The role of gender, social bias and personality traits in shaping linguistic accommodation: An experimental approach

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In observational studies of language change, women have been shown to use more innovative forms than men, and to be more likely to adopt new variants (e.g., Chambers, 2009; Crawford, 1995; Labov, 2001). At the same time, work on vocal convergence shows a mixed pattern of results, whereby some studies find that women accommodate faster (i.e., imitating the acoustic variants of others; Namy et al., 2002), and other studies find the opposite pattern (i.e., that men accommodate faster; Pardo, 2006). However, beyond these studies, gender effects in language accommodation and diffusion of morphosyntactic variants have not been systematically tested, and it is currently not clear how language evolution may be affected by social biases and individual attributions associated with different gender groups. For example, gender effects may stem from documented differences in social attributes and personality traits between groups, such as conformity and agreeability (Weisberg et al., 2011). Here, we test how the gender and personality traits of participants, as well as the gender of their interactive partners, shape accommodation patterns in a dyadic communication experiment using an artificial language - shedding light on the role of gender in shaping language change patterns in the presence of linguistic variation.

In this pre-registered study (https://osf.io/6eudq/), following Fehér et al., (2019), we use an online communication experiment in which participants of different genders first learn how to formulate sentences using two verbs, six novel nouns (slightly altered Dutch onomatopoeia assigned to a corresponding animal picture), and a marker for plural and singular forms. During training, the plural marker is always present, while the singular marker is optional (present only 33% of the time). After learning the language, participants play a director-matcher game with a partner from either the same or different gender group (Figure 1). While

participants believe they are interacting with another person, they are in fact interacting with a simulated partner. To manipulate the gender of the simulated partner, we use portraits from the FACES database (Ebner et al., 2010), and take a similar photo of each participant - creating the illusion that they are interacting with a real person at the other end. Crucially, the simulated partner always produces the singular marker which was optional during training. We examine participants' linguistic behaviour before, during, and after communication in pseudo-dyads, and test whether their tendency to accommodate to their partner (i.e., by reducing variation and increasing their use of the singular marker used by their partner) is shaped by the gender of the participant and the gender of their perceived partner. At the end of the experiment, participants complete an implicit association test (Karpinski & Hilton, 2001) and an explicit bias questionnaire (Rosencranz & McNevin, 1969; Swim et al., 1995) to assess whether they have any subconscious bias or stereotype towards different gender groups. In addition, participants fill out a self-report personality questionnaire ("Big Five"; John et al., 2008) to measure their openness to experience, extraversion, agreeableness, neuroticism, and conscientiousness.

We predict that: (1) people will be more likely to accommodate to members of their own gender group (Giles & Ogay, 2007); and (2) the likelihood of participants accommodating to their partners will be correlated with their personality traits and their attitudes/biases towards their communicative partner's gender. Critically, we predict that these patterns will be accounted for by gender-related differences in personality traits, such as women generally scoring higher than men on extraversion, agreeableness, and neuroticism. Preliminary results from N=16 participants show that while both men and women accommodated to their partner during interaction, only women persisted in using the singular marker post-interaction (with the use of the optional singular marker increasing from 25% before interaction, to 45% after interaction).
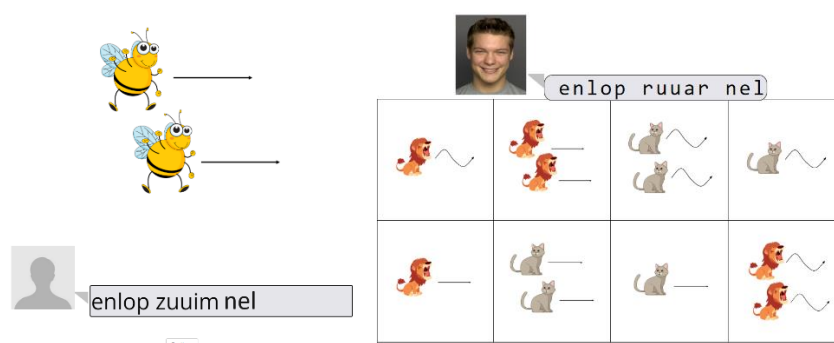

Figure 1: screenshot of the communication experiment

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