

an introduction to the more precise investigation, by means of laboratory and personal methods, which the topic demands. But even with such modest pretensions the book does good service, for it presents many subtle and ingenious ideas. The first part, devoted to memory, includes musicians, poets and orators. M. Arréat examines them in turn on motor, visual, auditory, emotional, and intellectual memory.

It is impossible to sum up briefly so many facts, but we may note in passing that Victor Hugo had enormous command of verbs, but no exceptional stock of qualifying adjectives of a visual kind.

The second part, devoted to imagination, appears to be quite as interesting as the first, and newer. He includes under imagination the facts of manual skill, the movement-memories of the fingers of the designer, the rich verbal flow of the orator, the incidents of his piece in the case of the dramatist. Then he describes the creation of a work of art (p. 127): 1. The conception, whether conscious or not, finished or not; 2. The execution, which is not alone the development of the thought: it reacts upon the thought and modifies it; 3. The emotional state which accompanies the execution; 4. The critical judgment by which the author accepts or rejects what comes to him; 5. A certain doubling of consciousness which results in two different attitudes of mind. Finally, the author draws an interesting analogy between imagination and delirium, and shows that the difference resides in the evident control by the intelligence in the former.

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In what Sense are Psychical States Extended? F. H. BRADLEY. *Mind*, N. S., IV, 225-235. April, 1895.

In a previous article Mr. Bradley discussed the intensity of mental states, maintaining that they possessed degree in various respects, and were in principle, if not in actual practice, measurable quantities. Incidentally he asserted that they, or at least some of them, possessed extensive quantity as well (see this REVIEW, II, 319). To this last point he now recurs. The general principle is that ultimately everything is psychical; but for the purposes of the discussion the less sweeping form of statement is adopted—that any feature of content which makes the meaning of an idea must be present psychically. It is on this principle that mental states are said to have weight and odor, to be long and broad. In what sense, then, is the extension which is predicated of a physical object also in the soul? It is true the physical extended is not present psychically in its full process, and there may even be doubts as to the

extent to which we possess the abstract feature of its extension ; still, up to a certain point at least, the extension which we have psychically present is the same as that which qualifies nature. The objection that if psychical states are extended they will collide with one another or with other extended things, is groundless. Spatial things need not be related spatially at all. The soul contains many disparate extensions. Is, then, the soul extended? In respect of certain of its states, the answer must be as given ; but in itself, and as a whole, the answer is emphatically, No. For extension is for it not an all-pervasive, but only a particular and subordinate quality ; whereas in the physical world it is taken as primary and predominant.

By way of appendix, Mr. Bradley formulates his doubts respecting the 'extensity' regarded by James and Ward as lying at the basis of our perceptions of space. These writers, he says, unite in what are perhaps two errors : claiming to observe extensity as a fact and denying in effect all non-extensive volume. Volume, he finds, indeed, everywhere, but either as implying space outright or as involving something less than extensity. By extensity he apparently understands the quality of 'side-by-sideness.' Nevertheless, while declining to identify volume with extensity, he goes on to mention two aspects of volume—viz., 'its intensiveness and its extent' as present and given, but not distinguished and developed, even in *mere* volume. But is not this undistinguished and undeveloped aspect of extent present, as Mr. Bradley implies, in all sensations, precisely what Ward, wrongly, perhaps, denying plurality to the intensive aspect, means by that 'latent or merged plurality' by which he defines 'extensity?' Whether extensity, in this sense, can be now observed is a separate question. Mr. Bradley admits that some such quality must be postulated.

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EXPERIMENTAL.

Ueber die Beeinflussung einfacher psychischer Vorgänge durch körperliche und geistige Arbeit. SIEGFRIED BETTMANN. Psychol. Arbeiten, I, 152-208. 1895.

Herr Bettmann's paper is a study of the mental fatigue effect of physical and psychical work. To secure uniform conditions, the experiments were all made immediately after awaking, the duration of sleep being carefully regulated. The subject (the author himself) arranged his mode of life methodically, avoiding any excite-