

The position and shape of the auricle is an important factor in this right-left localization, for the projection of a sound is much more faulty in those cases where the ears are closely applied to the side of the head ; at the same time, in those cases in which the auricles project from the side of the head, the posterior projection is generally false. Simple proof of this effect of the auricle may be obtained by placing the hollow of our hands in front of the ears, when any sound perceived will invariably be projected backwards, no matter from what direction it may come.

That the power of orientating ourselves in space with reference to external sounds varies in different individuals cannot be doubted. It is no doubt an acquired art, and depends on attention and experience, as well as the accurate interpretation of the smallest details. Just as in the matter of the vision of savages, which is proverbially so acute, it is a question of attention and practice in the interpretation of minute indications, and the perpetuation of this type through the requirements of their life.

Weber thought we could tell the direction of a sound by means of the perception of the varying swing of the membrana tympani. He instanced, in support of this theory, that eccentric projection is hindered if the meatus is filled with water. It hinders, but does not prevent the perception of the direction ; about this I will speak later on.

These facts of the perception and projection of a sound to the side of the greatest intensity gave rise to the theory of acoustic shadows or of the amount of covering power which the sound produced by waves of a given intensity entering one ear would have upon the sound produced by waves of a different intensity entering the other ear.

According to Kessel, the best binaural audition is produced when the sound proceeds from the mesial plane anteriorly ; the best monaural when the projection is exactly in a line with the meatus, at right angles with its opening. Kessel further advances the function of the pinna as being the main factor in determining the perception of the direction of a sound. He divides the pinna into five auditory districts which are sharply defined from