

Unable or unwilling?

Being under-informative is interpreted differently for native and non-native speakers

Being a non-native speaker of a language presents some disadvantages. People are slower to process foreign-accented sentences, and rate such sentences as less intelligible than native speech (Munro & Derwing, 1995). Adults judge non-native speakers as being less trustworthy and more vague (Lev-Ari & Keysar, 2010, 2012). Here we probe a systematic difference in the way comprehenders interpret what native vs. non-native speakers say (and leave unsaid). Unlike some of the evidence above, however, the difference creates a bias *in favor of* non-native speakers.

We focus on under-informativeness, the pragmatic phenomenon of saying less than is required conversationally. Under-informativeness can be generally due to either inability or unwillingness to say more (Grice, 1975; Sperber & Wilson, 1986). However, we hypothesize that under-informativeness is linked mostly to inability in non-native speakers (who produce errorful signals). Furthermore, since unwillingness can signal un-cooperativeness (Grice, 1975), non-native speakers might enjoy a relative social advantage compared to native speakers.

Exp. 1 (Explaining Under-Informativeness). Two hundred monolingual English-speaking adults learned about three functions of an invention called the Zeg (Figure 1) before reading a description of the Zeg's inventor, either Emma Smith (native English speaker) or Yuqi Chen (non-native English speaker; Figure 2). Participants were then told that Emma/ Yuqi was presenting the invention at a science fair and read her description of the Zeg: that description was under-informative (it omitted one of the three features of the Zeg). Participants were asked to indicate whether the inventor omitted the third feature because she couldn't or didn't want to mention it. A binary logistic regression showed that justifications varied by Speaker (Figure 3a), such that the odds of inability explanations were greater in the Non-Native compared to the Native Speaker condition ($M = .71$ vs. $M = .48$; Table 1).

Exp. 2 (Implications for Social Learning). We asked how perceived reasons for under-informativeness impact future social behavior (specifically, learning choices). Four hundred and fifty-seven additional monolingual English-speaking adults learned about the Zeg, its inventor (Emma/Yuqi) and the science fair as in Experiment 1. The participants read either an informative (all 3 features) or under-informative (only 2 features) description of the Zeg that was attributed to one of the inventors. Participants judged how likely they would be to visit Emma's/ Yuqi's display at another science fair. A 2 (Speaker) by 2 (Informativeness) factorial ANOVA revealed that, unsurprisingly, participants reported being more likely to learn again from Informative ($M = 2.99$) vs. Under-Informative ($M = 2.10$) inventors $F(1, 453) = 46.69, p < .001, \eta_p^2 = .09, 95\%$. The main effect of Speaker was marginally significant $F(1, 453) = 3.46, p = .063, \eta_p^2 = .01$. Critically, the interaction between Speaker and Informativeness was significant, $F(1, 453) = 3.96, p = .047, \eta_p^2 = .01$; participants were more willing to learn again from an Under-Informative Non-Native ($M = 2.34$) as compared to an Under-Informative Native speaker ($M = 1.84; p = .040$, Bonferroni post-hoc) – presumably because their omissions were more likely due to inability as opposed to unwillingness (see Figure 3b).

Our results suggest strong effects of non-native speech on social-pragmatic inferences. Importantly, because these effects emerge for written stimuli, they support theories that stress the role of expectations on non-native comprehension, even in the absence of experience with foreign accents (on the role of expectations, see Lev-Ari, 2015; Gibson et al., 2017; Fairchild & Papafragou, 2018). Our data bear on pragmatic theories of how speaker identity affects language comprehension and show how such theories offer an integrated framework for explaining how non-native language can lead to (sometimes unexpected) social meanings. Specifically, a broadly Gricean pragmatic account can resolve the apparent tension between existing evidence that non-native speakers face negative biases (e.g., Lev-Ari & Keysar, 2010, 2012) and the possibility that non-native communicators may also enjoy positive social treatment in some contexts (see also Hanulíková et al., 2012; Gibson et al., 2017).

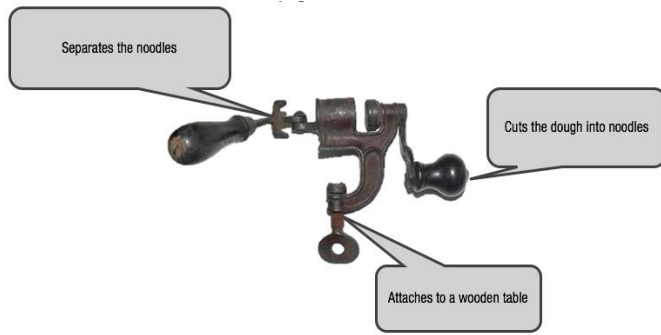


Figure 1. Novel object used in Experiments 1 and 2 (“Zeg”) and its three functions.

<p>The Zeg is one of Emma Smith's many inventions. She likes to create and build new tools, and is a member of an amateur inventor club. Emma also likes to hike and play the piano. She is originally from Boston but recently moved to Delaware and her neighbors say that she still has a strong Boston accent.</p>	OR	<p>The Zeg is one of Yuqi Chen's many inventions. She likes to create and build new tools, and is a member of an amateur inventor club. Yuqi also likes to hike and play the piano. She is originally from China but recently moved to Delaware and her neighbors say that she still has a strong Chinese accent.</p>
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Figure 2. Speaker descriptions used in Experiments 1 and 2.

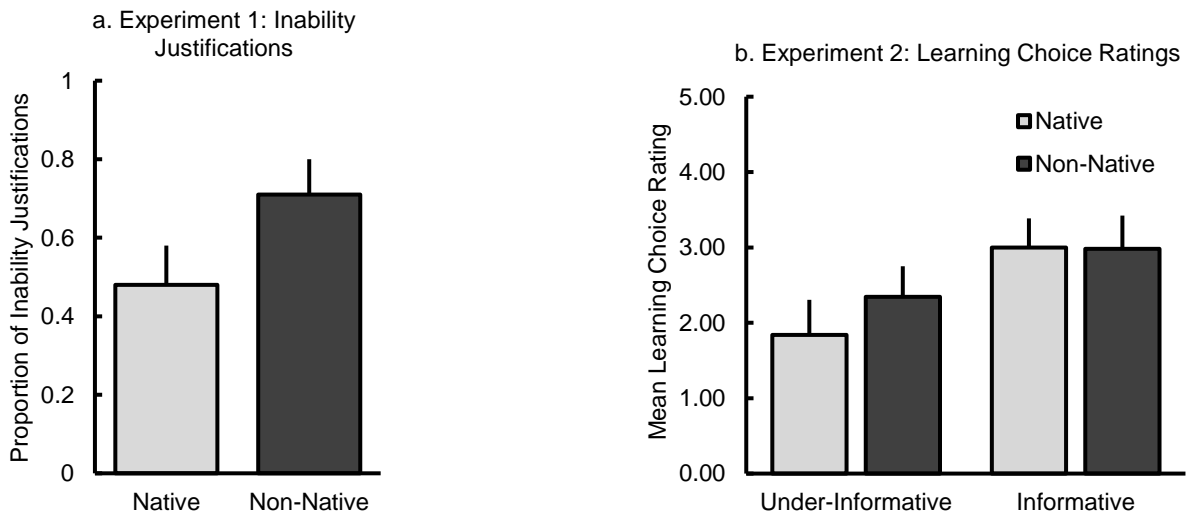


Figure 3. (a) Proportion of Inability Justifications in Experiment 1 and (b) Mean Learning Choice Ratings in Experiment 2. Error bars represent 95% confidence intervals.

Table 1.

Results of the binary logistic regression model for Experiment 1.

	β	SE	Odds Ratio	p	95% Confidence Intervals	
					Lower	Upper
(Intercept)	-0.08	0.20	0.92	.689	-0.47	0.31
Speaker	0.98	0.29	2.65	.001	0.40	1.57