or later, however, the reverse process of Dissolution, with its absorption of motion and disintegration of matter, which indeed has always been going on to some extent, must prevail, and these oscillations of the cosmic process will continue with­out end.

It appears, therefore, that Spencer ultimately describes the Knowable in terms of the mechanical conceptions of matter and motion, and that this must give a materialistic colouring to his philosophy. There are, however, other flaws also in his procedure. The presence of Force, *i.e.* his version of the methodological assumption of constancy in the quantitative aspects of phenomena, seems a very unsuitable basis for a philosophy of progress. To such a philosophy a consideration of the conditions, if any, under which progress can be conceived as ultimately real, seems a necessary preliminary, which Spencer omits. He also assumes that “ Evolution ” is a real, nay, an ultimate law of nature, but his evidence only goes to show that it is a result, in some cases, of the complex interaction of laws, which, like Rhythm, Segregation, &c., are in their turn only tendencies, and may be, and often are, counteracted. By the afterthought of a “ dissolution ” process (2nd ed. of *First Principles)* Spencer in a way admits this, but introduces fresh difficulties as to its relation to “ Evolution.” If the two processes go on together both are tendencies, and whether there is on the whole progress or not will depend on their relative strength; neither can be universal, nor the “law” of cosmic existence, unless its coexisting rival is regarded as essentially secondary. But if so it ceases to be available as evidence of a coming reversal of the dominant process. If, on the other hand, the processes are strictly alternative, a world which *ex hypothesi* exemplifies the one can never justify us in inferring the other. Spencer appeals alternately to the “ instability of the homogeneous ” and the impossibility of complete equilibration to keep up the cosmic see-saw, but he can do so only by confining himself to a *part* of the universe. A world *wholly* homogeneous or equilibrated could no longer change, while so long as a part only is in process, the process cannot be repre- sented as universal. Again, an infinite world cannot be *wholly* engaged either in evolution or in dissolution, so that it is really unmeaning to discuss the universality of the cosmic process until it is settled that we have a universe at all, capable of being con- sidered as a whole. In the last resort, therefore, Spencer fails to deduce philosophically not only the necessity of progress, but also its compatibility with the evolution-dissolution oscillation, and even the general possibility of conceiving the world as a process. In other words, in spite of his intentions he does not succeed in giving a metaphysic of evolutionism.

In the *Principles of Biology* the most notable points are the definition of life as the continuous adjustment of internal to external relations, and the consequent emphasis on the need of adapting the organism to its environment. This exaggerates the passivity of life, and does not sufficiently recognize that the higher organisms largely adjust external to internal relations and adapt their environment to their needs. His universal process of Evolution seems to give Spencer a criterion of “ higher ” and “ lower ” “ progression ” and “ degeneration,” independent of the accidents of actual history, and unattainable by strictly Darwinian methods. The higher (at least in times of “ evolution ”) is the more complex and differentiated, whether it invariably survives or not. On the other hand, he advances too easily from the maxim that function is prior to, and makes, structure to the conclusion that the results of use and disuse are therefore immediately incarnated in structural adaptations capable of hereditary transmission. This inference has involved him in much controversy with the ultra-Darwinians of Weis- mann’s school, who deny the possibility of the inheritance of acquired characteristics altogether. And though Spencer’s general position—that it is absurd to suppose that organisms after being modified by their life should give birth to offspring showing no traces of such modifications—seems the more philo- sophic, yet it does not dispose of the facts which go to show that most of the evidence for the direct transmission of adaptations is illusory, and that beings are organised to minimize the effects of fife on the reproductive tissues, so that the transmission of the effects of use and disuse, if it occurs, must be both difficult and rare—far more so than is convenient for Spencer’s psychology.

In his *Principles of Psychology* Spencer advocates the genetic explanation of the phenomena of the adult human mind by reference to its infant and animal ancestry. On the fundamental question, however, of the psychophysical connexion and the derivation of mind from matter, his utterances are neither clear nor consistent. On the one hand, his whole formu- lation of Evolution in mechanical terms urges him in the direc- tion of materialism, and he attempts to compose the mind out of homogeneous units of consciousness (or “ feeling ”) “ similar in nature to those which we know as nervous shocks; each of which is the correlative of a rhythmical motion of a material unit or group of such units ” (§ 62). On the other hand, when pressed by his disciple, Fiske (*Outlines of Cosmic Philosophy* ii. p. 444), he is ready to amend *nervous* into *psychical* shocks, which is no doubt what he ought to have meant but could not say without ruining the illusory bridge between the psychical and the physiological which is suggested in the phrase “ nervous shock.” And he admits (§ 63) that if we were compelled to choose between translating mental phenomena into physical and its converse, the latter would be preferable, seeing that the ideas of matter and motion, merely symbolic of unknowable realities, are complex states of consciousness built out of units of feeling. But easiest of all is it to leave the relation of the unknowable “ substance of Mind ” to the unknowable “ substance of Matter ” (substance he throughout conceives as the unknowable substrate of phenomena) to the Unknowable, as he finally does. To the theory of knowledge Spencer contributes a “ transfigured realism,” to mediate between realism and idealism, and the doctrine that “ necessary truths,” acquired in experience and congenitally transmitted, are a priori to the individual, though a posteriori to the race, to mediate between empiricism and apriorism. It has already been explained, however, that the biological foundations of the latter doctrine are questionable.

In the *Principles of Sociology* Spencer’s most influential ideas have been that of the social organism, of the origination of religion out of the worship of ancestral ghosts, of the natural antagonism between nutrition and reproduction, industrialism and warfare. Politically, Spencer is an individualist of an extreme *laissez faire* type, and it is in his political attitude that the consequences of his pre-Darwinian conception of Evolution are most manifest. But for this he would hardly have estab- lished so absolute an antithesis between industrial and military competition, and have shown himself readier to recognize that the law of the struggle for existence, just because it is universal and equally (though differently) operative in every form of society, cannot be appealed to for guidance in deciding between the respective merits of an industrial or military and of an individualist or socialist organization of society.

In the *Principles of Ethics* Spencer, though relying mainly on the objective order of nature and the intrinsic consequences of actions for the guidance of conduct, conceives the ethical end in a manner intermediate between the hedonist and the evolu­tionist. The transition from the evolutionist criterion of survival—which in itself it is difficult to regard as anything but non-moral—to the criterion of happiness is effected by means of the psychological argument that pleasure promotes function and that living beings must, upon pain of extinction, sooner or later take pleasure in actions which are conducive to their survival. Hence pleasure is, on the whole, good, and asceticism reprehensible, although in man’s case there has arisen (owing to the rapidity of evolution) a certain derangement and diver- gence between the pleasant and the salutary (§ 39). Nevertheless pleasure forms an “ inexpugnable element ” of the moral aim (§ 16). Conduct being the adjustment of acts to ends, and good conduct that which is conducive to the preservation of a pleasurable life in a society so adjusted that each attains his happiness without impeding that of others, life can be