

effect. Whereas, if the ordinary theory is correct, that vowel quality is due to the resonance of the mouth cavities, then the closure of the mouth passage, at both ends, would have been fatal to the effect.

I understand that during the course of the experiment, the man moved his mouth as though he were speaking; and Dr. Moore simply took precautions to prevent the passage of air through the mouth. The mouth positions for the vowels were, therefore, assumed, and the mouth would then, in effect, be a resonator, tuned to the vowel positions, held near a sounding body—the larynx. Under such circumstances, resonance effects should be produced without the actual passage of air through the mouth, just as an ordinary resonator, when properly tuned, becomes sonorous when held near a vibrating tuning fork.

I cannot look upon the experiment as by any means conclusive; and I know of no other facts to support the hypothesis that any of the vowels are formed in the larynx, independently of the mouth.

A number of years ago Dr. McKendrick, of Glasgow University, afforded me an opportunity of examining the speech of a man whose larynx had been excised. The patient had been supplied with an artificial substitute for the larynx, made, I think, of dentist's rubber. As there were no vocal cords, the man could only speak in a sort of whisper, which was barely audible. A small aperture had been left in the front part of the rubber substitute into which the man slipped a metal reed, taken from a harmonium or small parlor organ. Upon then attempting to speak, the reed was thrown into vibration by the air from the lungs, and a good sonorous voice resulted,—resembling the natural voice to a remarkable and startling degree. The patient spoke with a broad Scotch accent, and his articulation was simply perfect. Very little peculiarity could be detected in the artificial voice excepting that it was monotonous and without inflection. The speech was so natural in quality that it was difficult to realize that the source of sound was a metal reed inserted into the throat.

The man was a machinist by trade, and he employed his spare time in manufacturing reeds for himself. He had quite an assortment for experimental purposes, and he let me hear the effect of reeds of various sizes and materials. He could change his voice from bass to tenor, and from tenor to soprano at will, by employing suitable reeds.

The point to which I would direct your attention is this:—that the