

The Social Cell

"The Direction of Human Development," by M. F. Ashley Montagu (Harper, 404 pp. \$5), offers a reinterpretation of the Darwinian thesis to show that for the fittest to survive it is necessary for human beings to cooperate. It is reviewed below by Professor Weston La Barre of Duke University, author of *"The Human Animal."*

By Weston La Barre

OLD-FASHIONED social Darwinians, who saw always in human society the same Nature "red in tooth and claw," have evidently not understood Darwin himself correctly. The rule, thinks M. F. Ashley Montagu, has been not constant competition but in fact higher orders of cooperation among organisms. In *"The Direction of Human Development,"* a learned, eloquent, and often impassioned book, an eminent anthropologist has shown us how "fitness," even in the Darwinian sense, often consists in the survival of organic components—cells, separate individuals, or societies—be-

cause of their association together. Indeed, the universal fact of reproduction is a social relationship which characterizes all living organisms, even single-celled ones. The same social fact is true of multicellular animals. The cells of a sponge when mechanically separated may be able to survive independently, yet they show a "social appetite" to join together again, because of the superior survival advantages of such association. The separated cells of a fertilized frog's egg show the same tendency to migrate together, and here it is even more important for their joint survival.

The biological value of association is shown not only in the social insects but also in the "mood convection" of higher animals, which binds them together into mutually protective groups. The same principle is no less evident in man, whose body is an intricate society of 60,000,000,000,000 cells, and whose brain is an exquisitely complex association of nine billion neurones into one functioning whole. Nor is even this the total picture of man. Dr. Montagu piles up impressive evidence that the very nature of human nature is to be social, and in a new and extreme manner which embraces all men, living,

dead, and to come. For man's most conspicuous and unique adaptation, culture, is what remains of men's past working on their present to shape their future. In man there is an organic element of the species-as-a-whole. "Man is an open energy system constantly receiving, exchanging, and transforming energy within the larger whole, society."

Interesting as these ideas are in the abstract, they are still more significant for our practical understanding. It is for their immediate bearing on human relations—from child care to social ethics—that these studies are the most valuable. Dr. Montagu is a vocal and persuasive advocate of "rooming in" of the baby with the mother in the hospital (or, better yet, birth at home), breast feeding, and the self-demand schedule of the baby. For all these practices he cites good biological reasons. The baby is *necessary* for the mother who has just borne him, and in physiological terms; for the early suckling of the infant stimulates the return of the uterus to normal size and greatly lessens the dangers of bleeding. The mother is just as necessary to the mammalian infant, and in unexpected ways. Germ-free animals reared experimentally unaccountably died until it was discovered

Tomautos for Tomorrow?

THE imaginative prognosticators of the coming atomic age have long been predicting such miraculous comforts as atomic airplanes, atomic ships, and atomic automobiles. With some of these predictions even the informed prognosticators agree. In his *"Atoms for Peace"* (Dodd, Mead, \$3) engineer-writer David O. Woodbury goes along with some of them. He agrees that it would not be surprising to find the U.S. Navy standardized on atomic power within twenty-five years, that the skies may be filled with atomic—though, perhaps, inefficient—airplanes in ten years, and that the atom will be a great help in, among other things, combatting heart diseases and in keeping apples and oranges firm and fresh for long periods of time. But when it comes to the atomic automobile Mr. Woodbury's answer is "Tomautos!" Here is what he has to say in his book about the atom-auto:

•• Imaginative people, a lot of them journalists, have repeatedly dreamed of the car into whose tank one merely puts an "atomic pill" and then forgets about fuel for

good. Two hundred years on one pound of uranium, let us say. The only thing the prophets didn't mention was a name for the gadget. I suggest "atom-auto," conveniently shortened to "tomauto."

•• Gasoline has been doing a fine job in the family car for fifty years, and would certainly not yield to the atom without a struggle. It would have about everything on its side, too. First, shielding. Not a scientist is to be found today who will admit that shielding can ever be light in weight, since it is weight itself that provides the resistance to radiation. Thus, our atom-autos are going to be embarrassingly heavy, carrying fifty tons or so of lead or concrete or pig iron to save us from being rayed to death by our engines.

•• Anyway, the minimum critical mass would be enough to furnish power for the relatively tiny requirements of a car for decades, maybe fifty years. Thus, when you sold your car for junk it would still have virtually a new engine and its tank would still be "full." Tank and engine would run through dozens



of cars. You might, of course, imagine a system in which you bought a mileage interest in a car (which would be as big as a Pullman and have the tires of an earthmover), sold it for scrap, and installed the engine in another vehicle, and then another, till you gave up and went back to gasoline.

•• The atomic auto would be a nuisance in the morning, too. A pile doesn't simply turn on, it has to be brought up to criticality and the chain reaction started with great care. In the presence of experts this takes at least an hour, and is said to be the only moment when a fission reaction is in real danger of getting out of hand.

•• It would be a trifle embarrassing to get into a crash with your atomic car and its fifty tons of shielding. It might mow down a whole block before its accumulated momentum could be absorbed.

Still want a "tomauto?"

that the proper functioning of the autonomic systems of the baby animals was not being stimulated by the mother's licking of her young. In humans the closeness of the mother-child tie has again been demonstrated by the Fels Institute studies. If a mother undergoes severe emotional stresses in pregnancy the child is likely to be born and develop as a hyperactive, irritable, squirming, crying infant with frequent need of food, frequent bowel emptying, frequent regurgitation of food, and poor sleep habits. As Sontag puts it, "He is to all intents and purposes a neurotic infant when he is born—the result of an unsatisfactory fetal environment."

OUR ethical value-preferences as well, thinks Dr. Montagu, are not arbitrary but conditioned by organic requirements. Does some spiritual "ought" have nothing to do with biological facts? But it does; for if we can show that some human functions are best furthered by certain value-conditions then we have proof that this "ought" does have concrete biological meaning in differential-survival terms. For example, psychologists have shown that maternal neglect can cripple the ability for abstract thought—because the baby has not learned through love the complex ins-and-outs of his tribe's symbol systems, adds the anthropologist. But symbolic thinking is the hallmark of the human being. Therefore, maternal neglect mutilates our humanity. In its organic needs human nature is good; it is our present human nurture that is bad. "Man requires no supernatural sanctions for love. Love is a fact of nature, and it is the most important of all the facts about human nature."

The book is somewhat repetitious, as is inevitable in a book based on published articles. It is also at times perhaps a bit technical for the greatest lay audience it deserves, while for the specialist Dr. Montagu may occasionally weaken his case by overstating it.

But in its main trend it is a sound and necessary corrective for the atomistic and inhuman practices advocated by Behaviorism in the Twenties. To correct our inveterate moral blindness about our own nature we need the occasional fervor of an Old Testament prophet, and Dr. Montagu states convictions in which many of us will unashamedly join him. "In the nature of the basic needs we have the Rosetta Stone, which translates into the vernacular what the direction of human development ought to be, what, indeed, it must be if the human race is to survive."

WRITERS AND WRITING

The Web of Sensibility

"The Psychological Novel: 1900-1950," by Leon Edel (J. B. Lippincott, 224 pp. \$3), uses the work of Proust, Joyce, Dorothy Richardson, and Virginia Woolf to explicate the difficulties of the type of fiction that is designed to show that "experience is never limited, and . . . never complete." Professor Howard Mumford Jones of Harvard here uses it as an occasion to discuss the possibilities and the limitations of the psychological novel.

By Howard Mumford Jones

DISTINGUISHED as a close, sympathetic student of Henry James, Leon Edel in "The Psychological Novel: 1900-1950" (which originally took shape as lectures at Princeton) luminously discusses general technical problems implicit in that form of novel. He pays tribute to the earlier examples of James and Dujardin, but his discussion essentially begins with the years 1913-1915, when three influential Europeans published examples of this kind of fiction. Proust brought out two volumes in 1913, Joyce's "Portrait of the Artist As a Young Man," that prologue to "Ulysses," was printed in 1914, and Dorothy Richardson's unjustly forgotten "Pilgrimage" in twelve volumes was inaugurated in 1915. Drawing upon these authors and upon others, notably Virginia Woolf, Mr. Edel explicates the structural difficulties of fiction designed to show, in James's phrase, that "experience is never limited, and it is never complete."

Well, the first paradox is that albeit the intent of psychological fiction is to demonstrate that anybody's sensibility is "a kind of huge spider-web . . . suspended in the chamber of consciousness, and catching every airborne particle in its tissue" (the phrase is again James's) nothing of this sort is quite possible. Many experiences, many memories, many emotions, probably most of them, are not verbal, and yet the author, with only words at his command, must, by a careful selection and amassing of details, create the illusion of crowded consciousness—that is, the illusion that there has been no selection and amassing. Hence the tendency, by all kinds of allusiveness to employ pub-

licly accepted symbols (the classical ones in "Ulysses," for example), or a private set of symbols the reader must somehow pick up as he goes along. This sometimes results in loading the fictional page with centrifugal details leading attention away from the story and towards an unnecessary encyclopedism.

In the second place, whether the form of the narrative be first person or not the psychological novel tends to become autobiographical either in the sense that the reader watches an imagined consciousness unfold and identifies with it, or in the sense that, as in the case of Proust, the author transfers to a fictional being his own autobiography. As the reader is supposed to be placed inside the stream of consciousness in question, the writer must be alert to keep inside that stream also, to define the limits of the stream, and yet never quite to inform the reader what these limits may be. But readers are often more or less intelligent than the game implies. When the reader does not understand the limits of the stream of consciousness under inspection he may refuse to play the game expected. Thus many intelligent persons are baffled by Benjy's "day" in "The Sound and the Fury" because no intelligible signals are given as to the kind of consciousness involved (I waive the question of jumping in and out that stream, as Faulkner, I think, does). On the other hand, cultivated readers begin to wonder whether all the elaborate hocus-pocus in Part Three of "Ulysses" does not impoverish the work of art, inasmuch as elaborate and pedantic allusiveness and parody require a totally different kind of attention from that demanded of the fiction reader.

A third element is the central role time plays in psychological fiction. Mr. Edel rightly quotes Bergson's phrase about the invisible progress of the past as it gnaws into the future. From one point of view the psychological novelist must stand insecurely poised precisely at the point where gnawing takes place, casting lines simultaneously in both directions, a feat requiring considerable expertise in the writer but not therefore of equal interest to the reader. In "Mrs. Dalloway" retrospective time is of the essence of the book, but how much is gained by playing tricks with time-