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Chapter One

THE MAN-APES

A Lesson for Thomas Hobbes

Probably the most exciting development in modern anthropology is the discovery of the australopithecines, the "man-apes" of Africa. We began to dig them up in 1924 but are only just beginning to digest their immense significance for understanding man. The picture we get is a fascinating one of apes who were not yet men, but no longer apes as we know them. As far back as over a million years ago the first of these animals roamed the grasslands of southern and eastern Africa, and one of their outstanding features was that they roamed well: they had upright posture, and did not need to shuffle around balanced on the dragging knuckles of the backs of their hands, like the present-day chimpanzee. Consequently they had free hands for rudimentary weapons and for carrying food. Groups of them were hunters or at least scavengers, and they delighted over the flesh of animals. They put this flesh into a mouth that was remarkably like ours in form and size of tooth: absent were the giant interlocking canines of the present-day apes. Yet, they couldn't give the matter much thought, because another striking thing about these already princely primates was that they had a brain less than half the size of ours.

The important thing about these man-ape finds is that they now give us some long sought-after, basic insights into our own evolution. We can now understand that most of what we call "distinctively human" is based on our taste for meat; and

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meat is elusive and needs to be hunted down. In other words, we became men by fashioning tools and weapons, and hunting in groups. And in order to be efficient hunters we had to devise new forms of social organization, forms unknown and unnecessary among our vegetarian subhuman cousins the monkeys and apes.

We used to think that a large-brained upright primate arrived on the evolutionary scene, and that this large brain permitted him to learn to use tools, develop complex speech, see the difference between the way things are and the way they ought to be—and so, laugh and cry, carve and draw, and ceremoniously bury his own kind to defy the tragedy of death. But now we see that man's large brain is a rather late development. First we had an upright animal who learned how to use tools and to hunt, and this seems to have provided the stimulus for developing the brain. As you read the fossil record, it appears that the man-ape's taste for meat was progressively satisfied by increases in hunting skill: in the layers of fossil finds we see gnawed broken bones of larger, more ferocious animals succeeding the smaller, more defenseless ones. The hunters seem to be slowly coming of age, taking possession of the world around them more masterfully and surely. In the beginning they were probably scavengers trying to chase large animals away from their kills; later they went after the animals themselves.

But as we said, in order to be efficient hunters these man-apes had to develop new forms of social organization—their increasing skill depended on new inventions of a social kind. Popular writers today try to convince us that what we call distinctively human is something that we really share with the baboons: rugged individualism, indiscriminate sex, selfish grabbing of food, and females fighting for domination of the weak. But to make such analogies is not only cheap journalism, it is all wrong. Anthropologists know better: man developed away from the apes precisely because he had to hunt meat; and if you want to hunt meat you cannot afford yourself the luxury of baboon behavior. For one thing, if males want to get larger game they need to cooperate in the hunt: the larger and more

dangerous the game, the more sensitive and intimate the cooperation. This means you cannot fight over the kill, or over the females back at the camp when you bring back the kill. The band has to function as an organized unit that prepares together in repose, and that plans together in action; and so you need rules about social relations. The best way to get cooperation among volatile, erotic primates is to regulate sexual relations—who can mate with whom, who can live with whom regularly, and so on. By setting up such customs and marriage taboos you establish families and provide sexual partners between families. In a word, the invention of sexual codes establishes harmony and cooperation in mating units, and in bands composed of such units. And the result of this, as Marshall Sahlins has so well pointed out, is that you get your recognition from others not on what you *take*—like the baboons, but on what you *give*. Among primitives today the main reward of the one who kills the big animal is the prestige of being able to distribute it to his family and to others. Often the hunter himself gets the smallest share or the least desirable part of the animal. Unlike the baboon who gluts himself only on food, man nourishes himself mostly on self-esteem. It could not have been different among the earliest hunting bands, if they were to survive. The hunting band lives in the security of internal peace necessary to get food, of the right of all to partake of what food there is, and of the certainty of the provision of regular sexual partners for all. In this way society provides the means for the survival and the coming-of-age of all its members. These are, in sum, the two great uniquenesses of human life—regularized food-sharing and cooperation with others—and they are unknown among the subhuman primates. Even chimpanzees have not been observed to ever pitch in spontaneously to solve a task, although they can be trained to do so. Monkeys cannot even be trained. To the baboons, if they could understand these human inventions, it would all be a mystery, and would seem very tame and effete; but the result of such organization is anything but effete: the fact is that we hunt *them*, and not they us.

It is easy to suppose that the hunting band could then go on

and develop even greater brain size and sensitivities, once it had made these basic social inventions. The fashioning of better tools, and the planning with others for the use of these tools in the hunt, sharpened dexterity and foresight. Hunting develops doggedness and shrewdness: which one of several possible paths did the animal take? How badly is he wounded? If we track him into that area what will we have to watch out for, what would be our chances of getting back—with the game, without the game? and so on. There is great complexity of analysis, planning and conjecturing, in simple hunting activities, as any student of contemporary primitives knows. The Australian aborigine had a richness of perception, a refinement of analysis, a wisdom of his world, that would make a Ph.D. anthropologist seem like an imbecile in that setting.

And what about the stimulus of the social inventions themselves? The rules and regulations about sex and cooperation become stimuli to self-restraint, patience and planning, the development of richer symbolisms. It is not possible today to untangle the influences on the early growth of mind: all the hunter's activities were mutually reinforcing, and snowballed within themselves. Man's uniqueness is not due to any single activity, much less to any simple gimmick or mechanical invention. The home camp of the hunting band became a safe place to relax and play; not only to fashion tools, but to re-enact the hunt with ritual; not only to distribute meat, but to glorify one's people with stories and myths. As we are now beginning to understand, man became man in a total celebration of himself, in urges to distinctive self-expression.¹

Chapter Two

THE ORIGINS OF THE MIND

The Mechanics of the Miraculous

It is fairly simple to understand how an ape who abandons the trees and no longer needs his arms to swing with, gradually becomes a man-ape who walks upright and uses his arms to hunt and carry. It is fairly easy, too—using the wealth of factual material in almost a half-century of Africa diggings, to conjecture the long, slow development from grunting man-apes to true men who talk and dream. But in all of this there remains a mystery that has fascinated man since ancient times, a mystery that neither the Greeks, nor Darwin, nor modern anthropologists have been able to unravel with any certainty—I mean, of course, the gift of symbolic language.

We no longer believe, as was common, say, in medieval times, that language was a special creation of God infused into man by a single, Divine act. We can see, rather, how it must have come about gradually, over perhaps hundreds of thousands of years, and we can understand many of the basic predispositions to it, going back even to some aspects of vertebrate behavior. As we would have every right to expect, some of the groundwork for the birth of the symbol in man was laid down at much earlier levels of evolution.

The great Charles Sherrington once observed that if the amoeba were the size of a dog we should have to grant it a mind: it does act purposively in relation to various stimuli. After all, from a behavioral point of view, what we call "mind" is merely the style of reaction of an organism to its environment. The simplest organism takes note of its world, steers a course

through it, and gets what it needs from it; it is "minding" its world, as Leslie White put it, and deriving "reactivity meaning" from it. In other words, the world of meaning of any animal is created for it out of the range and subtlety of its reactivity. On the simplest level we have the direct reflex: the organism responds to the intrinsic properties of the thing it encounters in its field—it either ingests it, or recoils from it if it is not edible or is threatening.

On the next higher level we have the conditioned reflex. Remember Pavlov's famous experiments with the salivating dog. At first, the dog salivates in response to food. Then, food and another stimulus, a bell, are presented simultaneously, and the dog grows accustomed to associating one with the other. Finally, the food is omitted and only the bell is presented, but the animal, having associated his gratification with the bell, salivates when it is rung. This represents a real liberation from the environment, in a way: the dog is not interested in the intrinsic properties of the bell, but since it has now become a sign of something else, he can enrich his world by responding to it, and not only to the food. Animals probably make their own chance associations and become conditioned to them; say, an animal which associates the sound of a gun, or a train, with the disappearance of its mate.

On still a higher level, we have a kind of association in which the animal himself sees a relationship between two things in his visual field, and decides to act on it himself. The best example of this is the chimp who uses a stick to knock down a banana, suspended out of reach. We already have, here, a degree of autonomy unusual in the animal kingdom because it is not an experimenter who is establishing the relationship between the stick and the banana, but the chimp himself who figures out a problem situation.

Finally, we have the highest level of reactivity—meaning that animals on this planet have been able to achieve: what we call symbolic behavior. Man himself coins a designation for an object, and then responds to that arbitrary designation. The

word "house," for example, has no intrinsic qualities within itself that would connect it with an object—we could just as well use the words "casa," or "maison," or "dom." So, unlike Pavlov's dog, man creates the relationship between stimuli. And unlike the chimp reaching with a firm pole for a banana, the arbitrary symbol "house" has nothing intrinsic in it that would connect it with the object it stands for.

The development of mind, then, is a progressive freedom of reactivity. The reactive process which is inherent in the organism not only gradually arrives at freedom from the intrinsic properties of things but also proceeds from there to assign *its own stimulus meanings*. Mind culminates in the organism's ability to *choose* what it will react to. White calls this a "traffic in non-sensory meanings." Nature provided all of life with water, but only man could create the symbol H₂O which gave him some command over water, and the word "holy" which gave water special powers that even nature could not give.

Vertebrate Backgrounds to the Growth of Mind

Surely the development of the brain to its present size and complexity in man is one of the astonishing, science-fiction aspects of evolution. It represents a sensitivity to the environment unique in the animal kingdom, and in the universe, for all we know. This sensitivity, as we can see, was once the simple irritability characteristic of all of life. But it was the mammalian class that provided the conditions for the unprecedented growth of mind. As we learned in zoology, the mammals introduced into evolution a new kind of mother-child relationship. They distinguished themselves from the dominant reptiles, partly by being more helplessly dependent when young. When the reptile mother laid and incubated her eggs, her job was largely done. The young, after a minimum of protection, matured almost immediately to some kind of self-sufficiency in a hostile world. Not so the mammals. Their young are born in an immature state. After receiving nourishment in an internal

egglike sack, in the mother, the young are expelled helpless into the world, still dependent on the mother for nourishment and protection. We use the word "mammary" from the Latin "breast" specifically to refer to those animals whose young are nourished with the female's life-giving milk.

This seemingly minor change in the degree of maturity of the young of a certain type of animal had far-reaching consequences. In our development away from the lower mammals, we have mostly capitalized on the consequences of the initially strong mother-offspring tie of the earliest mammals. In the first place, this close dependence after birth meant that the young had a model for some of their behavior; they were in a position to *learn* things, and so develop the possibility for choice and a wider repertory of behavior. Evolution ceased putting a premium on the rapid development of rigid, instinctual patterns for coping with the environment. Along with this, and quite naturally, the young had a heightened sensitivity to animals of their own species. The mammal is a group-living animal, for the most part, content in being close to its own kind. A chimpanzee separated from his group will pine pitifully, lose all zest and appetite. One consequence of helpless dependence is that if it is catered to, it seems to increase. A look at the mammalian line reveals that, generally, the more complex the animal, the longer the period of dependence of the young. Kittens can scramble about and eat by themselves after only a few weeks; in the human infant, the brain and spinal cord are not even fully articulated before three months, and the baby has little postural control. This process of increased helplessness due to increased satisfaction of dependence is called "infantilization." The infant appears to be more and more "retarded" in his development. For example, monkeys have 70 per cent of brain size at birth, but the human infant does not attain this brain size until the age of three. The Rhesus monkey has a pregnancy of 166 days, compared to woman's 266; the young are suckled for several weeks only, while the human infant needs one to two years. The difference in rate of development is striking. The progressive helplessness of the mammalian young results in the human in-

fant's nearly monstrous appearance: an immense globular head perched uncoordinately on a puny, helpless trail of a body. An anomaly of nature, one might say. But there is serious work going on inside this improbable animal: a brain is being "incubated." The ape infant and the human infant are remarkably alike in head form. But they grow up to be quite dissimilar kinds of adults. The human seems to remain a true primate infant in appearance, and never grows into those characteristic features of our ape cousins that fans of horror movies know so well: the heavy eyebrow ridges, the flat nose, the massive jaws with interlocking canine teeth, the heavily muscled neck pulling back an unbalanced head. The ape seems to grow up before his brain has a chance to spread; the sutures in his skull knit tight, and he seems to lock his brain up under his pointed occipital. But these are only apparent structural differences, probably much more striking than significant. Whatever still unknown genetic chemistry shapes the process of slow human development, we owe our uniquely large and complex brain to it.

In Chapter One we saw that the great surge of human evolution was made possible by social inventions by the man-ape hunters; but now we are understanding that the man-apes themselves owed their complexities to their mammalian heritage, to their long dependency on the mother, to their sensitivities to one another. The chimp, for example, seems to make a characteristic greeting of friendliness by extending his arm. The sensitivity to gesture is perhaps best seen in the readiness of the chimpanzee to learn by watching a more experienced performer; in the Orange Park Zoo chimps learn to use the water fountain by imitating each other. The sensitivity to gesture seems to extend to an emotional sensitivity: some primates are dominant and some keep others away merely by demonstrating a disposition to annoyance, a tenseness or menacing readiness to which others are alert.

The basis for this kind of alertness is probably laid down in the dominance-subordination hierarchies characteristic of vertebrate society—of fish, birds, wolves, baboons: some animals are larger, stronger, or more energetic than others, and they

bluster around and enjoy the advantages of unconditional dominance. This means that all the animals have to be most sensitive to interindividual signals and cues. This sensitivity allows each animal to be cognizant in some way of the *part he is to play* in the life of the group—that is, the extent to which he will assert himself, insist on his prerogatives in food monopolizing, mating, and so on, toward certain others in the group. Each individual knows how, in other words, to maintain a delicate balance between self-assertion and the demands of living in the group, and he has an implicit awareness of his status vis-à-vis one or more others. Thus, man's acute sensitivity to his fellows was foreshadowed in the earliest development of vertebrate inter-individual stimulation.

But man is a primate, and here an interesting new factor enters the picture. Vertebrates have a "diphasic" sexual cycle. This means that they are put "into heat" periodically, but not all the time. The primates, on the other hand (as we may remember from our blushing adolescent trips to the zoo) are in heat *all the time*. This was the really revolutionary new development that occurred among the primates: Instead of the usual division into reproductive and nonreproductive phases of the lower vertebrates, primate behavior is *never free from tonic stimulus by sex hormones*.

The female estrous cycle, instead of occurring at widely distant intervals throughout the year, occurs with rapid periodicity. When fertilizable eggs are formed each month we call it a menstrual cycle. In other words, among the primates—if we choose to look at it in these terms—there is a thorough confounding of mating phase and nonmating phase: the animals are under constant hormonal tones and constant group interaction. Remember that the young are already considerably slowed down in their rate of maturation; remember too the dominance-subordination sensitivity of each member of the group; consider finally that all the members of this group are thrown together in constant interaction from which erotic stimulation is never absent. The picture that emerges is truly unique in the animal kingdom: a great variety of animals in various stages of develop-

ment, possessing rather keen sensitivity to the aggressive and erotic barometers of one another, are thrown together in one group. The result, as Earl Count and M. R. A. Chance have so well argued, is an extremely complex *jumble of statuses* to which the members must adjust. In other words, they must have on tap a flexible behavioral repertory, which again puts a premium on plasticity as opposed to instinctual rigidity. At each point in the growing animal's life, he must find a new adjustment to make to those around him: young to young, male to female, male to young, young to female, young to male, and so on. This need for continuing adjustment provides part of the stimulus for the emergence of a larger-brained animal. Nothing is so unpredictable as are other living organisms. When interpersonal navigation becomes difficult owing to a somewhat capricious and ever-changing organic environment, the acting animal must develop uncommon sensitivities and keen perceptions. Thus, when "mate-ability" was speeded up in the primates from a typically mammalian seasonal female receptivity to a more rapid monthly disposition to fertilization, vertebrate behavior seems to have "piled up on itself." Continually breeding animals surrounded by flocks of young in various stages of immaturity were together all the time. This provides a welter of interesting confusion and stimulation, a new environment that must be like Times Square to someone raised on a farm.

And so we can see how primate living laid the basis for the nervous complexity of man. It almost seems as if the man-apes had to make new social inventions to order the environment, if they were not to bog down from nervous exhaustion. On the humanoid level the organismic environment must have already represented a crucial problem of adjustment. Some way had to be found to give an *ordered simplification of the interindividual environment*. Among the lower primates this simplification is decided by strength and energy differences; man needed a schematization that was symbolic and psychological. It is by means of "status" and "role" that each individual is given a position and a part to play in the social circus, so that no one is left in the anxiety of guessing who is going to act how, when

approached. Coming of age in any society is basically a matter of learning how to act in a massively unpredictable environment, where each marvelous face, each gleaming pair of eyes, each temper, seems an inscrutable world in itself. The only way to control it in some measure is to play one's part correctly. To the infant reared in a family, the world that opens up to him is a mysterious panorama of aunts, uncles, cousins, siblings, and so on, that he has painfully to learn. This is why the concepts "status" and "role"—to get a bit ahead of our story—assume such a central place in sociology: they describe what is most necessary for human behavior, the real and basic step that man took beyond the subhuman primate band.

From our present vantage point we can muse on all this: it almost seems as though evolution created a fierce stimulation to increased sensitivity and emotion in the subhuman primates, only to permit in turn the repose of a simplified new ordering by the man-apes. The result was a new type of animal, with an unprecedented level of mastery of his world.

Chapter Three

THE DISTINCTIVELY HUMAN

The Ego, Language, and the Self

"All things that serve to pick up milk are 'spoons' to the child, and anyone who sings to him in the dark is 'mamma' . . . The best that society can do for the individual is to bring him into agreement with itself; but the result may be right and it may be wrong."

JAMES MARK BALDWIN
(1915, pp. 14, 17)

TRY repeating "man is an animal" a few times, just to notice how unconvincing it sounds. There seems to be no way to get this idea into our heads, except by long rumination over the facts of evolution or perhaps by exposure to a primitive tribe or by being raised on a farm. Primitives sometimes see little difference between themselves and the animals around them. Karl von den Steinen was told by a Xingü that the only difference between them and the monkey was that the monkeys lacked the bow and arrow. And Jules Henry observed on the Kaingang that dogs are not considered as pets, like some of the other animals, but are on a level of emotional equality, like a relative. But in our own Western culture we have, for the most part, set a great distance between ourselves and the rest of nature, and language helps us to do this. Thus we say that a sheep "drops" its lamb, but a woman "gives birth"—it's much more noble. Yet we have the right to make such distinctions

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because we assign the meaning to the world by naming the names of things; we inhabit a different sphere and we capitalize naturally on the privilege.

The origin of language, as we noted earlier, is a continuing mystery that will probably never be puzzled together satisfactorily. There has been some brilliant speculation about it: the anthropologist Charles Hockett thinks that language grew up precisely around the hunting activities of the man-apes. It was the challenge of the hunt for larger game, and the more intimate cooperation that this needed, that may have given rise to the development of complex signal systems out of simple call systems, and eventually, true language emerged. Others, like Weston La Barre, suggest that language grew up in the family, in the simple play-chatter of infants. With mother and offspring living very intimately for long periods, a keen sensitivity was developed to the desires and intentions of one another; add to this the natural babbling instinct which babies possess, and it is a simple matter to associate certain sounds with certain needs and intentions, and you have a shared symbolism emerging. (We see this happen with adolescents who are emotionally very close and who develop their own personal language; we see it also in close in-groups that develop their peculiar argot.) Lewis Mumford offers a similar theory of language growing up in playful mess and by repetition, rather than in practical and technical activities like hunting.

Well, if there is still no agreement on all this, one thing we are not in the dark about, and that is the role of language in making man quintessentially human. This is a fascinating part of our story, so let us dwell on it in a bit of detail. It all has to do with man's famous "ego" that makes him different from any animal known to nature.

The cerebral cortex in man is a gray mass of cells that seems to "spill over" into the frontal area of the skull—this area is what gives our head the globular appearance so different from the flat, foreheadless one of the apes. The cortex evidently aids man to feed his consciousness from within, and to serve as a complex control panel for reactivity to the environment. Thus, the brain

is kind of an "internal gyroscope" that keeps the organism in hand and that keeps the environment at a distance and well sorted out. When we talk about the ego we are referring, simply, to the unique process of central control of behavior in a large-brained animal. Hallowell has aptly termed it a major "psychological organ": it is not something we can see or dissect, but we can see the effects of it, and especially, in childhood autism and in some forms of psychosis, the effects of not having it. An autistic child who has been unable to develop its ego will not know where its body ends in relation to the environment, and might, in play, simply pound sand into its own eyes: there is no internal gyroscope to hold it steady, mark it off from the world, and keep experience in hand. We see the ego at its usual functioning, in the way it keeps the organism relatively independent of immediate environmental stimuli. The ego permits the organism to wait, and delay its response. With the ego the organism can hold constant in awareness several conceptual processes and stimuli at one and the same time. This allows the organism to imagine diverse outcomes without immediately acting; it makes reasoned choice possible; it allows the organism a freedom unknown in nature.

The study of the development of this major human "psychological organ" is one of the great and lasting contributions of psychoanalysts to the science of man. They took a phenomenon that had no specific physical form, that could not be touched or dissected, and they made an object of science out of it by carefully studying the development of the child's control of himself and his world, and the behavior of adults who had trouble controlling themselves and their world. As a result we came to understand the ego in its development and in all the vicissitudes of its malfunctioning. And we can perform the marvelous scientific feat of looking at a person's behavior and appraising an invisible organ that governs that behavior.

Freud discovered the ego partly by focusing his attention on the "id" or the "it", the ground from which the perceptive "I" springs and grows. The id refers to unconscious instinctive functioning undignified by conscious control and mastery. The

lower animals are almost entirely "it," vegetative bodies, bound by instantaneous reactivity to a world of sensation. They are incapable of holding their reactions and urges in abeyance—beds of sensation without a delaying, central control. The id is reactive life, the ego a human "organ" that develops to control the reactivity.

The id is a world of pictures, emotions, sensory meanings, stamped on the animal in confusion—"confusion," because it takes an ego to sort memories and sensations, to separate, classify and cognitively hold events steady in awareness. Without an ego the animal exists in timelessness, unable to place itself with precision in a world of sensation. Only humans know death because the ego fixes time. For the lower animals, the id is a timeless storehouse of fleeting emotional meanings. A deer cannot know yesterday from today, or tomorrow from next week: its world is flow of "eternal" sensation, punctuated only by a fearfully pounding pulse, a flavorful berry, and the unanticipated annihilation of sudden death.

Psychoanalysis points out that the ego creates time by "binding" it; that is, the individual gives the world of events a fixed point of self-reference. This is what allows man to live in a symbolic world of his own creation: he is the only "time-binding" animal, the only one who has a notion of past-present-future, a time stream in which he places himself and which he continually scans and appraises. Lower animals live in a continuous "now," troubled perhaps by sensory memories over which they have little or no control. But man controls his memories with the aid of his massive central nervous system. When the cerebral cortex became a central exchange for the regulation and delay of behavior, the stage for a consciousness of precise time was set, and a controlled time stream could come into being. With the ego, everything that exists has reference to an acute consciousness of "I" on the part of the organism. The uncontrolled picture thinking that probably occurs in the subhuman primates is an intrinsic symbolization in which the individual cannot assign himself a very definite place. Hallucinatory picture thinking uncontrolled by a sense of "I" is like

the overpowering imagery of a nightmare which engulfs and submerges the egoless dreamer. In sleep, the "I" gives up its differentiated alertness, and sinks back to rest into the organic bed of undifferentiated sensation. Freud's theory of dreams is based on the postulation that in sleep the ego gives up its vigilant direction of the organism's perceptions; everything that the ego has chosen not to be aware of, in order to continue its delaying mastery over sensation, threatens to come to the surface when the ego takes some necessary respite. In sleep, the ego can only make valiant attempts to disguise that which does come to the surface; and so we have the complex symbolism of dreams by means of which the individual tries to tell himself things the ego cannot or will not admit. But this is getting ahead of our story, into the negative aspects of the ego; here we are interested only in the evolutionary significance of its great strengths.

The ego, then, not only organizes perception and bodily control, it also fulfills a protective function for the organism; it is like an alert sentinel. Freud discovered that one of its main functions was to help the organism avoid anxiety. It provides the person with a self-conscious rallying point from which the organism can determine with precision what is alien to it. The ego handles anxiety by referring it to itself, by saying, "This is not me, not my conduct, not my awareness." In order to handle anxiety in something other than a mere stimulus-response slavery, there has to exist in consciousness an agent to negate the stimulus. The ape, or any mammal, instinctively sees a "not" in a danger situation which threatens to negate it. But until this "not" has a reference to a "me," it cannot be mastered.

Freud thought that these alien things were largely in the individual's own id, in the form of guilt and threatening desires that evolution had locked up in the organism. We shall touch on these things later on, suffice it to say here that most modern psychoanalysts no longer hold this view of the sources of anxiety for the ego. In giving a rounded picture of what the ego accomplishes for man, we want to stress, finally, the

close connection between anxiety-avoidance and the basic thinking process. As we said earlier the main function of the ego is that of delaying responses; this is what frees the individual from a dependence upon direct reactivity to stimuli. Now, it is by delaying action that the individual is allowed to scan his accumulated experiences for alternate approaches to a particular problem. He uses memory and past solutions to devise, in his mind, a solution to the present problem. Thinking is basically trial action, a "sneak preview," so to speak, of the situation one intends to experience. Obviously, trial action in detached thinking is possible only if the ego can delay response. Anxiety is crucial here, because the ego can delay response only when it controls anxiety. ("Keep a cool head" is shorthand for a more involved counsel: "Control anxiety while you present alternative courses of action in awareness, and choose rationally the one course which fits the situation.") Thus, the warding off of anxiety is central to the time-binding, action-delaying, and cerebral functions of the human animal.

We might expect that it is only in our consins, the sub-human primates, that we seem to be able to speak of a "rudimentary ego." Nissen observes in the chimp some processes of purposive delay of behavior and control by the animal itself, quite similar to human mastery. For instance, the chimp may simply *refuse* to expose himself to occasional failure in a difficult problem, rather than try for the 50 per cent rate of reward which grants him a desirable tidbit. He seems to be choosing *not* to bother, in the interests of his over-all equanimity. Or, consider the chimps in the Orange Park Zoo who, upon seeing visitors enter through a far door, ran to the drinking fountain, filled their mouths with water, and then waited for the close approach of the visitors to the cages before spewing the water out at them! This latter stunt was observed only once, but it seems to testify to putting together in the central control system several disparate stimuli: visitors entering, self taking in water, the likely approach of the visitors to the cage, and the expected pleasure of spewing in their faces.

And Hallowell, who has done the most stimulating and

careful speculation in this area, thinks there is good evidence for what he calls "intrinsic symbolic processes" on the sub-human level. An animal may privately produce memory representations of objects that are not present in the immediate visual field. After all, an ape's, dog's, or cat's senses are highly developed, and there is no reason to assume that images of remembered striking events do not pop into consciousness. An ape's 450-cubic-centimeter brain is of considerable size, and could conceivably permit imaginary picturing of past or even of potential events. Meredith Crawford observed that chimps were able to learn a gestural form of communication, gentle taps on the shoulder by means of which they could summon one another. Viki the chimpanzee seems to have played sometimes with an imaginary toy on an imaginary string, which she pulled around behind her.

But intrinsic symbolization is not enough. In order to become a social act, the symbol must be joined to some extrinsic mode; there must exist an external graphic mode to convey what the individual has to express. The chimp's gentle taps on the shoulder were already a cue which anticipated a social response. If the response did not come, he would pull forcibly to involve the other chimp in his laboratory task, or continue at it alone. This is a striking example of the developed mammalian intersensivity, of which we spoke earlier. But it also shows how separate are the worlds we live in, unless we join our inner apprehensions to those of others by means of socially agreed symbols. The water-spewing chimps at the Orange Park Zoo also had such inner apprehensions, a kind of consciousness of themselves; but their ingenious act was still too accidental and random, their imitation of each other, dumb.

What they needed for a true ego was a symbolic rallying point, a personal and social symbol—in "I." In order to thoroughly unjumble himself from his world the animal must have a precise designation of himself. The "I," in a word, has to take shape linguistically. It was the great psychiatrist Harry Stack Sullivan who said that the self (or ego) ¹ is largely a verbal edifice; and he saw the purpose of this edifice to be

largely that of conciliating the environment in order to avoid anxiety. The ego thus builds up a world in which it can act with equanimity, *largely by naming names*: objects are designated good, bad, or indifferent; are deemed worthy of attention, unworthy, or neutral. Everything friendly is initially referred to the "me"; everything hostile to the alien "not-me." No wonder the ape's "emotional motor is always idling"—as W. Howells beautifully remarked. This may be an apt way of describing an animal whose brain is already large enough to give him a store of anxiety-provoking sensory memories, and whose environment is complex and threatening; yet an animal who has not developed *controlled symbols* with which to put some distance between himself and immediate internal and external experience.

Speech, then, is everything that we call specifically human, precisely because without speech *there can be no true ego*. Every known language has the pronouns "I," "thou," and "he," or verb forms which convey these reference points. And this is forced logic because, as we said, without the personal pronoun there would be no true ego and hence no human group with language.

The personal pronoun is the rallying point for self-consciousness, the center of awareness upon which converge all the events in the outside world. It may seem an unoblivably flimsy peg for all of our executive power, this shadowy pronoun "I"—after all, it is just a word. But remember that the rudimentary ego is already there; the large-brained central control of behavior seems like a charged potential, waiting to be galvanized into directiveness by wedding itself to the word "I." This wedding of the nervous ability to delay response, with the pronoun "I," accomplished nothing less than the unleashing of an entirely new type of animal to take command of the world.

Besides, the "I" is not airy. It is bolstered by a name, a crying claim for recognition that has nothing airy about it: "Nobody can do that to Fred C. Dobbs," muttered Humphrey Bogart in a film, as he suspected others of gangling up on him.

Not only "Fred Dobbs," but "Fred C. Dobbs"—an unmistakable point of reference with an unambiguous existence. But a "C"—imagine it! Still a mere sound. A whole marvellous organic existence can be predicated on it.

The pronoun "I" and the personal name exist in a world of other "I's" and other names. Initially, the child's learning is monopolized by personal names and kinship terms of all those around him. In primitive society this may be most of what an individual learns, along with his pattern of obligations and expectations to all the kin. The "I" can take form only in relation to those around it; the individual exists to focus his own powers and act in the surrounding world.

We can see what the linguistic "I" does to order one's world, if we hark back to our discussion of the subhuman primates for a moment. Remember that they do grow up in a world of "kin." Delayed infancy and continual mating fill the environment with animals in all stages of development and all types of relationship. Remember too that the baboon has to relate to the various statuses of those around him on the basis of sheer power—who can be approached and who cannot, who can take food away from whom, who can be copulated with and who cannot. *Imagine how the animal's control would be increased if he could be given a pronominal "I" and a name, and in turn give an identity to each of the individuals around him.* Imagine too how his own equanimity and sense of security would be enhanced. Then his action would cease to take place in a timeless world characterized by a motor-idling emotionality and punctuated by sharp sensations. *The kin would take form as true individuals, and expectations and obligations would add meaning to a world of mere sensation.* The "I" signals nothing less than the beginning of the birth of values into a world of powerful caprice.

The Self and Self-Objectification

We can understand, then, that the "I" fills out one's world and gives it form, by giving form to oneself. But now some-

thing else happens in the process that is fascinating and in some ways tragic; it seems that for every great gain in evolution there is a price to pay. If the "I" gives one self-control and precise form, it does so, paradoxically, by initially taking that form and control *away from* the individual animal. The animal not only loses its instinctive center *within itself*; it also becomes somewhat split *against itself*. Let us linger briefly on these momentous new paradoxes.

It was the great Immanuel Kant who warned us, almost two centuries ago, that there was something very significant for human development in the fact that each infant becomes conscious of himself first as "me," and *then only* as an "I." We have since been able to confirm that this order is universal: "mine," "me," and then "I." It means, simply, that the child begins to establish himself as an *object of others* before he becomes an executive subject. He becomes a point of reference in relation to others before he becomes an agent of action for himself. His own slow development seems to create this unusual situation. He is helplessly dependent, clinging for his very life to his source of nourishment and protection (like his cousin the infant chimp who will clutch the leg of his trainer for weeks on end). The perverse result of this long merger with his source of life is that the child's own body seems to come upon his awareness *after* he has had sustained contact with another body. There seems to be a "pling up" of the infant on himself, as his discovery of the world takes place concomitantly with his discovery of himself. He becomes, in a word, an *object* to himself; he discovers his body as something in the *outside* world, as an instrument that belongs to him. The large-brained infant dragging his uncoordinated body has a feeling of his own strangeness; the symbols that he learns in identification with the adult may be more immediate than his own soma. (This would seem unbelievable were it not for clinical facts: a child who has been excessively dependent may ignore his own bodily sensations, may not even know that he is hungry unless his trainer tells him.)

This is what we call "self-objectivity" or "self-reflexivity":

the individual has a self-awareness that enables him to conceptually "back away from himself." We get a feeling of this in the formula "I can think of me." In other words, "I am conscious of experiences happening to me; I am not simply undergoing experiences, but I am *experiencing myself*." No other animal can give this rich substance, this added dimension, to itself. "I am tired," "happy," "hurt," "I'm bleeding!" and so on. Common actions a cat performs hourly with hardly a realization become, with names, heavy with meaning and thrill: "I look, I'm jumping!" The fact is momentous: *Man is the only animal—in the universe, for all we know—who sees himself as an object, who can dwell on his own experiences and on his fate.* It is this that makes him fully and truly human; it is the most interesting fact about him. Our great admiration for the ancient Greeks derives from their capacity to dwell on their own fate, they seem less blindly driven than were the people around them. And if one day we discover advanced life on another planet, this is the first and most vital question we will ask of it: was it capable of bending back upon itself, of contemplating its own destiny?

The philosopher George Herbert Mead traced with great brilliance the intimate details of the self-objectification process in infants. Admittedly, it is difficult to know what is happening in the mind of a child as he acquires a consciousness of himself, but Mead very giftedly reconstructed this process in speculation. The organism, he said, becomes conscious only in relation to other organisms or objects. In the beginning of the infant's awareness, both he and the objects around him must appear as *things*. He exerts an effort to meet and manipulate these things (say, in this instance, the suckling mother). Now one of the most vital facts about all objects is that they have both an *inside* and an *outside* (and we will want to dwell on the important consequences of this in the next chapter). But, says Mead, dawning consciousness has no awareness of this dualism; the organism knows its insides by direct experience, but it can know its outside boundaries only in relation to others. (Remember a film depicting the creation of Adam in the

Garden of Eden, which shows him awakening and being startled by his own body and recoiling from it as something strange; it was only gradually that he took possession of it by establishing its limits.) On the other hand, the infant can know the outside of his mother's breast by vision and touch, but has no way of getting a notion that the mother has an inside. Mead concluded that the only way we can give ourselves to ourselves, and confer insides upon others, is by "taking the attitude" of the other person toward ourselves. With this empathetic perception the infant identifies with the object and so gains an awareness of his own feelings as well as of the object's feelings. He seems to have to unite his perceptions with the attitude of another before he can fully perceive himself; the self cannot come into being without using the other as a lever. As the noted sociologist Franklin Giddings once put it: It is not that two heads are better than one, but that two heads are needed for one.

Consciousness, then, is fundamentally a social experience: the infant must take the position of another object in order to gain a perception of the full dimensions of himself and his world. The child assumes the attitude of the succeeding adult, and must then respond to meet that attitude. We can see clearly how this works in the child's use of language. As he imitates the language of the adult, this becomes a signal to him. The imitated words guide his conduct, as the child stimulates himself and responds to himself. The parents' pervasive symbolic sound floods into his organism through his ear. As he repeats it with his own vocal apparatus, the sound becomes a signal for animating his conduct. In other words, his symbolic action world is built from the *outside in*. A self-reflexive animal, after all, can only get the full meaning of its acts by observing them *after* they have happened. This is what led William James to remark that we are sad *because* we cry; in other words we give the full meaning to our crying by dwelling on it after it happens. We learn the full significance of our acts from those around us, and as we build up this knowledge we acquire a "mind." Mind grows up as a registering of the consequences

of what we do after we do it. Self-reflexivity gives us a much greater depth of experience, but we lose the animal directness of it.

And so we see the paradox that evolution has handed us. If man is the only animal whose consciousness of self gives him an unusual dignity in the animal kingdom, he also pays a tragic price for it. The fact that the child has to identify *first* means that his very first identity is a social product. His habituation of his own body is built from the outside in, not from the inside out. He doesn't unfold into the world, the world unfolds into him. As the child responds to the vocal symbols learned from his object, he often gives the pathetic impression of being a rife social puppet, jerked by alien symbols and sounds. What sensitive parent does not have his satisfaction tinged with sadness as the child repeats with such vital earnestness the little symbols that are taught him?

The Self versus the Body

Let us thicken up our discussion a bit, even at the risk of getting ahead of it. The point is that the matter is not so automatic or simple. As we shall see in the very next chapter, there is a real dualism in human experience. The social identity is largely symbolic, but the experience of one's powers is at first organic. The child builds up a "sense of himself" with symbols, but he also gets this sense by energetic movement, by perception and excitement. He registers self-experience mostly when his own executive actions have been blocked: it is then that he has to "take the role of the other" to see what his act "means." The more blockage, the more the sense of self is symbolic. One of the fascinating things to see in children is that when they have been allowed to be very active, they follow the flow of their own energetic will, and they may only gradually be "broken" into identification and the learning of restraining social symbols.

If the person's social identity is undetermined in later life he always has his organism to fall back on; in fact, this is the

basis for all psychotherapeutic change, as well as for spiritual self-realization. If the child has been allowed to gain an "organismic identity" by relatively free actions and self-controlled manipulation of his world, he has more strength and resilience toward the vagaries of social symbol systems. He inhabits his body more from the inside out, rather than from the outside in; we might say that his body belongs to him more "by right of habitation" rather than merely "by right of location." This is the meaning of Freud's remark that a child who has had bountiful mother's love can stand all the vicissitudes of life: he has a solid organismic identity to fall back on when everything else may be stripped away (cf. Saul, 1970). The total striving organism is after all greater than the particular world view imposed on it. Often, under severe stress, an individual saves his sanity by learning to fall back on his body, rely on it, he learns to trust nature as it manifests itself in his life-sustaining bodily processes, and stops the interference of his mind—the fears, obsessions, and phobias that can only act back upon the body and undermine it. This is why progressive educators from Rousseau to Dewey and Reich have made self-directed activity by the child a basic cornerstone of mental health.