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The Damping Constant of Tuning Forks

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the similarity does not hold in the matter of extent, the voices of the infants showing a much narrower pitch vibrato than that of the artists, and a much broader intensity vibrato.

The vibrato in the voice of the dog showed essentially the same characteristics as were found in the vibrato in the infants' voices in every significant respect. The fact that the vibrato has been found to be present in the dog's voice seems especially important in view of the possibilities it presents for the study of the phenomenon through vivisection, which, of course, has not been possible with humans.

Results of the study as a whole would seem to indicate that the vibrato is due to some native physiological characteristic which is not even peculiar to mankind; and new questions are raised as to why some adult singing voices have been found without vibrato, and as to how the vibrato may be related to other bodily rhythms such as tremors.

Research has been begun upon this latter problem with records of brain waves taken at the time a tone was being sung, with measurement of surface vibrations around the throat region, and with other attempts to discover periodicities which might be related to the vibrato. Perhaps the most interesting development so far along this line occurred when phonophotographic records were made of both the vibrato in the singing voice and of the periodicity of the laughter of the same subject. The intensity pulsations in the laughter records in this case were found to have the same rate as the intensity and pitch vibrato in the sung tone. Too little has been done here, however, to afford any opportunity for generalization.

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THE DAMPING CONSTANT OF TUNING FORKS

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The differences in the damping constants of tuning forks while testing hearing by both air and bone conduction are discussed. New methods of obtaining the damping constant are described.

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