Temporal Precision in Motor Rhythm

Robert Holmes Seashore
State University of Iowa
trol probably have more to do with the changes of dark adaptation.

The third experiment attempted to show that as dark adaptation goes on the shorter and shorter the refractory period becomes when the intensity remains constant. This has a definite bearing on the increase in sensitivity of the visual process. It seems safe to infer from the experiments that at each level or at successive periods of dark adaptation that the relation between the intensity of the stimulus and the refractory period vary inversely to each other.

STATE UNIVERSITY OF IOWA.

AN OBJECTIVE STUDY OF THE VOCAL ART

Milton Metfessel

(ABSTRACT)

By means of specially adapted sound photographic instruments, the voices of twelve vocal artists have been photographed. Interpretations of "Annie Laurie" by the following artists were used: MacCormack, Bispham, Welles, Lashanska, Case, Miller, Homer, Nordica, Nielson, Melba, Farrar, and Baker. A new musical staff has been introduced to adequately represent the facts analyzed from the data on the motion picture film. Among the factors of the vocal art isolated so far are: Attack of a tone, Vibrato, Release, Rhythm, Tempo, Sharpening and Flattening, Crescendo, Diminuendo, Swell, Glide, Portamento, Effect of Phonetic Elements, Appoggiaturas, Effect of Muscular Strain on the Vibrato, and Varying Esthetic Effects of Tones.

STATE UNIVERSITY OF IOWA.

TEMPORAL PRECISION IN MOTOR RHYTHM

Robert Holmes Seashore

(ABSTRACT)

The object of this research in motor rhythm is two-fold; (1) the analysis and comparison of factors involved in rhythmic perception and action, by means of a battery of 12 psychophysical tests, whose results are treated statistically and individually, and (2) the development and standardization of a new test for temporal accuracy in motor rhythm, which may be used in conjunction with present measures of musical talent. A graphic record of an observer's tapping in time with a recurrent rhythm pattern is obtained by means of a phonomap chronograph, and is then
measured for regularity. In contrast to numerous very low correlations between most of the tests of the battery are the consistent correlations of from .25 to .60 between perception of rhythm, time pitch, and tonal memory and rhythmic action and motor tests. It is concluded that rhythmic action is a complex but unitary capacity having as its principal common factor with these other tests the ability to take and retain a motor set, as a basis for comparison or regulation of perception and action. Ability in motor rhythm is distributed over a considerable range and may be rated in percentile ranking.

STATE UNIVERSITY OF IOWA.

IOWA PLACEMENT EXAMINATIONS

GEORGE D. STODDARD

(ABSTRACT)

The Iowa Placement Examinations in English, French, chemistry, and mathematics are designed primarily for entering college students. Each examination appears in two series: an Aptitude Examination which measures specific capacity in the various branches, and a Training Examination which measures objectively previous performances in the subject. Each examination was prepared through cooperation of the Psychology Department and the Department represented by the specific subject. Their primary purpose is to provide an adequate criterion for the sectioning of classes on the basis of ability. Available data on several thousand cases lead to the following tentative statements:

(1) The Iowa Placement Examinations show sufficient reliability and validity to permit of immediate sectioning of classes on the basis of ability.

(2) They are essentially positive: good performance strongly indicates good semester work; poor performance (to a less degree) poor semester work. Exceptions to prediction among the very good or the very poor are rare.

(3) This predictive value as to success in a particular subject is greater than that of a reliable group intelligence test, or of a broad survey test of high school achievement.

(4) Iowa Placement Examinations can be used in fruitful researches into university administration problems (selection, instruction, guidance, etc.); the value of high school training in a subject; comparative mental-educational surveys; etc.

STATE UNIVERSITY OF IOWA.