

There is one point where it fails badly, and that is, the projection of any special point in the median plane; a sound stimulating each ear with equal intensity is referred to the median plane, but no particular point in the said plane can with certainty be projected. One can hence perceive that without the addition of some new theory of the functions of the auditory organ, a discrimination of the various sound directions could not be explained by the right-left theory.

Preyer of Jena, in 1887, instituted a series of very exact investigations in regard to the extent and limitations of our power of appreciation of the direction of sound source. He examined a series of individuals in the same manner repeatedly. The sound tests were a toy called "cri-cri" and the tick arising from opening and closing the current on a telephone. Both sounds are short and sharp, so that the factor of reflexion can be excluded, as it is scarcely noticeable. The tests were applied in the thirteen different areas of the head, as follows:

- (a) Three primary axes, the vertical, sagittal and transverse.
- (b) Six secondary axes—antero-superior and postero-inferior, antero-inferior and postero-superior, right inferior and left superior, left inferior and right superior, right anterior and left posterior, left anterior and right posterior.
- (c) Four tertiary axes—right antero-superior and left postero-inferior, right antero-inferior and left postero-superior, left antero-superior and right postero-inferior, left antero-inferior and right postero-superior.

Giving thus with both terminations of their areas twenty-six tests. Preyer measured the false projection when it occurred by the angle which the axis, in which the test was made, formed with the axis in which it was projected by the person being tested.

I will not reproduce his tables, as they are far too vast for a paper like this. The conclusions I will give. Out of 2,080 tests he obtained 29.4 per cent. correct, so that chance is excluded. The greatest number of failures were when the sound came from below. Never was a sound from the left projected to the right. Right and left were with far more certainty distinguished by the ear alone than anterior and posterior or superior