

perceptions, is the result of an extremely complex activity of the mind. It is curious to note how, as it were irrationally, the child undertakes the synthesis of the number of sense data which it involves.

The exactness, however, of this space perception varies greatly in the different senses. The eye is very exact, thanks to its great motility and manifold innervation. The skin is not nearly so exact, and varies in different parts of the body. The hearing perceives not only distant sources of sound, but locates sound in the interior of the head, and perceives very slight differences in the pitch of sound by the vibration of the air in the external meatus. Only thus far has the entire tone perception by means of the ear any sense of space, for although these sound sources are perceived, they are rarely projected correctly. Hence this highly developed function is rarely used for the perception of space sense or orientation.

The oldest theory in regard to our perception of the direction of a sound is what is known in Germany as the *recht-links*, or right-left localization. The perception of direction according to this theory depends on the relation of either meatus auditorius externus to the source of the sound, and we obtain our information, especially, if we turn our head in the supposed direction of the sound.

If both ears are stimulated to the same extent, we project the sound source in the median plane anteriorly; but when one ear is stimulated more strongly than the other, the sound source is always projected to the side of the most powerful sensation. In testing this by moving a sounding object in a horizontal circle round the head on the level of the meatus auditorius externus, Rayleigh found that a variation of 1 per cent. in the strength of stimulus between the two ears is perceived. This seems slightly overdrawn, as 10 to 20 per cent. have been the figures asserted by all other authorities, and indeed the marked uncertainty of aural projection would favour the acceptance of the latter figures. Rayleigh further asserts that we perceive the direction of noises mixed with musical tones more easily than that of pure tones.