

NORMAL ILLUSIONS.

Normal Illusions in Representative Geometrical Forms. MABEL CLARE WILLIAMS. Univ. of Iowa Stud. in Psych., 1902, III., 38-139.

This article is a coping stone to the investigations on normal illusions latterly conducted at Iowa. It distinguishes and measures the effects of the visual illusions of length, of the vertical, of cylinder length, area and volume; all or some of which frequently coöperate to produce the mental misjudgment, though counteracted by the Müller-Lyer effect in certain forms. The research is based on ten fundamental forms of lustreless black tin, some of which appear in combined forms; on outline forms on black cardboard; and on familiar extra-laboratory objects. The author studied different methods (selection, production, primary position of regard, sidewise and downward regard); different distances; different dimensions of lines and squares; different classes of observers (the two sexes, youths, adults); different conditions, grades of intelligence, naïve and practice estimations, etc. The matter is arranged chronologically in eleven series, not logically under a minimum of captions. In the present case there seem good reasons for adopting this plan: the results are amenable to genetic interpretation; they can be employed for mutual corroboration, and the tabular records allow of a higher degree of completeness. A final exhaustive table of summaries is reproduced, and, in general, the tables are so complete that they may be used by other investigators. Numerous summaries are introduced with good effect.

Some of the important conclusions arrived at by the author are as follows: area, volume, cylinder length and 'length' illusions (sometimes merely associational) exist independently of, and often in greater intensity than, the well-known illusion of the vertical, and are usually in the nature of overestimations; the illusion of the vertical is strongest for the line; lines (or areas) occurring in a series of lines (or areas) are underestimated; the verticality of an area appears higher than that of a line; the horizontal direction of cubes and plates appears relatively bigger than the vertical, with respect to compared lines and plates; the illusions persist in merely representative objects, affect objects of different kinds, forms, sizes, complexity and remoteness, and are undimmed by practice.

In the final table the results are in terms of the horizontal line; the isolated-line criterion seems preferable to the plate, used in the early part to evaluate the cylinder length illusion: it represents the minimum of sensation stuff, with some element common to all forms;

and it embodies the highest simplicity of illusion motive, viz., only the illusion of the vertical with the maximum of illusion effect.

Dr. Williams inclines toward a physiological theory in explanation, but does not indicate stages and factors or otherwise elaborate it.

The suggestion occurs that the volume illusion here discovered may furnish one motive by virtue of which planospectives appear enlarged when seen perspectively in stereoscopic projection. The monograph is careful and exhaustive, and the author has succeeded in unearthing new illusions of sight.

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L'Association médiate. H. PIÉRON. *Revue Philosophique*, 1903, XXVIII., pp. 142-149.

M. Piéron calls attention to the fact that all experimental investigators, save Scripture, deny the existence of mediate association, whereas Aschaffenburg, Féré and Claparède, on the ground of introspection or of statistical observation, admit its occurrence. He proceeds to comment upon the explanations offered of mediate association: Hamilton's illustration by the row of balls is a mere analogy, and Wundt's appeal to indistinct consciousness is a mere transposition of the problem. Piéron believes that both difficulties, that of establishing and that of explaining mediate association, are due to the inadequacy of the ordinary view of association as 'a unilinear chain of terms,' and to the effort to explain it by the mechanical 'law of contiguity.' As a matter of fact, he insists, (p. 145) association is merely 'a particular case of the general law of states of consciousness, and this is a law of synthetic affinity.' The law governing the occurrence of particular associations is that of their interest for the self. In mediate associations, Piéron believes, the suppressed terms are hidden in the subconscious depths of spirit (*les dessous conscients de l'esprit*), and call up ideas which appear in consciousness because they have for the self an interest superior to that of the evoking ideas. The reason why the experimenters have failed in their efforts to excite mediate associations is then simply this: the merely contiguous images which they seek to arouse have little significance for the self, and are not evoked by the subconscious ideas.

In all this, there seems to the present writer to be little of importance. The view of unilinear association, which Piéron rightly opposes, is not held by psychologists to-day; the principle of contiguity,