sound to be produced is necessary, since by it the correctness or incorrectness of the adjustment is chiefly to be judged. The child should be trained to observe, by direct feeling, how the mouth and throat are adjusted in speaking, for by means of these kinæsthetic images the movement is afterward produced. He should also know the form taken by the vocal organs in pronouncing the elements of speech, for by this means he is directly assisted in the production of the specific sounds desired.

The author does not propose the substitution of a radically new method in teaching, but only the introduction of a rational system of training in vocalization and articulation, in connection with the use of illustrated primers and photographs of the positions of the vocal organs in articulation. A plate of twelve such pictures accompanies the monograph.

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Die Ideenassoziation des Kindes. PROFESSOR ZIEHEN. Berlin, Reuther u. Reichard. 1898.

In his introduction Professor Ziehen reviews the experimental work done concerning the association of ideas in children, and gives full bibliographical references to researches upon the nature of association in general. The work reported on was confined to children from eight to fourteen years of age, and considered four things: the determination of the child's store of ideas; of the nature of associations resulting from a given initial idea; of the rapidity of the association process, and of the influence of special conditions, such as fatigue, upon the rapidity of association. The first inquiry was a preliminary one. Of the three principal questions of the investigation only that concerning the association process is taken up in the present monograph. The initial idea was suggested by an object seen, heard, or felt, or by a word. The words were arbitrarily chosen monosyllables, usually concrete ideas, with occasional terms of relation (*e. g.* 'similarity') of processes ('storm') and proper names.

Concerning the form of association the question of chief interest is whether the process of association in the child shows a greater or less tendency than in the adult to special fixed association groups.

Our earliest associations are, without exception, spatially and temporally determined individual ideas. From these are derived spatially and temporally indeterminate object ideas. In adults the word (except in the case of proper names) awakens throughout universal

ideas; to give individual worth it is necessary to add a definite article or pronoun. The author's distinction here is a logical one, but it is doubtful if such a discrimination between adult and child can be drawn psychologically. The image, or psychological representative, must be without exception a concrete image, definite or indefinite, derived from individual past experiences. Accompanying this psychological element, however, is the awareness that the image *means* a type and not an individual. But such knowledge of his meaning the child of eight already possesses. The truer distinction—and perhaps that intended—is that in the adult the concrete image has less localization; it hangs before the mind as an isolated thing, but not, therefore, as a universal.

Verbal associations were rare; only in one case were they frequent, where they formed twenty-four per cent. of the total. Among adults such forms are much richer and more frequent. Of verbal associations the most usual form was word-completing, *e. g.*, *Bett-federn*: *Post-Karte*, etc. Rhyme associations were rare, *Schlange*; *Zange*; *Fisch*; *Tisch*, etc., but individual cases were found with almost every child. One noticeable type smacks strongly of the school and its training, *e. g.*, *Bett* is written with 'tt'; *Macht* is written with a capital.

In the case of adults not only is the representative image of a concrete term a general one, but almost always the image which it calls up is likewise general. It is astonishingly different with the child. The author says: "I was prepared for a relative predominance of the individual association form. Of the degree of this prevalence I had not the slightest suspicion * * * Most of the children connected with almost every stimulus word an individual idea, and with this again an individual idea, and in many cases both were spatially determined." The percentage of individual associations decreases with the age of the child; in the third class it is seventy-two per cent.; in the first, sixty-two per cent.; among adults the author found it to be on the average ten per cent., in regard to analytic and synthetic associations the elementary idea never aroused another elementary hetero-sensorial idea (*e. g.*, *sweet white*). This is natural; it awakens always the totalized object association (*e. g.*, *sweet-sugar*); this point suggests such phenomena as colored hearing, of which the author makes no mention, and the question whether they are of later development and not present in the imagery of children of eight to fourteen years of age. The elementary idea arouses a composite image four times as often as a simple; the type is *red-blood*, not *red-green*. This also is natural; the child

finds red combined in the concrete with elements of the other senses constantly, but seldom with green. The composite idea arouses most frequently (59 % of all cases) as its associate another composite which bears no relation of partiality to the first (*e. g.*, *window-door*); next to this, but far behind, comes its association with a greater composite of which it is a part (*e. g.*, *window-wall*); very seldom is this latter relation reversed (*e. g.*, *window-window-sash*).

The visual type predominates much more than among adults. Affective partitive ideas are very rare (*e. g.*, *gut—nicht gut; thut Weh*; etc.). In spite of the variety of content the form of association is always *contiguity* in the wider sense. No case of pure (indisputable) association through resemblance was observed. Associates far fetched in space and time are found much oftener than with adults. With adults familiarity is predominant; with the child congruity plays a much greater rôle; on the other hand, distinctness and constellation bear a much less important part. In closing the author recalls again the difficulty in tracing all the linkages of association upon which the very form depends, since the child himself forgets, and the consequent need for extended and patient investigation for the determination of these problems.

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Psychologie collective et Psychologie individuelle. RENÉ WORMS.

Lecture delivered before the Paris Academy of Moral and Political Sciences, November 12 and 19, 1898. Pp. 35.

These are by no means the first helpful words which psychologists have received from this eminent French sociologist, but they contain the most pointed bit of advice which he has addressed to them directly.

Starting with a reference to the rapid growth of sociology in recent years, he passes with a word the evident dependence of sociology upon psychology, and proposes to trace the influence of sociology upon psychology, in the formation of a collective psychology and in modifying the psychology of the individual, and then to sketch the outline of a new psychology which would recognize these changes. He is not here concerned with the metaphysical reality of the collective mind, but with the scientific inquiry into the causes of such common phenomena as the mind of a nation, a family or a crowd. He finds two sets of influences always present, a common environment and the reciprocal influence of the members of a group upon one another. The soil, climate, and productions of a country, for instance, arouse numer-