

## BIOLOGY

(Papers numbered 1 to 8 were presented at meetings previous to that of 1922, but were not published in the earlier volume. Papers numbered 9 to 32 were presented in the meetings of 1922.)

### I. HANDEDNESS AND SPEECH

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It has often been observed that interference with congenital left-handedness has caused disturbances in speech, such as stuttering or stammering, although this does not always happen. In some cases speech has been retarded in children who were not allowed the free use of their preferred hand. There is an intimate connection between the hand center and the speech center in the brain, and the speech center is located in the hemisphere that controls the dominant hand. Hence it is always an unwise and sometimes dangerous proceeding to force a left-handed child into using his right hand.

Seven children, six girls and one boy, were slow in learning to talk and at the same time, were ambidextrous. An explanation of the coincidence of retardation in speech and in the ascendancy of the right hand might be that as long as the dominant hand center was not definitely settled the speech center could not be located.

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