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An Objective Study of the Vocal Art

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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, Sharping and Flatting, 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 phonograph chronograph, and is then