

of metaphysical inquiry that the special standpoints of different sciences have been generated. It becomes any science to cling to its limitations as its special opportunities, and psychology, having finally attained an individual status, would be better engaged in cherishing this golden egg than in bombarding with it the metaphysical goose that laid it.

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Experimentelle Beiträge zu einer Theorie des Denkens. HENRY J. WATT.
Archiv f. d. Gesamte Psychologie, Band IV., Heft 3. Würzburg.
Pp. 289-436.

This is a study of controlled association, a problem beset with many technical difficulties. Belonging to that class of problems whose practical approach is through the direct medium of speech, it is very dependent on the far from satisfactory methods of speech registration as yet available. The apparatus employed in this instance was of the usual form, including drop-screen, break-make relay, chronoscope and voice-key. The handling of this last instrument has been the Achilles' heel in much work done along these lines, nor, with all the careful handling of the remaining apparatus, do its limitations seem to have been fully taken into account. The promptitude with which this instrument registers the reaction varies considerably according to the phonological character of the initial of the reaction-word. A prompt break never occurs save with an initial explosive, and not always then. A more accurate and hardly less cumbersome form of apparatus would have been the Rosapelly laryngeal recorder, with a tambour for the breath stream of voiceless initials, recording on smoked paper.

The forms of association studied are: genus-species, species-genus, between coordinates, part-whole, whole-part, between parts of one whole. On the basis of the subjects' introspection three classes of reaction are noted. In class *A* there is a single movement from stimulus to reaction; and four subtypes are here distinguished, in which, between stimulus and reaction, there appears either a visual image, a word image, a vague hesitation, or nothing appreciable. The last mentioned, which is of rare occurrence, tends to be the shortest, but its other differentia are probably due to habits of imagery, so that it is doubtful whether it really forms a distinct type of association. In classes *B* and *C* the movement from stimulus to reaction is not single. In *B* the intervening element is highly indefinite, in *C* it is a definite object of an unsuccessful search. These tend to be longer than *A*, and *C* longer than *B*.

The proportion of mediate associations is very subject to individual difference, and also varies with the character of the control. A slight tendency to negative correlation in the number of the two types of mediate association seems to exist for all subjects. Phonetic lapses were frequently observed, and the phenomena of persistent association complicated the results to a slight extent. Throughout, however, the psychological limitations of the problem are only too apparent. The numbers of cases are necessarily small, and the mean variations large,

occasionally 30 per cent. of the average. Controlled association-time is eminently subject to individual differences in experience that can not be analyzed out objectively, and introspective evidence has but narrow limits of validity. The small number of words which it is possible to use as stimuli, and the large constant errors that are introduced if it is attempted to repeat them, constitute other grave difficulties. With whatever care experimental conditions may be observed, and with whatever fullness results are collated and presented, it does not seem probable that under present conditions the problems of controlled association offer other than negative results of value to experimental psychology.

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The Argument for Immortality. A. K. ROGERS. *International Journal of Ethics*, April, 1905. Pp. 323-338.

The motive of the article is to emphasize anew the importance of the idea of immortality for the moral and religious life in view of recent tendencies to assign it a place of but secondary importance. The exact meaning of the concept is not determined, the author confining himself wholly to a defense of its validity. No consideration is given to the argument from revelation, nor to that from spiritualistic phenomena; in the latter case, from the belief that 'the bad company which they keep must necessarily affect the reputation of such facts if not their character.' The metaphysical argument is recognized as invalidated by the passing of the old idea of a soul substance, and the conclusions of science are shown to be wholly negative with reference to the idea. The moral argument is the only effective one. The older form of this, in which the demand is made that happiness be proportioned to virtue, does not necessarily imply the bribe theory of goodness, but only our demand that reality recognize our moral judgments. And 'can virtue stand justified to our minds, except as it does find that external confirmation which immortality tries to postulate?' But, granted that the ethical life must be objectively vindicated, does this imply the stability of the individual life, or is the progress of the race sufficient for the purpose? Moral values are grounded in the relationship of persons and may be said to culminate in love. And 'in its inmost heart love is a relationship which does not stop with those universal qualities of a man which make him simply an actor in the world history. It clings to the very core of individuality itself, and will be satisfied with just this as a living and continuous person, whose place no one else can wholly take.' The demand for immortality is thus not a selfish one, but is the demand that the person whom we love be immortal. And, if we express the nature of God by love, 'could we really respect a God for whom love, or fellowship, meant merely a temporary or passing phase of his experience, whose object was called into existence only to be dismissed again from the scene?'

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