

Some special tests were made on the unmusical observer, who used visualization. Her drawings of the movement of the variable tone agreed very well with the actual change.

In regard to the nature and course of the memory image the author draws these conclusions: The auditory memory image is but one part of a complex structure which represents the original experience. The memory image of a tone is not a tonal memory image; it is that and much more. The auditory image proper attains its maximal excellence about two seconds after the stimulus. It is in a very unsatisfactory condition at 40 seconds. The other constituents of the memory image do not necessarily follow the course of the auditory core; they may be serviceable for purposes of discrimination when the auditory image has disappeared entirely. Practice increases the serviceability of the image. The task of actively holding the image very soon develops a habit of imaging; the image, that is, of itself becomes so insistent that, when exclusion of the image is desired, very active attention to naturally powerful distractors is necessary. The presence of the auditory image is not necessary to the recognition of either difference or equality.

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*Ueber Vertheilung und Empfindlichkeit der Tastpunkte.* FRIEDRICH KIESOW. Philos. Stud., B. 19, 260-309.

This is a psycho-physiological study of 'touch spots' with special reference to the relation of tactile organs to hairs. It is a continuation of investigations begun at an earlier date in company with von Frey (*Zeitschr. f. Psych.*, 20, 126). Aside from a brief critical review of work done by Blix, Goldscheider and others the work is valuable chiefly for the large amount of carefully collected data. It contains twenty-seven tables, besides many columns of figures not included in the tables. For the purpose of close study the surface of the skin on different parts of the body was marked off into small areas, and a lens was used to locate the points, which were carefully marked when found. Pure tactile points not connected with hairs, were found on haired surfaces, but in comparatively small numbers. Individual differences are considerable, as might be expected from the great difference in the number and arrangement of hairs on different persons.