**Title: Pragmatic and knowledge lenience towards foreigners**

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**Background**: The identity of the interlocutor is an essential cue for successful communication. For example, a sentence like 'I have a large tattoo on my back' could be considered a credible statement if made by an adult, but an ironic one if made by a child. Here, we focused on the linguistic identity of the interlocutor. Recently, some researchers have highlighted the idea that the evaluation of an utterance is affected by accented speech. In a paper by Lev-Ari & Keysar (2010), speakers uttered typically unknown world-knowledge facts statements (e.g., 'Ants don't sleep'), with either a native or a foreign accent. Participants judged foreign-accented trials to be less true than native-accented statements. The authors interpreted their findings according to a 'fluency-intelligibility' account, where foreign-accented speech leads to a decrease in fluency and ease of understanding. Critically foreign-accented speech may not only affect message intelligibility but may also lead to an implicit categorization of the speaker as an outgroup individual (foreign) in terms of cultural and social heritage. Our main aim here was to explore whether the identification of an individual as a native or foreign speaker has an impact per se on **unknown** statement judgments. Critically, to avoid any influence of the auditory signal, we used a written modality presentation of the statements.

In a recent study, Fairchild and Papafragou (2018) also used written materials to isolate the influence of speaker identity on the acceptability of the scalar implicature. In their study, participants tended to accept more a series of under-informative written sentences ('Some dogs are mammals') when attributed to a foreign speaker compared to native speakers. In the two studies we present here, we first aim to replicate the Fairchild and Papafragou study on **scalar implicature** (Study 1); then we used the similar procedure to test **unknown** statements (Study 2). Two different experiments were conducted within each study. In experiments 1a and 2a we used the same methodology developed by Fairchild and Papafragou (2018). In experiments 1b and 2b, the same procedure was used with the difference that we added face photographs to each of the two speakers to increase the association between speaker and sentence.

**Study 1:** 244 native Italian speakers participated in the study (99 and 145 for experiment 1a and 1b, respectively). The experimental set was composed of 20 under-informative sentences with the quantifier 'some'. Furthermore, three filler conditions (20 sentences each) were added: true filler sentences containing 'some' ('Some hair is brown'); true filler sentences containing 'all' ('All snow is cold'); and false filler sentences containing 'all' ('All women are doctors').

Following Fairchild and Papafragou (2018), four bio-descriptions were created. Each short-bio either gave a description of a native Italian speaker with a strong Roman accent (Native speaker condition) or a native speaker of Moldovan with a strong Moldovan accent (Foreign speaker condition). In addition, for experiment 1b, two colour photographs of real women's faces were selected. The experiment consisted of two blocks: a native and a foreign language block (counterbalanced between participants). The sentences within each block were evenly distributed among the four types of sentences (10 of each),and presented in a random order. At the start of each block, one of the four speaker bio-descriptions was presented, and participants were instructed to read it carefully. The participants were then instructed that they would be reading 40 sentences that were originally uttered by the speaker they had just read. The sentences were presented in a random order. For each trial, a sentence appeared in the centre of the screen together with the ratings scale below. The speaker bio-description was presented at the top of the screen. Participants had to rate how each sentence made sense on a five-point scale (1-

“Completely no sense” and 5-“Completely sensible”). For experiment 1b the same procedure was used with the following differences: the two bio-descriptions were presented at the beginning of the experimental session together with one face image; sentences were presented together with the face at the top of the screen instead of the bio-description; the 80 sentences were presented in a random order with a short break after 40 sentences.

Descriptive statistics are reported in Table 1. Analyses were performed on the rating responses of the critical sentence condition. Ordinal logistic regression was used in the form of a mixed cumulative link model (*clmm* in R). In the mixed models, the factor Speaker (Native vs. Foreigner) and Experiment (1a vs. 1b) was introduced as fixed effect. The participant and item were included in the model as random factors. Two models were constructed, with and without interaction of the two fixed effects. The fits of the two models were compared using Akaike's information criterion (*AIC*). The model with the lowest AIC would have the best fit. The comparison between the two models revealed that the best model was the one without interaction. The model shows a main effect of the Speaker (SE=0.06, z= -2.01, p=.04) due to the fact that ratings for Under-Informative sentences were higher in the Foreign speaker condition (M=2.55, SD=1.48) than in the Native speaker condition (M=2.49, SD=1.47). The main effect of Experiment was not significant (p=.14).

**Study 2:** 239 native Italian speakers participated in Study 2 (114 for experiment 2a and 125 for experiment 2b). The experimental set was composed of 20 unknown sentences (‘The capital of Botswana is Gaborone’). Furthermore, two filler conditions, 20 sentences each, were added: true filler sentences (‘To play tennis, you need to have a racket’) and false filler sentences (‘Arachnophobia is the fear of having fun’). The same task, presentation modality, and analyses as for Study 1 were used. The comparison between the two models revealed that the best model was the one without interaction. Results from *clmm* also revealed a main effect of the Speaker (SE=0.06, z= -2.13, p=.03), with ratings for Unknown sentences were higher in the Foreign Speaker (M=2.99, SD=0.86) condition than in the Native Speaker (M=2.95, SD=0.88) condition. The main effect of Experiment was not significant (p=.25). See Table1.

| Speaker | Study 1 (Under-informative) | | Study 2 (Unknown) | |
|---|---|---|---|---|
| | Experiment 1a | Experiment 1b | Experiment 2a | Experiment 2b |
| Native | 2.34 (1.40) | 2.58 (1.52) | 2.98 (0.87) | 2.92 (0.89) |
| Foreign | 2.45 (1.41) | 2.62 (1.52) | 3.02 (0.83) | 2.96 (0.88) |

Table 1. Average of the ratings in Study 1 and Study 2 divided by manipulation and type of experiment. Standard deviations are reported in parentheses.

**Discussion:** Our results showed that the categorization of speakers as foreign or native speakers per se modulates the acceptability of statements independently from differences of processing linked to fluency. In Study 1, we replicated in Italian previous findings reported in English. We interpret 'pragmatic lenience' toward foreign speakers on the basis of beliefs of comprehenders about the lower linguistic competence of foreign speakers. In Study 2, our results were in the opposite direction with respect to the findings of Lev-Ari and Keysar (2010). A possible explanation for the advantage for foreigners may rely on the different attribution of general knowledge to foreign and native speakers when an unknown sentence is presented. Something we will call 'knowledge lenience' toward foreign speakers. Together, our results suggest that native speakers do not only tend to forgive lack of linguistic competence of foreign speakers, by accepting as more sensible under-informative statements, but they also tend to trust more foreign speakers in situations of lack of knowledge.

**References:**


- Fairchild, S., & Papafragou, A. (2018). Sins of omission are more likely to be forgiven in non-native speakers. Cognition, 181(December 2016), 80–92. https://doi.org/10.1016/j.cognition.2018.08.010

- Lev-Ari, S. & Keysar, B. (2010). Why don’t we believe non-native speakers? The influence of accent on credibility. Journal of Experimental Social Psychology, 46(6), 1093–1096. https://doi.org/10.1016/j.jesp.2010.05.025