

# Social Heredity and Social Evolution

The Other Side of Eugenics

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Evolution, etc.



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## PREFACE

THE application of the great laws of nature to the explanation of the history of the human race is one of the fascinating phases of science. In the study of the evolutionary processes of the organic world that has followed Darwin it has been generally assumed that the laws which govern the rest of the animal world have also governed the evolution of mankind. That man holds a unique position in nature has been generally recognized; and sometimes this idea has been so prominent in the minds of scientists, as well as other classes of thinkers, as to lead to the assumption that the development of man has been a thing apart from the rest of the living world and due to some special stimulus. Most generally, however, it has been silently assumed that mankind has been developed under the same kind of laws and forces that have been concerned in the formation of the lower orders of nature. One of the more recent phases of this belief has found expression in the great interest taken in the modern study of eugenics; for this school is based upon the laws of inheritance as they have been determined by the study of the lower orders of nature which have then been applied to man.

It is the purpose of this work to show that the laws of the evolution of animals and plants apply to human evolution only up to a certain point, beyond which man has been under the influence of distinct laws of his own. It is our purpose to show that while the human *animal* may doubtless have been

developed under the laws which have brought about the evolution of the rest of the living world, the *human social* unit has been developed under the influence of a new set of forces which have had little or no influence in developing the animal kingdom. In doing this there will be given a sketch of the evolution of what we call civilization, for such a sketch will show us that social evolution has been controlled and guided by a new force which we call *social heredity*, a force which had had almost nothing to do with the evolution of the rest of the organic world, and one which acts practically independently of the laws which the eugenists are disclosing to view. It has appeared to the author that, with all the cogency of the facts presented by the eugenists, there is a side of the question of human development which they are overlooking and which their readers are therefore likely to overlook; a side which, in our opinion, weighs more heavily in determining human progress than the laws of inheritance upon which eugenics is based. To present this other side of the case, without endeavoring at all to detract from the value of the agitation for a better inheritance by the best possible control of marriage, is the excuse for the preparation of this book at the present time.

H. W. C.

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## CHAPTER I

### HUMAN AND ANIMAL EVOLUTION CONTRASTED

#### THE EVOLUTION OF MAN AND ANIMALS ATTESTED BY THE SAME KIND OF EVIDENCE

IT seems to be quite generally admitted to-day that the human race was the culmination of a long series of evolutionary changes. Whatever may be said of his mental nature, man's body is of the earth earthy and has had a history parallel to that of other animals. The same arguments which have led to the well-nigh universal acceptance of the theory of organic evolution of animals apply with equal cogency to the physical nature of man. The lines of argument which have led to the acceptance of the doctrine of evolution are three: 1. The evidence derived from the study of comparative anatomy. 2. The evidence derived from the study of fossils. 3. The evidence derived from the study of embryology. While many and varied arguments have been brought forth for the theory of genetic descent, they may mostly be centered around these three lines of evidence. Now, these three kinds of evidence apply equally to man and to the lower animals. Man shows exactly the same kind of anatomical similarity to the lower animals that they show to each other, for, anatomically, muscle for muscle, bone for bone, man is built upon the same plan as the ape. Human fossils too, though scanty, clearly tell the same story of a progress from lower forms. Among the few fossil

human skulls that have as yet been found there are several that indicate a being of lower brain capacity than man of to-day; and there are one or two that seem to be so distinctly intermediate between man and the ape that there has been a dispute as to whether they were really men or some especially highly developed ape. Moreover, these human fossils carry the history of man back to a much earlier age than was at one time thought possible, and thus have given a far longer period to human evolution than we formerly supposed. Embryology teaches the same lesson. The human embryo, like that of other animals, passes through a series of stages more or less representing the earlier types of animals in the earth's history. At one period it develops gill slits on the sides of its neck like a fish; at another it possesses a well developed tail; in short, like the embryo of a cat or a dog, it passes through stages that in a measure represent the past history of the animal kingdom.

It has been these lines of argument primarily that have led to the general acceptance of the doctrine of organic evolution. Now, we may perhaps deny their cogency entirely and therefore refuse to accept the theory of evolution in toto; but if we accept them as sufficient to convince us of a general evolutionary history of animals, it is simply mental suicide to refuse to apply them to mankind. Logical thinking forces us either to accept the evolution doctrine as applying to physical man or to deny entirely the truth of any evolutionary history of animals. Since the patient search for evidence during the half century or more since Darwin has convinced thinkers generally of the truth of the

theory of evolution as concerns animals, we are logically forced to admit a similar natural origin of physical man.

**Mental Evolution.**—The problem of the origin of mental man is not so clearly nor so easily settled. When his mind is taken into consideration, man stands on a pinnacle by himself, so widely separated from lower animals that to some there has seemed to be an impassable gulf between him and the animal world. Various attempts have been made to define this mental distinction between man and animals. Likenesses between them are evident enough. Animals certainly have some powers of thinking; some have a memory and are taught by experience. Their sensations appear to be like those of man; and this is true also of their emotions, for fear, affection, anger, jealousy, love and the like are clearly seen among some of the higher animals. While man alone may be said to reason, still something at least faintly resembling reasoning may be seen among certain animals. Man alone has been said to make and use tools; but monkeys certainly learn to *use* tools, for they sometimes utilize sticks and stones for their own purposes; and it must be remembered that the oldest records of mankind definitely tell of a period in his history when he too simply used the sticks and stones which he found at hand as a first step toward the manufacture of tools for his own definite ends. To be sure, man did not stop at this point, but passed upward to the higher plane of tool making, as well as tool using, and why he did so while animals have not, it will be for us to inquire later. But surely we cannot find any radical separation between man and animals at this point of the use of tools when we find



a monkey using a hook on the end of a stick to pull a desired banana within his reach.

**Fundamental Differences Between Man and Animals.—**

Actual differences of a fundamental character between man and animals are not easy to find, but after extended analysis the fundamental differences appear to be two: 1. Man alone possesses the power of forming *concepts* and using *words*. 2. Man alone possesses a *moral sense*, or *conscience*. Other secondary and subordinate differences may surely be found, but these are radical. No animal forms concepts and gives them names, and none has a moral sense.

Even along these lines some thinkers are telling us that this seeming gap between man and animals may be at least partially bridged. Animals certainly have perceptions—a first step in mental activity. Some animals too have a sort of practical, though vague, classification of perceptions; as, for example, when a dog smells an object and at once recognizes it as belonging to one of the two classes “good to eat” and “not good to eat.” This is a step toward a conception and only needs to be named to become full concept. A water bird acts quite differently in alighting upon the water and on the land, thus showing a practical recognition of the difference between solids and liquids. In this the bird’s mind certainly resembles that of the child when, long before he knows the difference between the words “hard” and “soft,” he jumps quite differently when he is to land on a hard floor or a soft cushion. The recognition of such a practical classification is surely a step toward their clear conception, and certainly in this respect the animal may stand on a par with the

young child. The child, however, goes on to higher thinking, while the animal stops here, and the real question is, therefore, why the animal stops and the child goes on. The illustration will serve, however, to show how it may be claimed that even in the line of forming concepts man differs from the higher animals in degree only.

Along the line of the moral sense, or conscience, a somewhat similar reasoning has been used. It has hardly been claimed by anyone that any animal has a moral sense. No one has ever suggested sending missionaries to the animals in the jungle. But it is pointed out that many animals have impulses that are imperative, urging them into definite courses of action which are for the benefit of the species but may be fatal to the individual. The salmon is impelled by an irresistible impulse to ascend the rivers at the time of spawning. That this is for the benefit of the species is probable, but it certainly results in the death of the individuals by millions. A tiger will sacrifice her life for her young. In these actions there are certainly points of resemblance to the action of a martyr who sacrifices his life for a principle, and this latter action we call moral.

Thus it appears that doubts have arisen whether there are any real lines that can be drawn between man and animals which do not disappear upon careful study. That there is a vast difference, however, is perfectly apparent, and this difference must be found along the lines pointed out, that is, in the formation of language and concepts, and in the development of the moral sense and the consequences that have resulted from it.

To these differences it may be perhaps possible to

add a third in the fact that man alone universally develops *societies* and *government*. It is true that societies are not wanting among lower animals, and some sort of government occasionally appears. But these are commonly based upon a somewhat different principle from those of mankind. This point we will not dwell upon here, for it is the primary topic for discussion in this whole work, and will be extensively developed in later chapters.

**Natural Forces Sufficient to Explain Natural Phenomena.—**

The acceptance of the reality of a natural origin of the human race by evolution thus comes to rest upon exactly the same basis as that of the rest of the animal kingdom, and it stands and falls with the general theory of evolution. Now, no thinker can fail to realize that the evolutionary theory has received its almost universal acceptance from two general lines of reasoning. The first is the direct evidence derived from the collection of facts such as above mentioned. The second is a broader one and lies in the fact that this conception falls into line with the general tendency of thought. For centuries science and philosophy have been endeavoring to group the facts of nature under the influence of definite forces acting by definite laws. As we have studied more and more deeply into nature we have found ourselves able to remove from the realm of miracle one after another of the former mysteries of nature and put them in their place as due to known forces acting by known laws. Step by step has this comprehension of nature advanced as astronomy, chemistry, physics, geology have been subjected to more and more rigid scrutiny, and every step taken has been leading in one general direction.



It has become more and more evident with each decade that nature's forces are sufficient to account for all natural phenomena, and that these forces act according to definite methods which we call laws. As one after another of the previously mysterious phenomena have been thus brought within our comprehension it has been more and more certain that all of nature's phenomena will in time be explained by natural forces. Further, it has been more and more clearly seen that nature's processes are regular, though they may be slow. The "cataclysms" of earlier science have been forgotten, and in their place we have found constant but persistent forces, slowly but continuously producing the series of changes by which the world has been built. The great Colorado cañon was cut out slowly by the same forces that are digging channels for the tiny rivulets by the roadside; and in the same way the other great wonders of nature have been the result of the slow but persistent and ever-present forces of nature.

Now, it is evident that this line of thought, after it has comprehended the processes by which all other forms of life have been developed, must in time inevitably extend to the origin of man. Just as rapidly as the thought of the day becomes accustomed to this conception of the method of nature's action, just so rapidly does it adopt the only view of the origin of the human race that is consistent with this conception. It is thus a general realization of the *uniformity of law* that has brought about the general willingness to accept a belief in a natural origin of the human race, a belief which is to-day very general not only among scientists but even

among theologians—a class of thinkers at first much opposed to such a doctrine.

HAVE HUMAN AND ANIMAL EVOLUTION BEEN CONTROLLED BY THE SAME LAWS?

In all this line of reasoning there has been a tacit assumption that human and animal evolution have been controlled by the same laws, and therefore that the conclusions reached concerning the development of animals may be legitimately applied to the development of the human race. This conclusion is a natural one, and is surely correct up to a certain point. A human animal was doubtless produced by the same laws that were concerned in the production of a horse or an ape. But the human race is something more than a collection of human animals. Human evolution has progressed along wholly new lines, and has produced a result so different from anything found elsewhere in the organic world as to have led some to insist that mankind belongs to a kingdom by himself distinct from plants and animals both. Now, while no modern biologist will hold such an extreme position as this, none can fail to realize that evolution in the human race has produced unique results. Whereas every other animal may be regarded simply as an incident in an evolutionary progress, each appearing and then disappearing without leaving a trace of itself behind, unless perchance it became a fossil, mankind is taking possession of the whole world, is exterminating all forms of life except those that contribute to his comfort and happiness, and, though he leaves few fossils, is leaving behind himself traces which are changing the whole face of nature. His evolution

cannot, from the standpoints of its results, be compared with that of any other animal. It may well, therefore, be possible that his evolution may have been brought about by new forces and controlled by new laws, so that the conclusions drawn from the study of animals may not be legitimate, or at least not adequate, when applied to man.

The organic evolution of animals and plants in general has been brought about by the action of three great factors, namely, *reproduction*, *variation*, and *heredity*. It has been the task of the last half century to work out the laws by which these factors have brought about the history of the living world which we have called organic evolution. It was Darwin who first set us thinking about this subject. In the years that have passed since Darwin, new data have forced upon us a considerable modification of the views advanced first by him. These years have disclosed many details of the method of action of these forces in producing evolution, and while to-day we cannot pretend that we understand the process fully, we certainly have an approximate idea as to how these three forces have interacted with each other to produce the living world of to-day. In applying these principles to man it has been assumed that the laws discovered for animals apply also to man. Unquestionably they do up to a certain point. But since the human race is more than a simple animal, it is possible that its unique attributes may have been developed under a different set of forces.

**Heredity.**—Whatever may have been the details of the method by which organic evolution has been brought about, there is no question that the primary

factor has been the repetition in the offspring of the characteristics of the parents, a phenomenon that we call heredity. This has so clearly been the fundamental force as to have led to most extended studies aimed at solving the method of its action. Darwin tried to form an idea of its mechanism, but with little success. Various others have attempted the same thing with equal lack of success, until the simple suggestion of Weismann, about thirty years ago, placed it in an entirely new light. His conception of a continuous germinal substance so clearly fulfilled the requirements as to place Weismann's explanation of heredity beyond the class of mere theories and to put it among the accepted truths of science. With increasing interest and avidity as newly discovered facts began to disclose fundamental laws, has the subject of heredity been studied for three decades. Out of the accumulated facts some clearly definite results have already been reached.

1. It has been quite firmly demonstrated that the class of characters which we commonly call *acquired* are not passed on to the offspring by inheritance. Animals may transmit to their offspring those traits that they themselves have inherited, but they cannot transmit those characters that they have developed in themselves as the result of their own actions, or as the result of the action of their environment upon them. It has been difficult to make us willing to accept this conclusion; for we have generally been unwilling to believe that our own actions cannot in any degree affect the characteristics that we transmit to our children. But the accumulating evidence has finally forced us to give up the cherished belief in the inheritance of acquired characters.
2. The



modern study of heredity has disclosed the fact that there is a noticeable permanency in the nature of inherited traits. It has shown how definite characteristics are handed on from parent to child generation after generation, showing in each successive generation the same characters as at the start. It has told us that such traits may seem to disappear entirely in one or more generations to reappear later unchanged in some subsequent generation. 3. Modern study has even shown something of the laws by which different characteristics, *dominant* or *recessive*, as we call them, are transmitted to posterity, and has particularly emphasized the idea that such characteristics, in some cases, remain as distinct as at the start in spite of crossbreeding. Inheritance has been thus shown to be a very definite thing, far more fixed in the race than we formerly believed. We have learned that desirable traits cannot be brought into inheritance or forced out by any kind of training, for inherited traits are fixed. All this emphasizes the fact that to produce a good race of offspring "*nature*, and not *nurture*," must be appealed to as the dominant force.

In all this, again, we find that it is assumed that the laws that control animal inheritance apply equally to man; and again we say that this is doubtless true up to a certain point. Doubtless the human animal was the result of the same kind of laws of reproduction and heredity that have guided the evolution of the animal kingdom. Out of this conception has emerged the interest that has appeared in the modern study of *eugenics*. A couple of generations ago it was possible to teach that a child's education should begin "a hundred years before he is