He experimented with coloured papers. The results, the author states, lend support to Nafe's view without proving it. He thinks three different interpretations are possible: (I) Affection is bright or dull pressure (Nafe's view); (2) affection is accompanied by bright or dull pressure (the author's view); (3) affection and bright and dull pressure depend upon identical processes in proprioceptive endorgans, but different attitudes of report.

A. Wohlegmuth.

A Study of Vocational Attitudes in Relation to Pubescence. (Amer. Fourn. Psychol., January, 1931.) Lehman, H. C., and Witty, P. A.

The writer presents several hypotheses as to the change of attitude to vocational desires at the approach of puberty.

A. Wohlgemuth.

The Retroactive Effect of Pleasant and Unpleasant Odours on Learning. (Amer. Journ. Psychol., January, 1931.) Frank, J. D. and Ludvigh, E. J.

The authors conclude that the degree of learning varies with the degree of pleasure and unpleasure of the odours, as judged by the observer, in such a way that the greater the pleasure, the better the learning, and the greater the unpleasure, the poorer the learning.

A. Wohlgemuth.

The Effect of Colour on Apparent Size. (Amer. Journ. Psychol., January, 1931.) Gundlach, C., and Macoubrey, C.

The results of this study reveal a marked and consistent effect of colour on apparent size, and this effect seems to be directly related to the luminosity of the colours involved.

A. Wohlgemuth.

Psychological Monographs, No. 187, 1931. University of Iowa. Studies in Psychology, No. XIV. Edited by Christian A. Ruckmick.

This number contains the following papers:

Voluntary Movements of the Organs of Speech in Stutterers and Non-stutterers. Blackburn, B.

Stutterers showed a marked inferiority to normal speakers in ability to execute rhythmical, voluntary movements of mid-line speech-structures in a non-speaking situation, especially voluntary movements of the tongue and diaphragm, and in a lesser degree of lips or jaws. There is no difference in other voluntary rhythmical movements such as those of arms or hand. It appears that several types may be differentiated among stutterers.

A Comparative Study of Affective Response by Means of the Impressive and Expressive Methods. Dysinger, D. W.

Words written on cards were presented to the observers. The observers had to indicate the feeling-tone they experienced by the

word or the situation called up by it. The reading of the psychogalvanic reflex was taken at the same time. The conclusions arrived at were as follows: There is a striking correspondence between the affective tone indicated in the deflection and that reported by the subjects in the majority of cases. In most of the remaining cases there is incomplete evidence of correspondence, and in a few cases it is entirely lacking.

## An Investigation of the Phenomena Connected with the Beating-Complex. Hange, J. B.

By the beating-complex is meant the experience associated with the simultaneous sounding of two notes of different pitch, but not too far apart from one another. As the difference in pitch increases it tends to give rise to the experience of smoothness and blending involved in consonance. Electrically-driven tuning-forks and Stern variators were used to produce the notes in this research. It was found that the quality of the beat is dependent upon both the relative and the absolute intensities of the primaries, and that it is necessary to control the intensity of the primaries when the effect of changes in the difference in frequencies on the quality of the beat is studied.

## Apparent Movement in Auditory Perception. Mathiesen, A.

As the results of previous workers seemed doubtful and even contradictory, the author set herself the task of finding reliable conditions for the  $\varphi$ -phenomenon in the auditory field. Under the carefully thought-out conditions of the experiment no compulsory conditions for apparent auditory movement were found. In so far as reports of movement were made, the range of interval within which such apparent movement occurred did not closely correspond to the range of phenomenal shortening of distance.

## A "Central" Explanation of Sound Localization. Ruckmick,

Auditory localization involves not only favourable physical conditions, but a definite mental set made up of an attentive attitude and the effect of practice. These critical attitudes, while best induced by certain physical conditions, cannot be referred entirely to any sensory process, but, it is suggested, can better be explained in terms of neurological conditions in the cortex and underlying levels as traces of past experience in the individual and in the race which interpret the present perceptual occurrence.

## Variations in the Galvanic Response. Smith, F. O.

The object of this investigation was to determine the variations in the direction, latency, magnitude, time and number of deflections in the galvanic reflex when various stimuli are presented to different individuals. The author found that not only do the

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deflections vary with different observers for the same stimulus, but the same observer may show different galvanic responses to the same stimulus on different occasions. These may vary in direction, latency, magnitude or time of deflection.

Some Aspects of the Psychophysics of the Vibrato. Tiffin, J.

In this study an attempt was made to apply the traditional psychophysical approach to the vibrato by means of a specially devised apparatus. Tests of ability to hear a frequency vibrato and ability to hear an energy vibrato were constructed and applied to nearly 400 students. In addition an intensive investigation was made with five observers to determine certain systematic tendencies in the hearing of the vibrato. The method of constant stimuli was used exclusively in this intensive series. The results of both series are set out in full.

The Relation between the Physical Pattern and the Reproduction of Short Temporal Intervals: A Study in the Perception of Filled and Unfilled Time. Triplett, D.

The problem of this study is the comparison of the reproduction of temporal intervals when the standard and comparison intervals are filled with tones and when they are empty so far as sensory content is concerned. It was found that some observers have positive and others negative constant errors for filled or for unfilled intervals. The most significant result, it is stated, which came out of the attempt to compare the filled and unfilled intervals has been the discovery that some of the observers perceived the unfilled intervals as positive entities, not unlike the filled intervals.

Experimental Study in the Use of the Tonoscope. Williams, H. M.

This paper gives a description of the "Iowa Tonoscope, Model VI," and of tests and experiments carried out with it.

A. Wohlgemuth.

Internationale Zeitschrift für Individual-Psychologie, May-June, 1931.

This number contains the following papers:

The Meaning of Life [Der Sinn des Lebens]. Adler, A.

This is an exposition of Adler's philosophy. Character traits are elements in the structure of the life-style. They show us the relationship between individual to social problems. The possibility of their growth is, of course, hereditary. A social relationship has to be acquired, and this depends upon the creative force of the child.