THE SENSORY ACUITY OF PSYCHOPATHIC INDIVIDUALS

A Comparison of the Auditory Acuity of Psychoneurotic and Dementia Praecox Cases with That of Normal Individuals

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In order to investigate attributed differences in the threshold of sensation of normal and of psychopathic individuals, we made a study in which we determined the auditory thresholds of psychoneurotic subjects and of dementia praecox cases, and compared the results with those obtained by a study of normal individuals.

I. PSYCHONEUROTIC GROUP

Descriptions of symptoms of psychoneurosis in psychiatric literature, as well as casual observation of psychoneurotic subjects, have indicated that this pathological condition brings about a hyper-sensibility of sense capacity. Bleuler writes: "In melancholic and neurotic states we often encounter a more or less general hyperesthesia. The patients not only suffer much from sensory stimuli, but they falsely interpret the stimuli. Thus a dim light may seem glaring, knocking on the door may be conceived as shooting, and the sound of a fountain may be taken as the hissing of the escaping steam from a locomotive. Hysterical and hypnotized persons may, under certain conditions, react to the slightest sensory impression in a manner unperceived by normals." Diefendorf, Kempf, and others, have also described as one of the neurotic symptoms hyperesthesia of sense capacity.

As is indicated above by Bleuler, the dissociation occurring in hypnosis has been attributed with the power of causing a similar transcendence of normal sensory capacity. Moll stated: "Many subjects are helped also by the hyperesthesia of their organs of sense, which enables them to perceive things ordinarily overlooked." Braid and Bramwell, among others, also asserted the existence of hypersensibility in hypnotic subjects. Hull was able to demonstrate the fallacy of the concept in the case of hypnosis, when it was tested experimentally, and we believe that our own re-
results indicate a similar fallacy of the concept of hyperesthesia in psychoneurotic subjects.

In our experiment we measured the auditory thresholds of 24 psychoneurotic subjects who were patients in the New York Psychiatric Institute. We compared these with the auditory thresholds of a control group of normal subjects. Our set-up consisted of an audio-oscillator of 1000 d. v. s. and a head phone as sound source, the intensity of which was controlled by a potentiometer shunted across the phone. Intensities were expressed in decibels. Twenty readings were taken for each subject by the method of limits, with ascending and descending series.

The average threshold in decibels so obtained was almost identical for the psychoneurotic group and for the normal control group. In figures the psychoneurotic average was 53.2 decibels, as compared with 53.5 decibels for the normals. It seemed possible that the range might be greater for the psychoneurotic subjects, so we made this comparison. It showed no significant difference in the two groups, the psychoneurotic range being 37 to 70 decibels as compared with the normal range of 37 to 69 decibels. As one further check we averaged the lowest reading for each subject by groups, but again found the result to be almost exactly the same for the two groups, 50.3 decibels for the psychoneurotics as compared with 50.7 decibels for the normals.

Thus within the limits of our experimental conditions, and the type of subjects used, we conclude that psychoneurotic subjects show no greater sensory acuity in audition than do normal subjects, nor is there wider range of acuity.

In considering the discrepancy between this result and the descriptions in the psychiatric literature concerning hyperesthesia in psychoneurotics, it is of some value to indicate that a similar discrepancy has been shown concerning hyperesthesia in the hypnotic trance. As Hull pointed out, when this theory was actually tested experimentally there was no evidence of hyperesthesia in the hypnotic trance. He writes: "The outstanding positive result surviving from the experiments just alluded to is the fact that subjects when in the hypnotic state usually show all signs of believing