

*Geist und Körper, Seele und Leib.* LUDWIG BUSSE. S. 482. Leipzig, 1903.

The author has already taken an active part in this 'Streitfrage' by articles in the *Zeitschrift für Philosophie und philosophische Kritik*, of which he is the editor, as well as in several brochures bearing directly on the subject. In this work he has undertaken two main tasks: (1) To give a statement of all the possible theories relating to the connection between mind and body, and (2) to establish his own theory which is that of interactionism and simultaneously to refute the various forms of the rival hypothesis of parallelism. The first task is performed very carefully and impartially. As to the execution of the second, we cannot think that the author has been more successful than on previous occasions in driving parallelism from the field.

Having proved to his own satisfaction that parallelism cannot be put forward merely as a working hypothesis, but that it involves a metaphysical doctrine; further that the parallelism between physical and psychical must be of a thorough-going and universal character, which brings with it as a necessary consequence panpsychism; and that it is most in harmony either with a realistic monism such as Spinoza's or with a complete dualism (pp. 67-118), Professor Busse proceeds to a detailed examination of the doctrine extending over two hundred and fifty pages. The assertion put forward by Paulsen, amongst others, that psychophysical parallelism is a necessary consequence of critical phenomenalism or transcendental idealism, he regards so far from being established that he considers it may be questioned whether the two doctrines are mutually compatible. But the argument that critical idealism, by making the material world a phenomenon of mind, cuts at the root of the parallelism which was designed to meet the difficulty of the connection between physical and psychical, there being then no longer two different 'things' to correlate, seems to prove too much. For it would follow similarly on any idealistic, just as on any materialistic basis, that there could then be no problem of interaction.

The modern interpretation of the principle of causation has been frequently held by recent writers to exclude the possibility of an interaction between physical or physiological events and psychical processes. The author, however, maintains that it is neither the causal principle nor the concept of causality in itself, but other principles which have been supposed to be inseparably connected with or else falsely identified with the causal principle, which have led to this inference. These are the principles of the conservation of energy and the self-containedness of physical causation. Before examining their

extent and validity, the weakness of parallelism is exposed by considering some of its inevitable consequences.

Amongst its unacceptable consequences are the automaton theory and psychological atomism ('pluralistische Seelenlehre,' p. 208 et seq.), the first of which cannot be escaped as some 'idealistisch-denkender Parallelister' would have us believe by a reference to the idealistic metaphysical foundation of their theories; nor by critical or neutral monism, which involves a perpetual oscillation between the idealistic and realistic standpoints according to the requirements of the situation (Riehl). The unity of consciousness, it is maintained, demands an unified subject, the basis of which is a soul-substance; and the author quotes with approval similar views of Professors James and Ladd. He endeavors, though not quite convincingly, to refute two objections against the substantiality of the soul, one of which urges that the soul itself must be extended, the other requiring a 'seat' of this substance. He points to the inconsistencies of thinkers like Wundt and Paulsen, who, while denying the substantiality of the soul, yet fall back on the unifying and all-inclusive will as the foundation of their idealistic theories (p. 339). For what else, as he asks pertinently is this 'einheitlicher Wille,' which both Wundt and Paulsen regard as the ultimate essence of men and things in general, than the soul-substance, the manifestations of which are psychical phenomena in another aspect (p. 339)? But, indeed, it would not be easy to say what exactly the views of Wundt are in regard to the problem under discussion. Passages could readily be quoted from his writings that would tend to support equally well both interactionism and parallelism.

The mind-stuff theory is according to Professor Busse an unavoidable consequence of psychophysical parallelism, and is escaped by Riehl, Ebbinghaus and Wundt only through inconsistencies (pp. 345-378). Though not maintaining that parallelism necessitates the postulate that 'die inhaltliche Bedeutung der psychischen Vorgänge sich auf der physischen Seite wiedergeben lassen muss,' he holds there is a residuum (*Rest*) remaining on the psychical side which can be correlated with nothing on the physical. This is the synthetic activity or function of consciousness. Now psychophysical parallelism, it is argued by the author, involves that mechanical associationist psychology which resolves, or at least attempts to resolve, the whole psychical activity into a mechanism of psychoses ('Psychomen'). And there further arises the difficulty of reconciling the independence of the laws of logical thought with physico-chemical uniformity. To attempt to solve this 'antinomy' by falling back on

an original preëstablished harmony between the physical and psychical series is, of course, hopeless. The alternative, however, of either surrendering the independence of logic or giving up parallelism, will scarcely be admitted by all parallelists—nor is it demanded by all critics of parallelism—just as they will certainly not universally accept the statement that a mechanical psychology and psychophysical parallelism necessarily go hand in hand.

Seeing that the theory of parallelism is pressed with such serious difficulties, the question naturally presents itself whether some other rival view cannot maintain itself better. Why not the 'Wechselwirkungslehre'? It is held by numerous investigators that certain fundamental propositions of physical science stand in the way of its acceptance, above all the principle of the conservation of energy and its corollary, the principle of the self-sufficiency of physical causation ('Geschlossenheit der Naturkausalität.') Now if it could be shown that these laws are reconcilable with the theory of the interaction of mind and body, then not only would the strongest objections to its acceptance be removed, but the strongest arguments for the contending theory of parallelism would be simultaneously undermined.

The author examines the principle of self-containedness of physical causation first, which we think is a reversal of the correct systematic order, it being ultimately based on the principle of the conservation of energy. That the former principle is not self-evident is obvious; nor is it, according to Professor Busse, 'der Ausdruck einer erfahrungsmässig feststehender Thatsache'; nor even 'ein auf Grund eines sicheren und unanfechtbaren Induktions-schlusses aus Thatsachen der Erfahrung abgeleitet' (p. 387); but a mere prejudice or dogma, nothing more than an article of some scientists' creed, which is not proved for organic changes. Indeed we are told that the attempted proof is in some cases a *petitio principii* (p. 398); and that the principle implies in addition the concept of a finite universe, 'eine abgeschlossene Totalität des Weltganzen,' a concept quite metaphysically transcendent.

In dealing with the principle of the conservation of energy, two interpretations of it are, says the author, to be noticed and distinguished: (1) Its assertion of the constancy of energy—'Konstanzprinzip,' (2) its assertion of equivalences of transformations of energy—'Äquivalenzprinzip.' The principle of the constancy of energy cannot be harmonized, as he frankly admits, with any form of the doctrine of interaction. He points out (1) the groundlessness of Stumpf's attempt to regard the psychical as itself a form of energy (to which also Külpe seems inclined), as well as (2) the impossibility

of introducing the idea of a 'Wirken ohne Energieveränderung,' from which result both the double-cause and the double-effect theories (pp. 417-437) and finally (3) the untenableness of the hypothesis suggested by Sigwart and recently more than once urged again, of a 'Richtungsänderung bestehender Bewegung (oder Energie) ohne Energiezuwachs,' according to which the soul might conceivably guide or set free potential energy without increasing its actually existing amount (M. Wentscher). But there is another way out of the apparent difficulty. For according to the author the constancy of energy depends solely on the 'Geschlossenheit der Naturkausalität,' which is not proved. And the first law itself is not capable of empirical verification; for no one can actually show that the energy of the universe is constant. If it fluctuated slightly in amount, who would be the wiser? On the other hand, the principle of the equivalences of energy is quite reconcilable with the theory of interactionism, since it involves no idea of an 'abgeschlossene Totalität der Natur." Like all other laws of nature, says Professor Busse, it leaves the question undetermined what takes place when, instead of body acting on body, body acts on a soul or *vice versa*. The principle of equivalences merely asserts that where reciprocity of action exists between material things, whatever quantity of physical energy is used, is supplied (or replaced) by an equal amount of physical energy or of 'some other kind' of energy! But what sort of energy will that be which is not physical? Having once dismissed the concept of psychical energy, of which we can speak indeed only through a metaphor, as well as the idea of 'Richtungsänderung ohne Energievermehrung,' how is it possible to harmonize the 'Einwirkung des Psychischen' with the principle of equivalences or with the principle of excluded perpetuum mobile? The author's views assuredly require some further elucidation on this point. He inclines to the view which limits the validity of the last-mentioned principle to the sphere of inorganic phenomena; from which it appears to us that he fails to understand its intimate connection with the principle of the conservation of energy. Finally, notwithstanding his polemic against metaphysical propositions and dogmas, he has resort to a supernatural agency, which is one of those scientifically uncontrollable principles that will do almost anything you please. "Sicher wird der Weltgeist, wenn er der Welt im Momente, da sie stille steht, einen neuen Anstoss geben will, sich weder durch den Respekt vor dem Grundsatz der Unmöglichkeit des Perpetuum mobile, noch durch die Pariser Akademie, welche diese Unmöglichkeit aussprach, daran hindern lassen" (p. 473). As if the sole founda-

tion for this principle were a mere dictum of the French Academy of the year 1775! The author's utterances can hardly be held to be a philosophical refutation of a scientific principle; nor can his concept of a 'Weltgeist,' implying as it does that of a 'Weltganzes' also, be considered less metaphysical and dogmatic or better established than those interpretations of the principle of the conservation of energy which he sets aside.

The limitation of the perpetuum mobile principle to inorganic phenomena stands at the present time for a mere possibility which finds much of its support in the existing ignorance of the exact relations between organic and more especially between cerebral changes. Admitting what seems a rational requirement, that where psychical processes manifest themselves in connection with organic changes the latter must differ somewhat in character from those cases of physical change where no psychical factors appear, still this would by no means imply as a probable consequence that, in regard to the conservation of energy, brain changes differ in principle either from those occurring in other parts of the human organism or from those of a physico-chemical nature. No actual observations are forthcoming to render such a supposition plausible. The principle of the conservation of energy embraces the totality of measurable phenomena, and an ineluctable consequence of it is, that physical effects must be referred exclusively to physical causes by which they are completely determined. To put forward the last statement as, at least, a heuristic principle is certainly legitimate until a negative instance is indubitably established, *i. e.*, until either it is shown to be impossible to discover the physical causes of observed physical changes or a definite case of the interaction of psychical factors is proved. Professor Busse does not maintain that either has, as yet, been accomplished. The telegram-argument already urged by the author on previous occasions and again repeated (pp. 310-321) is assuredly over-worked as an argument for the indispensableness of a soul-substance, which would resolve the supposed difficulty only by introducing another.

To conclude, the arguments of the book, if not always convincing, are on the whole clearly presented, and the tone of the criticisms is objective. The style is rather diffuse, and there is some unnecessary repetition of the arguments. It is noticeable that Professor Ward's instructive discussion of psychophysical parallelism (*Naturalism and Agnosticism*, Vol. II.) is not mentioned; although the standpoints of the two thinkers seem in many respects essentially similar.