"THE PSYCHOLOGICAL THEORY OF EXTENSION."

I. By Prof. WILLIAM JAMES.

Since even the worm will 'turn,' the space-theorist can hardly be expected to remain motionless when his Editor stirs him up. Had I seen my July *MIND* earlier than I did, these remarks would have been in time for the October number. Appearing in January, I can only hope that the reader may not regard them as reviving an issue that is stale. The Editor, in his observations on "The Psychological Theory of Extension" in No. 51, made, as it seems to me, some *admissions* that ought to be recorded, as well as some *assumptions* that ought to be questioned, in the interests of clear thinking, in this dark field. One admission (if I rightly understand page 420) amounts to nothing less than giving up the whole positive and constructive part of the Brown-Bain-Spencer-Mill theory of Space-perception, and confessing that the criticisms usually made upon it are fatal. That theory contends that a variety of intensive elements can, by grouping [association] assume in consciousness the appearance of an extended order. "How is the transformation to be effected? or rather, can it in any way be effected?" asks the Editor. "I do not know that it can," he replies, "if sought for upon that line." As the account of Space-perception by these authors is usually reckoned one of the greatest triumphs of the Analytic School of Psychology, this defection, by a writer whose general tendencies are loyal to the school, is worthy of emphatic notice. The Editor's second admission is, that, if we could suppose ourselves reduced to the eye with its exploratory movements as our sole and only means of constructing a spatial order, such a construction might come to pass (p. 424)—an admission quite at variance with the widely prevalent notion that analytic psychology has proved the space-perceptions of the eye to be but reproduced experiences of touch and locomotion. So many doctrines reign by the mere inertia of supposed authority, that when, as in these two points, the chain of authority gets broken, public attention should be drawn to the fact.

The chief *assumption* of the Editor's which I wish to question is his proposition that, although experiences of an intensive order will not by *themselves* acquire the extensive character, they will yet, if so experienced as to be referred to an *objet* (in the sense of "bare obstacle to muscular activity of a touching organ"), begin to assume that character. If we construe this view definitely, everything about it seems to me questionable. Either the obstacle feels big originally or it does not. If it have originally no bigness, the same difficulty arises which the Editor admits to be fatal to ordinary theory: how can intensive elements be transformed into an extensive result? If, on the contrary, the obstacle have a sensible bigness, then, of course, that would explain how the touch of it, the look of it, or any other sensation

which the mind incorporates in it, should share the bigness and appear itself extended. But then the question would arise—Why on earth should this feeling of muscular resistance be the only one which originally comes to us with a bigness? What grounds *a posteriori* or *a priori* can we show for assigning to it so pre-eminent an advantage, in the teeth of all the spontaneous appearances, which make us feel as if the blueness of the sky were spread out in itself, and as if the rolling of the thunder or the soreness of an abscess were intrinsically great? But the Editor keeps his whole account so studiously and cautiously vague that I confess I find it hard to construe his obstacle-object as definitely as this. It must, he says, not be treated as external “at the outset,” for the mere experience of resisted muscular activity is analysable into elements “which are found to be merely intensive—intensity of passive touch varying with intensity of effort” (p. 421). Nevertheless touch and effort are so related as to “suggest a cleft in conscious experience, which has but to be widened and defined for the opposition of self and not-self to be established”. It is when referred to the “not-self” of the experience thus defined that the originally intensive qualities of touch, look, sound, &c., begin, according to the Editor, to appear extended, and finally become more definitely extended in proportion as the resisting body gets more definitely to seem external.

Such accounts, however vaguely expressed, are indubitably true, if one goes far enough back in time. Since things are perceived later which were not perceived earlier, it is certain *a priori* that there was a moment when the perception of them began; and we are, therefore, sure in advance, of being right, if we say of any perception that first it didn't exist, and that then there was a mere suggestion and nascency of it, which grew more definite, until, at last, the thing was fully established. The only merit of such statements lies in getting them historically exact, and in determining the very moment at which each successive element of the final fact came in. Science can never *explain the qualities* of the successive elements, if they show new qualities, appearing then for the first time. It can only name the moment and conditions of their appearance, and its whole problem is to name these aright. Now, we probably all agree that the *condition* of our perceiving the quality of bigness, the extensive quality, in any sensible thing is some peculiar process in our brain at the moment. But whereas, in the articles which the Editor criticises, I maintained that the *moment* is the very first moment in which we get a sensation of any sort whatever, the Editor contends possibly that it is the first time we have the feeling of resisted muscular effort, but more probably (as I read his text) that it is much later in the day, after many sensations, all purely “intensive,” have come and gone. In my articles I have given (with probably far too great prolixity) the grounds for the date which I assign, and criticised the grounds given by Wundt and

Helmholtz for the later one which they prefer. I miss in the Editor's remarks (as in all English writings upholding the same view) any attempt at explicit proof that the earlier date is impossible, and that sensations cannot come with any apparent bigness when they first appear. May not the supposed impossibility be rather an assumption and a prejudice, due to uncriticised tradition? If there be definite reasons for it in the Editor's mind, I hope sincerely that he will publish them without delay. But if, on the contrary, a mere dim bigness *can* appear in all our first sensations, then the date of its appearance is most probably then; for discriminations, associations and selections among the various bignesses, occurring later on, will perfectly explain (as I have tried to show) how the definitive perception of real outer space and of the bodies in it grows up in the mind. Eye-experience, touch-experience and muscular experience go on abreast in this evolution, and their several objects grow intimately identified with each other. But I fail to see in this fact any reason for that *dependence* of the visual space-feelings "on a tactile base," such as my critic in his last paragraph seems to find. One who asks a blind person to compare pasteboard angles and the directions of their sides with each other, and who observes the extraordinary inferiority of his tactile perceptions to our visual ones, will be very loth to believe that the latter have the former for their base.

I am at a loss to know who the Editor means by the theorists ("space-theorists generally," he calls them) who commit the mistake of "seeking for an extension that is extension of nothing at all". Certainly this mistake cannot be imputed to anyone who, like myself, holds extension to be coeval with sensation. The matter of the sensation must always be there to fill the extension felt. The extension is of the warmth, the noise, the blue luminosity, the contact, the muscular mass contracting, or whatever else the phenomenon may be.

Still other points do I find obscure in the Editor's remarks—obscure, I am sure, from no other reason but the brevity to which he has confined them. May he be enabled soon to set them forth at fairer length!

II. By JAMES WARD.

Though on the first appearance of the Editor's criticism of the theory of space-perception upheld by Prof. James and myself I did not fail to take his strictures duly to heart, it seemed then better to leave the reply to Prof. James as one not only more able than myself to take up the cudgels in its behalf, but as one also with more claim to reply in this place; inasmuch as the preceding volume (xii.) of *MIND* is adorned by his long and masterly expositions of the theory. Moreover, I had then some hopes of following suit on my own account with a new state-