

PHYSICS AND POLITICS

CHAPTER I

THE PRELIMINARY AGE

Part I

ONE peculiarity of this age is the sudden acquisition of much physical knowledge. There is scarcely a department of science or art which is the same, or at all the same, as it was fifty years ago. A new world of inventions—of railways and of telegraphs—has grown up around us which we cannot help seeing; a new world of ideas is in the air and affects us, though we do not see it. A full estimate of these effects would require a great book, and I am sure I could not write it; but I think I may usefully, in a few papers, show how, upon one or two great points, the new ideas are modifying two old sciences—politics and political economy. Even upon these points my ideas must be incomplete, for the subject is novel; but, at any rate, I may suggest some conclusions, and so show what is requisite even if I do not supply it.

If we wanted to describe one of the most marked results, perhaps the most marked result, of late thought, we should say that by it everything is made "an antiquity." When, in former times, our ancestors thought of an antiquarian, they described him as occupied with coins, and medals, and Druids' stones; these were then the characteristic records of the decipherable past, and it was with these that decipherers busied themselves. But now there are other relics; indeed, all matter is become such. Science tries to find in each bit of earth the record of the causes which made it precisely what it is; those forces have left their trace, she knows, as much as the tact and hand of the artist left their mark on a classical gem. It would

be tedious (and it is not in my way) to reckon up the ingenious questionings by which geology has made part of the earth, at least, tell part of its tale; and the answers would have been meaningless if physiology and conchology and a hundred similar sciences had not brought their aid. Such subsidiary sciences are to the decipherer of the present day what old languages were to the antiquary of other days; they construe for him the words which he discovers, they give a richness and a truth-like complexity to the picture which he paints, even in cases where the particular detail they tell is not much. But what here concerns me is that man himself has, to the eye of science, become "an antiquity." She tries to read, is beginning to read, knows she ought to read, in the frame of each man the result of a whole history of all his life, of what he is and what makes him so,—of all his forefathers, of what they were and of what made them so. Each nerve has a sort of memory of its past life, is trained or not trained, dulled or quickened, as the case may be; each feature is shaped and characterized, or left loose and meaningless, as may happen; each hand is marked with its trade and life, subdued to what it works in;—if we could but see it.

It may be answered that in this there is nothing new; that we always knew how much a man's past modified a man's future; that we all knew how much a man is apt to be like his ancestors; that the existence of national character is the greatest commonplace in the world; that when a philosopher cannot account for anything in any other manner, he boldly ascribes it to an occult quality in some race. But what physical science does is, not to discover the hereditary element, but to render it distinct,—to give us an accurate conception of what we may expect, and a good account of the evidence by which we are led to expect it. Let us see what that science teaches on the subject; and, as far as may be, I will give it in the words of those who have made it a professional study, both that I may be more sure to state it rightly and vividly, and because—as I am about to apply these principles to subjects which are my own pursuit—I would rather have it quite clear that I have not made my premises to suit my own conclusions.

1st, then, as respects the individual, we learn as follows:

"Even while the cerebral hemispheres are entire, and in

full possession of their powers, the brain gives rise to actions which are as completely reflex as those of the spinal cord.

"When the eyelids wink at a flash of light, or a threatened blow, a reflex action takes place, in which the afferent nerves are the optic, the efferent, the facial. When a bad smell causes a grimace, there is a reflex action through the same motor nerve, while the olfactory nerves constitute the afferent channels. In these cases, therefore, reflex action must be effected through the brain, all the nerves involved being cerebral.

"When the whole body starts at a loud noise, the afferent auditory nerve gives rise to an impulse which passes to the medulla oblongata, and thence affects the great majority of the motor nerves of the body.

"It may be said that these are mere mechanical actions, and have nothing to do with the acts which we associate with intelligence. But let us consider what takes place in such an act as reading aloud. In this case, the whole attention of the mind is, or ought to be, bent upon the subject-matter of the book; while a multitude of most delicate muscular actions are going on, of which the reader is not in the slightest degree aware. Thus the book is held in the hand, at the right distance from the eyes; the eyes are moved, from side to side, over the lines, and up and down the pages. Further, the most delicately adjusted and rapid movements of the muscles of the lips, tongue, and throat, of laryngeal and respiratory muscles, are involved in the production of speech. Perhaps the reader is standing up and accompanying the lecture with appropriate gestures. And yet every one of these muscular acts may be performed with utter unconsciousness, on his part, of anything but the sense of the words in the book. In other words, they are reflex acts.

"The reflex actions proper to the spinal cord itself are natural, and are involved in the structure of the cord and the properties of its constituents. By the help of the brain we may acquire an affinity of artificial reflex actions. That is to say, an action may require all our attention and all our volition for its first, or second, or third performance, but by frequent repetition it becomes, in a manner, part of our organization, and is performed without volition, or even consciousness.

"As everyone knows, it takes a soldier a very long time to

learn his drill—to put himself, for instance, into the attitude of 'attention' at the instant the word of command is heard. But, after a time, the sound of the word gives rise to the act, whether the soldier be thinking of it or not. There is a story, which is credible enough, though it may not be true, of a practical joker, who, seeing a discharged veteran carrying home his dinner, suddenly called out 'Attention!' whereupon the man instantly brought his hands down, and lost his mutton and potatoes in the gutter. The drill had been gone through, and its effects had become embodied in the man's nervous structure.

"The possibility of all education (of which military drill is only one particular form) is based upon the existence of this power which the nervous system possesses, of organizing conscious actions into more or less unconscious, or reflex, operations. It may be laid down as a rule, that if any two mental states be called up together, or in succession, with due frequency and vividness, the subsequent production of the one of them will suffice to call up the other, and that whether we desire it or not."*

The body of the accomplished man has thus become by training different from what it once was, and different from that of the rude man; it is charged with stored virtue and acquired faculty which come away from it unconsciously.

Again, as to race, another authority teaches:—"Man's life truly represents a progressive development of the nervous system, none the less so because it takes place out of the womb instead of in it. The regular transmutation of motions which are at first voluntary into secondary automatic motions, as Hartley calls them, is due to a gradually effected organization; and we may rest assured of this, that co-ordinate activity always testifies to stored-up power, either innate or acquired.

"The way in which an acquired faculty of the parent animal is sometimes distinctly transmitted to the progeny as a heritage, instinct, or innate endowment, furnishes a striking confirmation of the foregoing observations. Power that has been laboriously acquired and stored up as statical in one generation manifestly in such case becomes the inborn faculty of the next; and the development takes place in accordance with that law

* Huxley's "Elementary Physiology," pp. 284—286.

of increasing specialty and complexity of adaptation to external nature which is traceable through the animal kingdom; or, in other words, that law of progress from the general to the special in development which the appearance of nerve force amongst natural forces and the complexity of the nervous system of man both illustrate. As the vital force gathers up, as it were, into itself inferior forces, and might be said to be a development of them, or, as in the appearance of nerve force, simpler and more general forces are gathered up and concentrated in a more special and complex mode of energy; so again a further specialization takes place in the development of the nervous system, whether watched through generations or through individual life. It is not by limiting our observations to the life of the individual, however, who is but a link in the chain of organic beings connecting the past with the future, that we shall come at the full truth; the present individual is the inevitable consequence of his antecedents in the past, and in the examination of these alone do we arrive at the adequate explanation of him. It behooves us, then, having found any faculty to be innate, not to rest content there, but steadily to follow backwards the line of causation, and thus to display, if possible, its manner of origin. This is the more necessary with the lower animals, where so much is innate."*

The special laws of inheritance are indeed as yet unknown. All which is clear, and all which is to my purpose is, that there is a tendency, a probability, greater or less according to circumstances, but always considerable, that the descendants of cultivated parents will have, by born nervous organization, a greater aptitude for cultivation than the descendants of such as are not cultivated; and that this tendency augments, in some enhanced ratio, for many generations.

I do not think any who do not acquire—and it takes a hard effort to acquire—this notion of a transmitted nerve element will ever understand "the connective tissue" of civilization. We have here the continuous force which binds age to age, which enables each to begin with some improvement on the last, if the last did itself improve; which makes each civilization not a set of detached dots, but a line of color, surely enhancing shade by shade. There is, by this doctrine, a physical

* Maudsley on the "Physiology and Pathology of the Mind," p. 73.

cause of improvement from generation to generation: and no imagination which has apprehended it can forget it; but unless you appreciate that cause in its subtle materialism, unless you see it, as it were, playing upon the nerves of men, and, age after age, making nicer music from finer chords, you cannot comprehend the principle of inheritance either in its mystery or its power.

These principles are quite independent of any theory as to the nature of matter, or the nature of mind. They are as true upon the theory that mind acts on matter—though separate and altogether different from it—as upon the theory of Bishop Berkeley that there is no matter, but only mind; or upon the contrary theory—that there is no mind, but only matter; or upon the yet subtler theory now often held—that both mind and matter are different modifications of some one *tertium quid*, some hidden thing or force. All these theories admit—indeed they are but various theories to account for—the fact that what we call matter has consequences in what we call mind, and that what we call mind produces results in what we call matter; and the doctrines I quote assume only that. Our mind in some strange way acts on our nerves, and our nerves in some equally strange way store up the consequences, and somehow the result, as a rule and commonly enough, goes down to our descendants; these primitive facts all theories admit, and all of them labor to explain.

Nor have these plain principles any relation to the old difficulties of necessity and freewill. Every Freewillist holds that the special force of free volition is applied to the pre-existing forces of our corporeal structure; he does not consider it as an agency acting *in vacuo*, but as an agency acting upon other agencies. Every Freewillist holds that, upon the whole, if you strengthen the motive in a given direction, mankind tend more to act in that direction. Better motives—better impulses, rather—come from a good body: worse motives or worse impulses come from a bad body. A Freewillist may admit as much as a Necessarian that such improved conditions tend to improve human action, and that deteriorated conditions tend to deprave human action. No Freewillist ever expects as much from St. Giles's as he expects from Belgravia: he admits an hereditary nervous system as a *datum* for the will,

though he holds the will to be an extraordinary incoming "something." No doubt the modern doctrine of the "Conservation of Force," if applied to decision, is inconsistent with free will; if you hold that force "is never lost or gained," you cannot hold that there is a real gain—a sort of new creation of it in free volition. But I have nothing to do here with the universal "Conservation of Force." The conception of the nervous organs as stores of will-made power does not raise or need so vast a discussion.

Still less are these principles to be confounded with Mr. Buckle's idea that material forces have been the main-springs of progress, and moral causes secondary, and, in comparison, not to be thought of. On the contrary, moral causes are the first here. It is the action of the will that causes the unconscious habit; it is the continual effort of the beginning that creates the hoarded energy of the end; it is the silent toil of the first generation that becomes the transmitted aptitude of the next. Here physical causes do not create the moral, but moral create the physical; here the beginning is by the higher energy, the conservation and propagation only by the lower. But we thus perceive how a science of history is possible, as Mr. Buckle said—a science to teach the laws of tendencies—created by the mind, and transmitted by the body—which act upon and incline the will of man from age to age.

Part II

But how do these principles change the philosophy of our politics? I think in many ways; and first, in one particularly. Political economy is the most systematized and most accurate part of political philosophy; and yet, by the help of what has been laid down, I think we may travel back to a sort of "pre-economic age," when the very assumptions of political economy did not exist, when its precepts would have been ruinous, and when the very contrary precepts were requisite and wise.

For this purpose I do not need to deal with the dim ages which ethnology just reveals to us—with the stone age, and the flint implements, and the refuse-heaps. The time to which I would go back is only that just before the dawn of history—coeval with the dawn, perhaps, it would be right to say—for

the first historians saw such a state of society, though they saw other and more advanced states, too: a period of which we have distinct descriptions from eye-witnesses, and of which the traces and consequences abound in the oldest law. "The effect," says Sir Henry Maine, the greatest of our living jurists—the only one, perhaps, whose writings are in keeping with our best philosophy—"of the evidence derived from comparative jurisprudence is to establish that view of the primeval condition of the human race which is known as the Patriarchal Theory. There is no doubt, of course, that this theory was originally based on the Scriptural history of the Hebrew patriarchs in Lower Asia; but, as has been explained already, its connection with Scripture rather militated than otherwise against its reception as a complete theory, since the majority of the inquirers who till recently addressed themselves with most earnestness to the colligation of social phenomena, were either influenced by the strongest prejudice against Hebrew antiquities or by the strongest desire to construct their system without the assistance of religious records. Even now there is perhaps a disposition to undervalue these accounts, or rather to decline generalizing from them, as forming part of the traditions of a Semitic people. It is to be noted, however, that the legal testimony comes nearly exclusively from the institutions of societies belonging to the Indo-European stock, the Romans, Hindoos, and Slavonians supplying the greater part of it; and indeed the difficulty, at the present stage of the inquiry, is to know where to stop, to say of what races of men it is not allowable to lay down that the society in which they are united was originally organized on the patriarchal model. The chief lineaments of such a society, as collected from the early chapters in Genesis, I need not attempt to depict with any minuteness, both because they are familiar to most of us from our earliest childhood, and because, from the interest once attaching to the controversy which takes its name from the debate between Locke and Filmer, they fill a whole chapter, though not a very profitable one, in English literature. The points which lie on the surface of the history are these:—The eldest male parent—the eldest ascendant—is absolutely supreme in his household. His dominion extends to life and death, and is as unqualified over his children and their houses

as over his slaves; indeed the relations of sonship and serfdom appear to differ in little beyond the higher capacity which the child in blood possesses of becoming one day the head of a family himself. The flocks and herds of the children are the flocks and herds of the father, and the possessions of the parent, which he holds in a representative rather than in a proprietary character, are equally divided at his death among his descendants in the first degree, the eldest son sometimes receiving a double share under the name of birthright, but more generally endowed with no hereditary advantage beyond an honorary precedence. A less obvious inference from the Scriptural accounts is that they seem to plant us on the traces of the breach which is first effected in the empire of the parent. The families of Jacob and Esau separate and form two nations; but the families of Jacob's children hold together and become a people. This looks like the immature germ of a state or commonwealth, and of an order of rights superior to the claims of family relation.

If I were attempting for the more special purposes of the jurist to express compendiously the characteristics of the situation in which mankind disclose themselves at the dawn of their history, I should be satisfied to quote a few verses from the "Odyssey" of Homer:—

“ τοῖσιν δ' οὐτ' ἀγοραὶ βουλευφόροι οὔτε θέμιστες,
 θεμιστεύει δὲ ἕκαστος
 παίδων ἢ δ' ἀλόχων, οὐτ' ἀλλήλων ἀλέγουσιν.”

They have neither assemblies for consultation nor *themistes*, but everyone exercises jurisdiction over his wives and his children, and they pay no regard to one another.

And this description of the beginnings of history is confirmed by what may be called the last lesson of pre-historic ethnology. Perhaps it is the most valuable, as it is clearly the most sure result of that science, that it has dispelled the dreams of other days as to a primitive high civilization. History catches man as he emerges from the patriarchal state: ethnology shows how he lived, grew, and improved in that state. The conclusive arguments against the imagined original civilization are indeed plain to everyone. Nothing is more intelligible than a moral deterioration of mankind—nothing

than an æsthetic degradation—nothing than a political degradation. But you cannot imagine mankind giving up the plain utensils of personal comfort, if they once knew them; still less can you imagine them giving up good weapons—say bows and arrows—if they once knew them. Yet if there were a primitive civilization these things must have been forgotten, for tribes can be found in every degree of ignorance, and every grade of knowledge as to pottery, as to the metals, as to the means of comfort, as to the instruments of war. And what is more, these savages have not failed from stupidity; they are, in various degrees of originality, inventive about these matters. You cannot trace the roots of an old perfect system variously maimed and variously dying; you cannot find it, as you find the trace of the Latin language in the mediæval dialects. On the contrary, you find it beginning—as new scientific discoveries and inventions now begin—here a little and there a little, the same thing half-done in various half-ways, and so as no one who knew the best way would ever have begun. An idea used to prevail that bows and arrows were the “primitive weapons”—the weapons of universal savages; but modern science has made a table,* and some savages have them and some have not, and some have substitutes of one sort and some have substitutes of another—several of these substitutes being like the “boomerang,” so much more difficult to hit on or to use than the bow, as well as so much less effectual. And not only may the miscellaneous races of the world be justly described as being upon various edges of industrial civilization, approaching it by various sides, and falling short of it in various particulars, but the moment they see the real thing they know how to use it as well, or better, than civilized man. The South American uses the horse which the European brought better than the European. Many races use the rifle—the especial and very complicated weapon of civilized man—better, upon an average, than he can use it. The savage with simple tools—tools he appreciates—is like a child, quick to learn, not like an old man, who has once forgotten and who cannot acquire again. Again, if there had been an excellent aboriginal civilization in Australia and America, where, botan-

* See the very careful table and admirable discussion in Sir John Lubbock's “Pre-Historic Times.”

ists and zoologists ask, are its vestiges? If these savages did care to cultivate wheat, where is the wild wheat gone which their abandoned culture must have left? If they did give up using good domestic animals, what has become of the wild ones which would, according to all natural laws, have sprung up out of them? This much is certain, that the domestic animals of Europe have, since what may be called the discovery of the *world* during the last hundred years, run up and down it. The English rat—not the pleasantest of our domestic creatures—has gone everywhere; to Australia, to New Zealand, to America: nothing but a complicated rat-miracle could ever root him out. Nor could a common force expel the horse from South America since the Spaniards took him thither; if we did not know the contrary we should suppose him a principal aboriginal animal. Where then, so to say, are the rats and horses of the primitive civilization? Not only can we not find them, but zoological science tells us that they never existed, for the “feebly pronounced,” the ineffectual, marsupials of Australia and New Zealand could never have survived a competition with better creatures, such as that by which they are now perishing.

We catch then a first glimpse of patriarchal man, not with any industrial relics of a primitive civilization, but with some gradually learnt knowledge of the simpler arts, with some tamed animals and some little knowledge of the course of nature as far as it tells upon the seasons and affects the condition of simple tribes. This is what, according to ethnology, we should expect the first historic man to be, and this is what we in fact find him. But what was his mind; how are we to describe that?

I believe the general description in which Sir John Lubbock sums up his estimate of the savage mind suits the patriarchal mind. “Savages,” he says, “unite the character of childhood with the passions and strength of men.” And if we open the first record of the pagan world—the poems of Homer—how much do we find that suits this description better than any other. Civilization has indeed already gone forward ages beyond the time at which any such description is complete. Man, in Homer, is as good at oratory, Mr. Gladstone seems to say, as he has ever been, and, much as that means, other and better

things might be added to it. But after all, how much of the "splendid savage" there is in Achilles, and how much of the "spoiled child sulking in his tent." Impressibility and excitability are the main characteristics of the oldest Greek history, and if we turn to the east, the "simple and violent" world, as Mr. Kinglake calls it, of the first times meets us every moment.

And this is precisely what we should expect. An "inherited drill," science says, "makes modern nations what they are; their born structure bears the trace of the laws of their fathers;" but the ancient nations came into no such inheritance; they were the descendants of people who did what was right in their own eyes; they were born to no tutored habits, no preservative bonds, and therefore they were at the mercy of every impulse and blown by every passion.

The condition of the primitive man, if we conceive of him rightly, is, in several respects, different from any we know. We unconsciously assume around us the existence of a great miscellaneous social machine working to our hands, and not only supplying our wants, but even telling and deciding when those wants shall come. No one can now without difficulty conceive how people got on before there were clocks and watches; as Sir G. Lewis said, "it takes a vigorous effort of the imagination" to realize a period when it was a serious difficulty to know the hour of day. And much more is it difficult to fancy the unstable minds of such men as neither knew nature, which is the clock-work of material civilization, nor possessed a polity, which is a kind of clock-work to moral civilization. They never could have known what to expect; the whole habit of steady but varied anticipation, which makes our minds what they are, must have been wholly foreign to theirs.

Again, I at least cannot call up to myself the loose conceptions (as they must have been) of morals which then existed. If we set aside all the element derived from law and polity which runs through our current moral notions, I hardly know what we shall have left. The residuum was somehow, and in some vague way, intelligible to the ante-political man, but it must have been uncertain, wavering, and unfit to be depended upon. In the best cases it existed much as the vague feeling

of beauty now exists in minds sensitive but untaught; a still small voice of uncertain meaning; an unknown something modifying everything else, and higher than anything else, yet in form so indistinct that when you looked for it it was gone—or if this be thought the delicate fiction of a later fancy, then morality was at least to be found in the wild spasms of "wild justice," half punishment, half outrage—but anyhow, being unfixed by steady law, it was intermittent, vague, and hard for us to imagine. Everybody who has studied mathematics knows how many shadowy difficulties he seemed to have before he understood the problem, and how impossible it was when once the demonstration had flashed upon him, ever to comprehend those indistinct difficulties again, or to call up the mental confusion that admitted them. So in these days, when we cannot by any effort drive out of our minds the notion of law, we cannot imagine the mind of one who had never known it, and who could not by any effort have conceived it.

Again, the primitive man could not have imagined what we mean by a nation. We on the other hand cannot imagine those to whom it is a difficulty; "we know what it is when you do not ask us," but we cannot very quickly explain or define it. But so much as this is plain, a nation means a like body of men, because of that likeness capable of acting together, and because of that likeness inclined to obey similar rules; and even this Homer's Cyclops—used only to spare human beings—could not have conceived.

To sum up, law—rigid, definite, concise law—is the primary want of early mankind; that which they need above anything else, that which is requisite before they can gain anything else. But it is their greatest difficulty, as well as their first requisite; the thing most out of their reach, as well as that most beneficial to them if they reach it. In later ages many races have gained much of this discipline quickly, though painfully; a loose set of scattered clans has been often and often forced to substantial settlement by a rigid conqueror; the Romans did half the work for above half Europe. But where could the first ages find Romans or a conqueror? Men conquer by the power of government, and it was exactly government which then was not. The first ascent of civilization was at a steep gradient, though when now we look down upon it, it seems almost nothing.