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The Effects of Topic and Part of Speech on Nonbinary Speakers' Use of (ING)

Abstract

This paper investigates the variable usage of (ING) by nonbinary speakers across conversation topics, specifically asking whether nonbinary speakers shift their rates of (ING) variation when discussing the salient topic of gender. 8 nonbinary speakers (4 AFAB and 4 AMAB, ranging from 21 to 27 years old) participated in sociolinguistic interviews conducted by a nonbinary researcher who was familiar with each interview participant. A modular interview guide was developed based on Labov's Q-GEN-II modules with modifications made to specifically obtain participant narratives on their experiences with gender identity and expression in addition to traditional narratives. The results of the study find that despite a markedly more deliberative style during gender topics, participants do not shift rates of (ING) across topics. The present study further finds that a speaker's assigned gender at birth plays no predictable role in rates of (ING). Taken together, these results suggest that nonbinary speakers form their own distinct linguistic community which should be analyzed as operating outside of the gender binary.

The Effects of Topic and Part of Speech on Nonbinary Speakers' Use of (ING)

Jack Rechsteiner and Betsy Sneller*

1 Introduction

As the academic understanding of gender evolves, it is important for research to evolve alongside it. Much previous sociolinguistic work has considered gender in terms of the male–female binary which has led to analyses that view gender as a social variable which has predictable effects in tandem with the effects of other macro-social categories and sociolinguistic variables (Eckert and McConnell-Ginet 1992). If sociolinguistics aims to descriptively study the influence of social variables on a speaker's language production, then it is imperative to use an analytic approach which allows for the many complexities of gender to be examined and interpreted. Gender has been used as a sociolinguistic variable because of its salience in public discourse and power relations (Trudgill 1972, Lakoff 1973) as well as being a key component of many social hierarchies (Enke 2012:p. 1), and previous studies have asserted that "the clearest and most consistent results of sociolinguistic research in the speech community are the findings concerning the linguistic differentiation of men and women" (Labov 1990:p. 205).

Even with such a long-standing precedent being set by past research, the fundamental concept underpinning gender differentiation as it relates to the male-female binary is "undertheorized and simplistically understood" in the sociolinguistic field (Becker et al. to appear). Features such as pitch, loudness, pronouns, affect, and directness have all been shown to hold potential gendered meaning (Corwin 2009), but past research has provided evidence that biological or physical differences only play a minor role in the variation observed between genders (Zimman 2017). As such, framing gender as a male-female binary is inadequate for understanding the interactions between gender and sociolinguistic variation because it fails to include identities which could provide valuable insight into these interactions, such as trans, intersex, and nonbinary speakers. The term trans is used in this paper to refer to people whose gender identities differ from the sex assigned to them at birth. Trans has been used to refer to trans women and trans men in addition to people with genders that are not part of the female-male binary (Enke 2012, Goldberg and Kuvalanka 2018, Gratton 2016); additional terms that have been used to refer to people outside of the cisnormative gender binary include genderqueer (Bradford et al. 2019), transgender and gender nonconforming (TGNC) (Goldberg and Kuvalanka 2018), and others. For the sake of clarity and coherence, this paper uses trans to refer specifically to trans women and trans men, and nonbinary to refer to identities which are not captured by the dichotomy of cis or trans female-male binaries as well as identities which resist the label of any gender at all; this choice is further motivated by the notion that not all nonbinary individuals identify as trans (Darwin 2017).

Existing research on those who are outside the cis binary has largely focused on the experiences of trans people with binary trans identities (Goldberg and Kuvalanka 2018); however, the amount of research on speakers with gender identities outside of the cisnormative binary is significantly smaller (Bradford et al. 2019, Garmpi 2020). Nonbinary individuals present direct opposition to these gender binaries, in that they may identify as being somewhere along the spectrum between male and female or outside of the male–female dichotomy entirely. The experiences of nonbinary individuals have been shown to be different from the experiences of binary-gendered individuals, such as marginalization in both cis and LGBT communities in addition to the unique challenges of being gender non-conforming in spaces that tend to understand gender as a binary framework (Bradford et al. 2019, Goldberg and Kuvalanka 2018). The construction of nonbinary identity has also been argued to be an active and unique process due to the ways that nonbinary speakers utilize linguistic resources "to produce stances of resistance to cis-normative femininity and masculinity"

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(Gratton 2016). It follows, then, that examining the sociolinguistic variation in nonbinary speakers provides an opportunity to add nuance and depth to the sociolinguistic understanding of how gender and language variation interact.

In a past study on nonbinary speakers' use of language to construct identity, Gratton (2016) examined nonbinary speakers' pronunications of (ING). (ING) has two primary variants: the standard velar [II] and the nonstandard alveolar [III]. These variants show some gender differentiation in binary speakers across North American English dialects, with cis men more likely to produce higher rates of [III] than cis women (Labov 2001). Gratton examined nonbinary speakers' pronunciations of (ING) across two social contexts: a queer cafe and a cisnormative cafe, and found that compared to their rates of [III] in the queer space, each nonbinary speaker shifted their rates of [III] in the cisnormative space in opposition to their sex assigned at birth. Gratton argues that this shift in pronunciation is due to the threat of being misgendered in a cisnormative space.

While the threat of being misgendered is a strong explanation for the shifts found in Gratton (2016), it is also possible that other factors such as attention paid to speech (Labov 1984) or activation of a relevant exemplar cloud (Eckert 2008) play a role. The current study builds on Gratton's work by examining the variable use of (ING) by nonbinary individuals across different conversation topics. In this study, we hold the social context stable (sociolinguistic interviews conducted by the first author, who is nonbinary), and ask whether activation of a salient topic (in this case, gender and gender identity) also impacts speakers' pronunciations of (ING). We find that the nonbinary participants interviewed did not significantly vary in their use of (ING) across topics (gender vs. other). Furthermore, we find that all participants had similar patterns of (ING) production regardless of their sex assignment at birth. This raises the implication that nonbinary speakers form a marcosocial category which is distinct from and operates outside of the gender binary.

2 Nonbinary Identity and Language Variation

Research has suggested that gender is constructed through "stylistic bricolage" consisting of an array of linguistic features that are used in relation to one another in a variety of ways to create a variety of gender identities (Zimman 2017). Existing studies on nonbinary speakers have argued that nonbinary speakers use linguistic features to "construct a gender presentation that does not fall along strictly binary gender lines" (Corwin 2009). Corwin (2009) studied nonbinary speakers who produced both masculine- and feminine-indexing phonetic features, such as a small pitch range combined with a high rate of high rise terminals, to create a speech style that "demonstrates a uniquely nonbinary linguistic pattern." In a similar way, Steele (2019) observed nonbinary speakers usage of "/s/ and f0, two sociophonetic variables that have been tied to binary expressions of gender, to construct non-binary gendered styles". Garmpi (2020) put forth a thematic analysis of the narratives of seven nonbinary individuals which showed how these individuals performed their gender through a combination of overtly gendered linguistic features and features which covertly index certain kinds of gendered styles; importantly, the study by Garmpi (2020) showed that nonbinary individuals actively subverted the normative female-male binary as a way to create social space for their identities. Taken together, these studies provide evidence that nonbinary speakers use gendered linguistic features in unique ways to construct their identity.

3 The Variable (ING) as a Gendered Variable

The variable (ING) has been found to be a socially meaningful linguistic variable which is salient to speakers as a defined social object; e.g. listeners have been documented as perceiving velar -ing to be more metropolitan and less masculine than alveolar -in (Campbell-Kibler 2007). The social associations of (ING) are not fixed meanings; rather (ING) is a variable that a speaker can manipulate to affect their linguistic style in a way that is perceptible to a listener, in relation to other semiotic features that the speaker provides (Campbell-Kibler 2006). Sociolinguistic studies have examined (ING) patterning along gender lines since the mid twentieth century. Fischer (1958) observed differences in usage of (ING) for past participle endings between the girls and boys of a New

England village, with the girls using the velar -ing variant more than the boys. Since 1958, further research on (ING) has provided evidence that the variable is affected by external factors, which include gender along with style, social class, and others. A frequent and consistent finding observed in sociolinguistic research is that female-gendered speakers use standard forms of stable, stratified linguistic features at a higher frequency than male-gendered speakers do (Labov 1990). This principle of linguistic variation has been found to apply robustly to (ING), with female-gendered speakers using the standard -ing variant at a higher rate than male-gendered speakers in speech communities as widely varied as Norwich, England (Trudgill 1972), Toronto, Canada (Tagliamonte 2004), Cessnock, Australia (Shnukal 1982), Philadelphia, USA (Labov 2001), and Virginia, USA (Kiesling 1998). However, Calder and King (2020) demonstrated that treating gendered linguistic variables, such as /s/ pronunciation or (ING), as operating homogeneously across speech communities is problematic because their work found an interaction between gender and race for /s/ pronunciation. Zimman (2017) proposed that gendered speech variation is better understood through the lens of sociolinguistic style, because it is "a theoretical construct that recognizes the inherent variability of language as well as the capacity for speakers to combine and recombine linguistic features in order to construct social meaning". Eckert 1992, 2014 argued that the more important factors involved with gendered variation in language are the social practices that a community uses to construct gender differences; practices which are then used by speakers in those communities to align with or break with the gender binary as it is defined within their communities.

3.1 Motivations for Variation

The work done by Gratton (2016, 2017) on variable (ING) production in nonbinary speakers observed that speakers shift away from the variant associated with their sex-assigned-at-birth in non-queer spaces and proposed that the *threat of being misgendered* is one of the primary reasons non-binary speakers shift their usage of (ING). However, it is worth exploring the possibility that there are other mechanisms which could be contributing to the previously mentioned rates of variation.

One mechanism that could be causing variable (ING) production is the amount of attention paid to speech in each setting. Labov (1972) put forth the idea that the style a speaker uses is dependent on how much attention the speaker is paying to their own speech, and it is possible that Gratton's consultants are paying more attention to their speech in the two different contexts. Another mechanism that might be influencing the variable rates of (ING) is the activation of indexical fields, where exposure to concepts via linguistic and non-linguistic cues can activate contextual labels that a speaker associates with that concept which subsequently effect the speaker's speech perception and production (Drager et al. 2010, Hay and Drager 2010). The final mechanism this paper will introduce is that of topic-based shifting, a type of sociolinguistic style shifting where changes in a speaker's linguistic production accompany changes in the topic they are speaking about. It is attested in the literature that speaker identity and its relevance to the conversational topic is a significant factor in causing topic-based shifting (Becker 2009). Grieser (2019, 2022) found that African American speakers showed higher rates of final consonant devoicing, an African American Language feature, when speaking about topics such as African American community and family. Similarly, Wan (2022) observed that speakers of Taiwan Mandarin who are active supporters of the deaf community shifted to a more retroflexed variant of /s/, which is a socially salient variable, as a way of performing 'deafness' during deaf identity topics. In the current study, we investigated whether indexical field activation plays a role in nonbinary speakers' pronunciation of (ING), by analyzing speakers' rates of [m] across topics relating to gender compared with topics that would not directly activate gender.

4 Methodology

Due to the previously outlined mechanisms that could be influencing speaker's (ING) variation, we controlled for potential effects of the interlocutor, the threat of being misgendered, and the setting. The effect of the interlocutor was controlled for by having all participants be interviewed by the same nonbinary interviewer. The threat of being misgendered was controlled for as, prior to this

study, the interviewer was already familiar with the participants and their gender identities, and the interviewer held similar gender ideologies to those of the participants. The setting was controlled for by conducting interviews one on one over the web-conferencing platform of Zoom, so participant's were able to remain in a setting that was comfortable to them. Audio was recorded by participants locally using Audacity, or, when that was not an option, with the service Cleanfeed which utilizes the Opus codec to record audio live.

The participants in this study were 8 nonbinary speakers who were recruited through the researcher's personal connections within a community of queer individuals. Participants varied in their specific nonbinary identities, but all participants used labels such as genderflux or nonbinary woman to describe their nonbinary identity in further detail, which is consistent with the study by Harrison et al. (2012). All 8 participants lived in Michigan at the time of the study, had some level of college education, and ranged in age from 21 to 27. 7 participants identified as white, and 1 participant identified as black. 4 of the 8 participants in the current sample reported being assigned male at birth and 4 of the 8 participants reported being assigned female at birth.

A modular interview guide was developed based on the Q-GEN-II modules from Labov 1984. The Q-GEN-II modules were modified to include topics relevant to the participants' nonbinary gender identity, including their experiences as a nonbinary individual, the ways they express their gender, their queer community relationships, and their perceptions of cis speech. Questions were written to accompany each module and questions were formed to be open-ended in an effort to elicit narrative or conversational speech styles. Interviews lasted between 41 minutes and 151 minutes. The interviewer had the module guide with a list of questions available at all times, but in all interviews, participants were encouraged to discuss any topics that interested them even if they were not included in the pre-written questions. The interviewer focused on following the conversational flow determined by each participant's interest in certain topics, and as such the order of questions varied between interviews and no interview touched upon every question. The interviewer actively worked to create a comfortable and friendly setting, so that participants felt safe and open to express and talk about their gender identity. It was also made clear to participants that they could decline to speak about any topics that made them uncomfortable, without fear of penalty or being removed from the study. These methodological choices, coupled with the community relationships already formed between the interviewer and the interviewees, helped interviewees to speak in a natural and conversational manner.

Coding for (ING) was done auditorily in Praat using the handCoder Style praat script (Fruehwald 2012). Monosyllabic content words were excluded from the analysis. Coding for topic was based on interview content; for example, participants talking about their own gender experience, answering questions during the gender module of the interview, or gender as it came up organically in other topics were coded as Gender, and all other contexts were coded as Not Gender. Coding was also done for the lexical category of tokens because (ING) variation is morphologically conditioned (Houston 1985). The output data was coded granularly and then analysis showed certain lexical categories patterning together so these were collapsed into the following categories: 'Verb' which is made up of verbs and phrasal verbs, 'Noun' which is nouns and proper nouns, 'Adj' which is adjectives and adverbs, 'SN' which is something and nothing, and 'gerund' which is gerunds. After coding, the data was run through a mixed effects logistic model in R with (ING) pronunciation as the dependent variable, the main effects of style, sex-assigned-at-birth, and part of speech, and a random intercept for speaker and a random intercept for word so that lexical frequency was taken into account. The analysis also included an interaction effect between style and sex-assigned-at-birth, as this follows the findings in Gratton's work that the direction of shift may be different for nonbinary speakers assigned female at birth and nonbinary speakers assigned male at birth.

5 Results

A total of 1192 tokens of (ING) were analyzed for the eight participants. Figure 1 shows the overall rates of the standard variant *-ing* for each participant across the entire interview, with speaker along the x-axis and proportion *-ing* pronunciation overall along the y-axis. Bars depict standard error. We

find that all participants produce similarly high rates of the standard -ing variant, with the exception of participant MS. MS's slightly lower rates of -ing is not altogether surprising: MS is the only participant from Michigan's Upper Peninsula. The Upper Peninsula of Michigan is a region that is geographically separate from the rest of Michigan and – more importantly for (ING) realization – is strongly associated with rural and working class identities (Rankinen 2014), which in turn have been found to correlate with higher rates of the nonstandard -in variant.

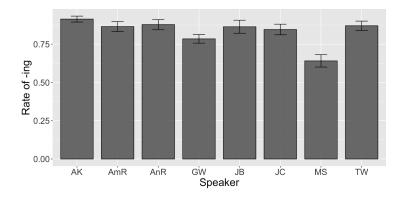


Figure 1: Speakers' overall rates of -ing.

Figure 2 shows each participants' rates of -ing across the two topic categories. Again, speaker is presented along the x-axis, and proportion -ing pronunciation is provided along the y-axis. Bars depict standard error. Gender-related topics are presented by the dark purple bar, while all other topics are presented by the light blue bar. The results in Figure 2 suggest that participants do not shift their pronunciation of (ING) across different topics.

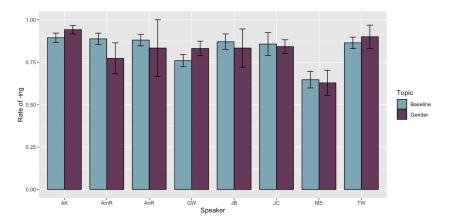


Figure 2: Speakers' rates of -ing by topic.

This main finding is confirmed by the results of a mixed-effects logistic model, which included (ING) realization as the dependent variable, main effects of topic (Gender vs. Other), sex assigned at birth (AFAB vs. AMAB), word category (Adjective, Noun, Something/Nothing, Gerund, Verb) and an interaction term for Topic (Gender vs. Other) by sex assigned at birth. The values for -ing are significant, which is to be expected because all participants were shown to have high rates of -ing overall. The values for Topic(gender) are not significant which shows that topic does not have a statistically significant effect on the participant's rates of -ing. Similarly, sex assigned at birth does not show any significant effects; in other words, a speaker's sex assigned at birth plays no predictable role in their rates of -ing. The next four rows show the effect that lexical category had on rates of

-ing. The only category that had a marginally significant effect were verbs, which shows speaker's producing slightly lower rates of -ing for verb, which is consistent with past research finding that verbs are more likely to be pronounced with the alveolar -in (Houston 1985). The last row shows no interaction between style and sex assigned at birth, which means that in addition to there being no significant results for the effects of topic or sex assigned at birth, there are not significant results for the interaction between these social effects.

Fixed Effect	Estimate	P value
-ing	0.95	> .001
Topic(gender)	-0.02	.67
Sex assigned at birth	-0.09	.21
PartofSpeech(Noun)	0.1	.15
PartofSpeech(Some/Nothing)	-0.01	.95
PartofSpeech(Gerund)	0.04	.48
PartofSpeech(Verb)	-0.08	.08
Topic:SexBirth	0.05	.41

Table 1: Results of the mixed effects model.

(a) $lmer(ING \sim Topic * SexBirth + PartofSpeech + (1|speaker) + (1|word))$

The results of this study found that the 8 nonbinary participants had stable usage of (ING) across the two topic categories, which suggests that indexical field activation and topic-based shifting are not major influences for shifting rates of (ING) in nonbinary speakers. Setting and the perceived threat of being misgendered were controlled for in the study, so these results are in line with the argument from Gratton (2016, 2017) that the perceived threat of being misgendered is a major motivating factor for nonbinary speakers shifting rates of (ING). Furthermore, the results of the study found that a participant's assigned gender at birth plays no predictable role in rates of (ING), suggesting that nonbinary speakers form their own linguistic community that operates outside of the gender binary. This is congruent with the observation given by Darwin (2017) that nonbinary individuals subvert "normative scripts of gender display/linguistics" to create stances which "contribute toward the redoing of gender to include options beyond man and woman". This provides further support for the notion that nonbinary speakers employ linguistic features, that are used traditionally by other gender identities, in a distinctly nonbinary style. This allows these speakers to establish a 'nonbinary' indexical meaning as a means of asserting their identity through stylistic bricolage, whether they are consciously aware of it or not.

6 Conclusions and Future Directions

Labov (1990:p. 209) claims that "If we assign gender to our subjects by some other criterion than sex, we run the risk of losing any chance of replication by others". This statement captures a snapshot in time when sociolinguistic research was predicated on ideas of gender that are now outdated, but it also reflects possible contemporary anxieties that removing the gender binary from variationist analysis would make studies incomparable. However, sociolinguistic work on the patterns of binary gendered speakers who act similarly across macro-social speech communities is not nullified by analyzing the linguistic patterns produced by nonbinary and non-cis people. This point is further supported by the claim that "If we are interested in getting around either binary, we are not likely to do so entirely on the basis of large corpora, but through a variety of targeted ethnographic or, in some cases targeted survey, studies" (Eckert 2014). Conrod 2021 suggests that linguistic studies which ask about gender should carefully consider exactly what information is being collected and

how that information is relevant to the research question, so that researchers can avoid the harmful practice of implicit misgendering as well as protecting and respecting the people who participate in these studies. Additionally, Becker et al. (to appear) noted that although their results seemed to support the idea that gender is a single spectrum with cis men and cis women on each end, they believe that theorizing gender in that way is ideologically under-representative of the complex nature of language variation and that it leads to the incorrect notion that nonbinary speakers must be acting within or in reaction to the gender binary.

To continue expanding sociolinguistic theories of gender, research should continue to look outside the gender binary framework as a means of elucidating the linguistic machinations that underpin the production of gender stances. Identities which are not captured by the categories of binary gender suggest that the expression of gender through linguistic means is an arena with much variation and that this variation can provide invaluable insight into the ways that speakers convey social meaning through their linguistic style.

This study was able to be performed by a member of the nonbinary community who was already a familiar acquaintance with the participants involved, but the number of participants was limited in size due to the scope of this research. Future studies should continue this work with nonbinary individuals to observe if this trend of nonbinary individuals continue to pattern similarly to each other across varying social backgrounds and experiences, as well as accounting for how these social backgrounds may influence and inform nonbinary individuals production of gender. It would also be valuable for future research to examine if similar patterns are found with other dependent linguistic variables that have been seen to have gendered distributions in cis populations, such as sibilant contrasts, pitch, or discourse markers.

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