

ESR 15. The phonological Body: Body Movements to Accompany Speech Perception and Production of Foreign Speech Sounds

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Beat gesture influences which speech sounds we hear¹ and impacts how we produce them². However, much less is known about how body movements aiming at stimulating the articulatory qualities of speech sounds might improve perception and production of speech. To address this gap, we will explore the role of body movements in perceiving and producing foreign speech sounds. French speaking adults will be trained to perceive and produce Arabic speech sounds in the context of congruent body movement, incongruent body movement, and no body movement. Before and after training, participants will be asked to perform an ABX discrimination task³, an identification task, to assess speech perception, and a production task. We will be looking at accuracy and reaction times before and after training. In comparison with the 'no body movement' condition, we expect that (i) congruent body movements will improve speech perception and production of Arabic speech sounds by improving accuracy and/or decreasing reaction times and (ii) incongruent body movement will affect speech perception and production of Arabic speech sounds by decreasing accuracy and/or increasing reaction times. Results will be shown and discussed during the last day of the second Comm4CHILD conference.

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2. Poukstra, L., Harrison, S. J., Paxton, A., & Dixon, J. A. (2020). Gesture–speech physics in fluent speech and rhythmic upper limb movements. *Annals of the New York Academy of Sciences*, 1–17. <https://doi.org/10.1111/nyas.14532>

3. Kartushina, N., Hervais-Adelman, A., Frauenfelder, U. H., & Golestani, N. (2015). The effect of phonetic production training with visual feedback on the perception and production of foreign speech sounds. *The Journal of the Acoustical Society of America*, 138(2), 817–832. <https://doi.org/10.1121/1.4926561>