Phonetic convergence by gender non-conforming individuals

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Phonetic convergence, defined as "an increase in the similarity of acoustic-phonetic form between talkers" (Pardo 2013: 559), has been investigated by many researchers via many different phonetic variables. However, studies regarding it have had particularly mixed and/or inconclusive findings as to the effect that binary gender has on the phenomenon (c.f. Coles-Harris 2017). Meanwhile, concerning research focused specifically on gender non-conformity, there have been findings that GNC (gender non-conforming) individuals subconsciously phonetically diverge from cisgender individuals of their ASAB (assigned sex at birth) in order to further themselves from the perceived "standard" of their ASAB (c.f. Parnell-Mooney 2019). Unfortunately, while profound, these findings are based on a limited number of participants.

With this in mind, the motivation behind the present study is to further investigate these previous findings with a larger group of GNC individuals. This is done via the analysis of /s/-COG (center of gravity) and F0 of GNC individuals, as both are phonetic variables that have been previously identified as markers of GNC gender expression/performance (c.f. Zimman 2017, Hazenberg 2012) and both have shown evidence of phonetic convergence in previous studies looking at cisgender groups (c.f. Babel & Bulatov 2012, Long 2018). In doing so, the present study aims to answer two questions: *Do GNC individuals show phonetic convergence of /s/-COG and/or F0,* and *does the extent of this depend on the perceived gender identity of the individual they are speaking with?*

Participants underwent an online wordlist shadowing task where they immediately repeated words that they heard, as well as a questionnaire to gain information on potential significant social factors. For the shadowing task, stimuli consisted of words spoken by a cisgender female voice with higher /s/-COG and F0 and a cisgender male voice with lower /s/-COG and F0. In total, data from 26 AFAB (assigned female at birth) GNC individuals was analyzed. If participants showed convergence, higher /s/-COG and F0 values would be expected when shadowing the female vs. male talker. However, as shown in Figure 1 below, there was no difference in either acoustic dimension when shadowing the two different talkers, and no significant convergence (or divergence) was found for either variable (even when results were checked at an individual level).

At present, there are two main potential reasons for these results: either the "social threshold" for activating phonetic convergence was simply not met, or GNC individuals show less convergence than cisgender populations (who have been found to converge on these features in previous studies). If the first potential reason is shown to be accurate, then these results highlight the importance of this linguistic phenomenon's connection to social context and gender performance, particularly for GNC individuals. If the second potential reason is shown to be more accurate, then these results highlight not only a general gender difference between cisgender and GNC individuals, but also the importance of including GNC individuals in any gender-based research. Data collection with a cisgender control group is planned to try to evaluate these possibilities.

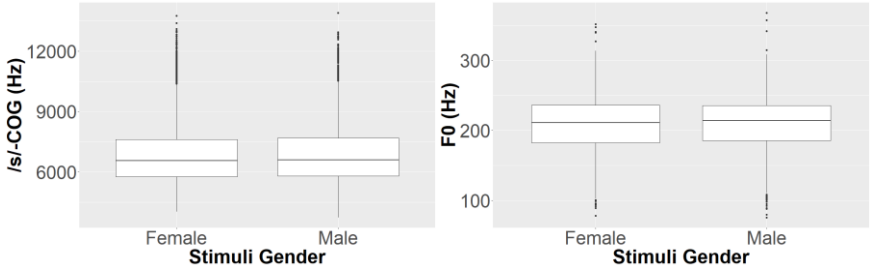

Figure 1. Individual raw measurements from all shadowing task recordings for /s/-COG (left, N=3895 tokens) and F0 (right, N=3543 tokens), split by gender of the stimuli voice being shadowed.

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