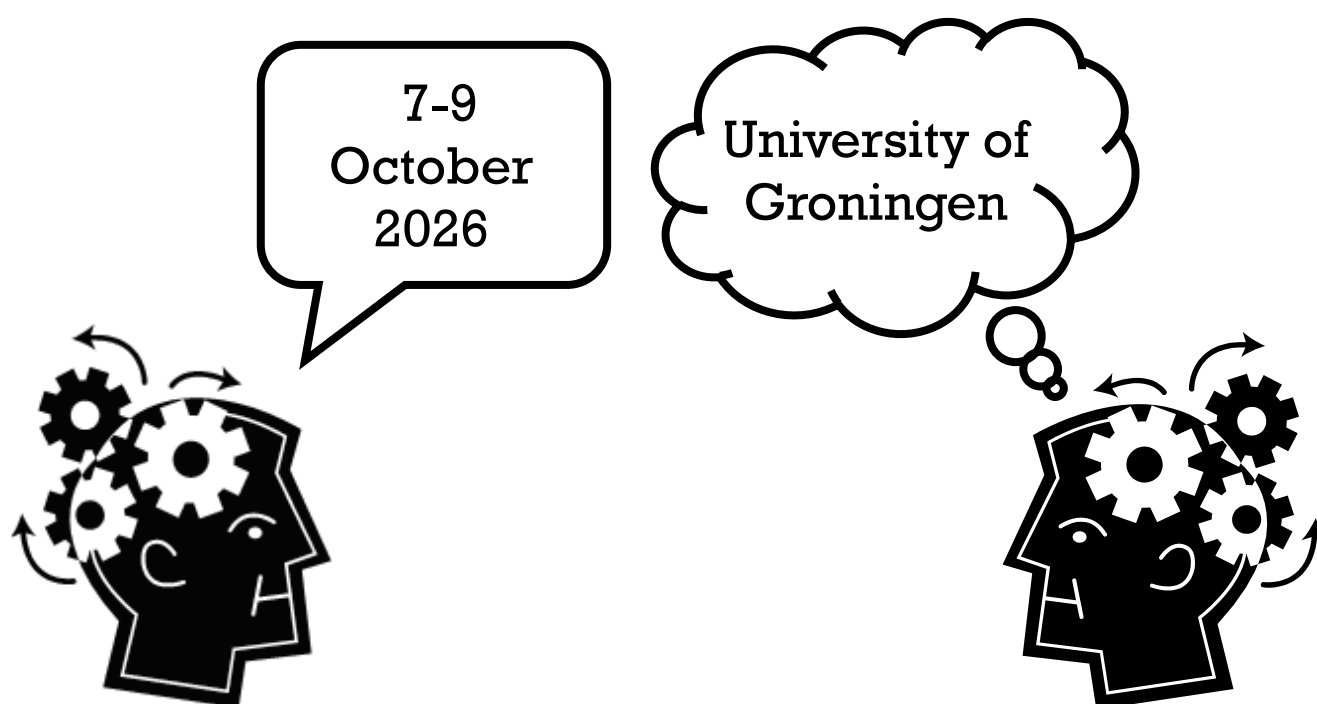


ExAPP2026

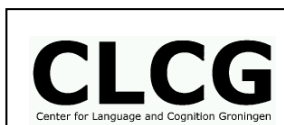
Experimental Approaches to the Perception
and Production of Language Variation



Plenary speakers:

Laura Rosseel *VUB Brussels University*

Nicolai Pharao *University of Copenhagen*



Welcome to ExAPP2026

The ExAPP2026 Committee warmly welcomes you to Groningen for the 5th ExAPP conference!

The goal of ExAPP is to gather scholars employing experimental methods to investigate linguistic variation. We are convinced that empirical approaches to the study of language variation and change can benefit greatly from study designs using systematic manipulation of variables. ExAPP aims to offer a conference that covers aspects of variation on all linguistic levels, and the perception as well as the production thereof. This edition of ExAPP will feature 10 thematic sessions in which 28 papers will be presented, and two poster sessions with 12 posters in total. You can find the detailed programme on pages 6 and 33 of this booklet.

We kick off the conference on Wednesday 7 October at 6:30 PM at De Sleutel (Noorderhaven 72), just around the corner of the conference venue. On Thursday morning, **Merel Keijzer**, vice-dean for research at the Faculty of Arts, will welcome everyone in the Norman building (Lutkenieuwstraat 5), before we start our four oral sessions. After lunch, we will have our first poster session, and then our plenary speaker, **Laura Rosseel** (VUB Brussels University) will share with us thoughts about contextualising language attitudes experiments.

We will finish the first conference day with coffee and pastries in honour of Charlotte Gooskens. Charlotte was the driving force behind the first edition of ExAPP, so it is safe to claim that none of us would be gathering here this week had she not initiated this conference series in 2010. As many of you are aware, Charlotte passed away at the beginning of 2026. She has left a huge void in her field of research: the mutual intelligibility of closely related languages. We miss her dearly at the Faculty of Arts, in the Center for Language and Cognition Groningen (CLCG), in the chair group European Languages and Society, and most importantly, as a dear friend. Therefore, we would like to commemorate her with you all on Thursday afternoon.

On Friday morning, we start the day with two oral sessions and continue with coffee and posters. After four more oral sessions, our second plenary speaker, **Nicolai Pharao** (University of Copenhagen), will share insights into experimental approaches to social and lexical meaning, before it is time to take farewell again.

We are delighted that so many of you again found their way to beautiful Groningen. We hope to provide a venue for inspiring talks, for sharing ideas and building new networks, and most of all, meeting colleagues and make new friends.

The ExAPP2026 committee,

Alexander Martin

Anja Schüppert

Nanna Haug Hilton

Remco Knooihuizen

Table of contents

Welcome to ExAPP2026	1
Table of contents	2
PLENARY 1	4
Contextualising language attitudes experiments: a quest beyond reach or a journey worth taking?	4
PLENARY 2	5
Indexical decision: Exploring experimental approaches to social and lexical meaning.....	5
THURSDAY 8 October 2026	6
Metalinguistic awareness of contact phenomena in United States Spanish	7
The production and perception of variation in accommodation: Three experimental approaches	9
Pedagogical Translanguaging Practices from EFL Textbooks in Dutch Secondary Education.....	10
How pluricentric is the Dutch language really? Insights from an online survey in Aruba, Belgium, the Netherlands and Suriname	12
The fuzzy boundaries of standard language varieties: Insights from a citizen science experiment on Belgian Standard Dutch	14
Estonian speakers' attitudes towards language variation: Salience, acceptability, and standard language ideology	16
What if you could have it all: three temporal perspectives on Frisian vowel breaking.....	18
To Break or Not to Break: Morphological and Phonological Influences on Breaking in Frisian Adjectives	20
Variation across the Frisian Language Family: Infinitives, Language Contact, and Speaker Attitudes	21
<i>Switse, Harkje, Prate</i> : Language identity, bilingual speech, and vitality in an A.I.-mediated future	22
Stylistic Variation of Singapore Hainanese Implosives: Experimental Evidence of Language Policy's Effect on Phonetics	23
What Gets Lost in the Cluster: Comparing Broad and Fine-Grained Categories in DACH Speaker Evaluations	24
The sound system of Surinamese Dutch: towards an empirical description	25
POSTER SESSION I: Language Perception, Attitudes & Identity	26
The Perceived Trustworthiness of Languages in Fryslân	26
How do traditional speakers perceive new speakers of Gronings? An experimental study	27
Language Attitudes in Fryslân: A Matched-Guise Study of Frisian, Dutch and English	28
Bridging Centuries: The Intelligibility of Middle High German Words for Present-Day Native Speakers of German	29
Falling together, falling apart: Realizational differences between statements and wh-questions across European Portuguese varieties.....	30
Not an Error but a Feature: Reframing /p/ and /b/ in Saudi English	32
FRIDAY 9 October 2026	33
Implicit self-concept: a cognitive approach to identity in sociolinguistics	34
Does syntactic complexity reduce social meaning activation? New evidence from French subject-verb inversion in French	35
Lead-lag dynamics in the cognitive internalization of permissive subjects: A cross-linguistic multi-method study	36
Perceptual proximity and dialect recognition in the Quattro Province (Italy)	37

The Path of the least Effort: Inter-Nordic Language Comprehension facing new Challenges	38
On (pre)adolescents' perception of lexical variation: a mixed-methods approach to the identification of English loanwords in Dutch	39
The applications and challenges of preregistration in laboratory sociolinguistic research	40
Focus Groups as an Exploratory Bridge Between Corpus Data and Experimental Design	41
Bekoffiën, opbelbaar or rather kunstelijk? What potential words can tell us about morphological productivity.....	43
Effects of Talker Gender on the Voicing Categorization of Stop Consonants: Cross-Linguistic and Individual Variation	44
Sociophonetic variation in nasal coarticulation in London English.....	46
Perception and production link under contrast merger: Evidence from Quanzhou Southern Min–Mandarin bilingual speech	48
'Waar ziet ge uzelf over vijf jaar?': Perception of address pronoun variation in Belgian Dutch job interviews	51
The Indexical Field of Address Forms: Mandarin T/V Distinction Perceived and Produced	53
Standard language ideology revisited: a contextualised perspective on standard - colloquial language variation in an educational setting	55
Equal in Dictionaries, Unequal in Processing: Lexical Access to Russian Words with Variable Stress.....	57
Poster Session II: Structural, Phonetic & Grammatical Production	58
Investigating Chinese and European Listeners' Perception of English Accent Similarity: Evidence from a free-classification task	58
Acquiring the social meaning of language variation: Investigating the potential of semi-artificial sociolinguistic language learning	59
Mutual intelligibility of West Nordic varieties	60
Sociophonetic variation in Dutch schwa epenthesis: an auditive, acoustical and automatic analysis	61
New Englishes in Academic Writing: Innovative Uses of Conditional Clauses	62
Refutational too between semantics, pragmatics, and social meaning in American English.....	63

PLENARY 1

Thursday 8 October, 15:00 – 16:00



Contextualising language attitudes experiments: a quest beyond reach or a journey worth taking?

Laura Rosseel, VUB Brussels University

Context is a crucial factor in the study of the perception and production of language variation. Linguistic variation emerges from situated experience and is hence shaped by linguistic, discourse-related, and social context. While this is widely acknowledged in work theorizing the social evaluation of language variation (see for example Preston 2010, Eckert 2008), it is quite another matter practically integrating these insights on contextualisation of language into experimental studies (cf. critical perspectives in for instance Preston 1989). Over the years, language attitudes researchers have tried various approaches to reconcile the contextualised nature of language variation with the experimental toolbox they dispose of.

In this talk, I discuss this quest for more contextualised language attitudes experiments building on our work on the social evaluation of language variation in Belgian Dutch, illustrating how the inclusion of contextual information has led to new insights. At the same time, I try to point to challenges we still face and reflect on ways forward to fully leverage the potential of more contextualised experimental work in language attitudes research and beyond.

PLENARY 2

Friday 9 October, 15:30 – 16:30



Indexical decision: Exploring experimental approaches to social and lexical meaning

Nicolai Pharao, University of Copenhagen

Variation in speech production is perceived and given meaning by interlocutors. This is a central tenet of contemporary sociolinguistics where steadily increasing amounts of studies within the third wave examine socially meaningful variation in interaction. Within this approach, a strand of speaker perception studies using experimental approaches have been conducted to elucidate the relationship between different types of phonetic variation in running speech and how co-occurrence impacts social meaning.

In this talk, I will attempt to provide a comprehensive picture of the processes of socially meaningful listening while also pointing to issues that require further work, and where experimental approaches may prove useful. One such area is the relationship between the processing of social and lexical meaning as listeners encounter variation in the phonetic signal. Drawing on data collected for a dialect of Danish where participants were given both a Personalised Implicit Association Task and a Lexical Decision task, I want to explore how sociophonetic and psycholinguistic methods may be combined to further understand the interrelationship of social and lexical meaning in speech.

THURSDAY 8 October 2026

08:00 - 08:45	Registration <i>Norman Building, Lutkenieuwstraat 5, 9712 AW Groningen</i>	
8:45 – 9:00	Opening by prof. dr. Merel Keijzer , Vice-dean for research at the Faculty of Arts	
	<i>Upstairs</i>	<i>Downstairs</i>
09:00 - 10:30	Language Contact, Learning & Translanguaging	Language Attitudes, Standards & Variation
	Dylan Jarrett and Benjamin Weissman: <i>Metalinguistic awareness of contact phenomena in United States Spanish</i>	Frauke Vervaeke: <i>How pluricentric is the Dutch language really? Insights from an online survey in Aruba, Belgium, the Netherlands and Suriname</i>
	Anna Kai Jørgensen: The production and perception of variation in accommodation: Three experimental approaches	Anne-Sophie Ghyselen, Iene De Meyer, Lyvia Diser, Marjan Doom & Alexander Jonckheere: <i>The fuzzy boundaries of standard language varieties: Insights from a citizen science experiment on Belgian Standard Dutch</i>
	Lorena G. Tuica: <i>Pedagogical Translanguaging Practices from EFL Textbooks in Dutch Secondary Education</i>	Maarja-Liisa Pilvik, Liina Lindström, Mari Aigro, Lydia Risberg, Len Toots: <i>Estonian speakers' attitudes towards language variation: Salience, acceptability, and standard language ideology</i>
10:30 - 11:00	COFFEE BREAK	
11:00 - 13:00	Special Session on Frisian	Experimental Sociophonetics & Phonology
	Cesko Voeten & Martijn Kingma: <i>What if you could have it all: three temporal perspectives on Frisian vowel breaking</i>	Yong Chuen Shin: <i>Stylistic Variation of Singapore Hainanese Implosives: Experimental Evidence of Language Policy's Effect on Phonetics</i>
	Fenna Bergsma, Kyle Elbaz Fingerhut, Martijn Kingma, Marijn van 't Veer: <i>To Break or Not to Break: Morphological and Phonological Influences on Breaking in Frisian Adjectives</i>	Elijah Liam King: <i>What Gets Lost in the Cluster: Comparing Broad and Fine-Grained Categories in DACH Speaker Evaluations</i>
	Fenna Bergsma, Anne Merkuur, Suzanne Dekker, Eric Hoekstra, Wilbert Heeringa, Silke Oosterhof, Jildou Kooke, Kerrin Tadsen, Henk Wolf, Veronika Pugge, Lena Terhart, Thede Thießen: <i>Variation across the Frisian Language Family: Infinitives, Language Contact, and Speaker Attitudes</i>	Mishko Bozhinoski: <i>The sound system of Surinamese Dutch: towards an empirical description</i>
	Dylan Rose, Hans Van de Velde, Matt Coler: <i>Switse, Harkje, Prate: Language identity, bilingual speech, and vitality in an A.I.-mediated future</i>	
13:00 – 14:00	LUNCH	
14:00 – 15:00	Poster Session I	
15:00 – 16:00	Plenary (Upstairs): Laura Rosseel : <i>Contextualising language attitudes experiments: a quest beyond reach or a journey worth taking?</i>	
16:00 – 16:45	Coffee and pastries in honour of Charlotte Gooskens	

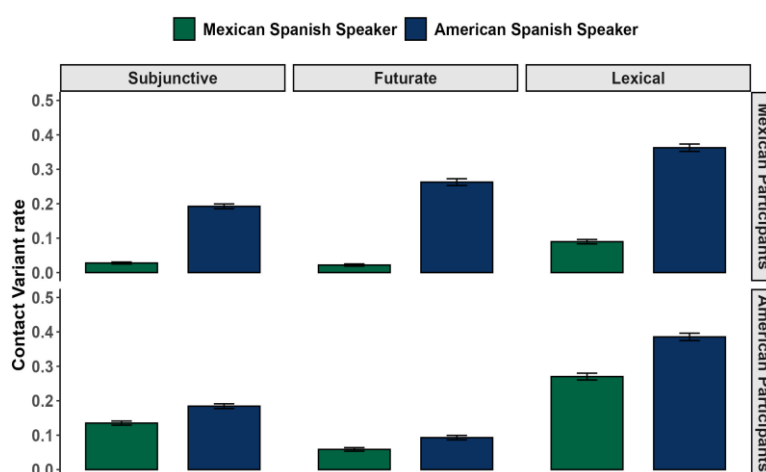
Metalinguistic awareness of contact phenomena in United States Spanish

Dylan Jarrett & Benjamin Weissman

The prolonged contact between English and Spanish in the United States has given rise to a plethora of contact phenomena. Previous research has documented borrowing and calquing from English (Waltermire & Valtierrez, 2019), extensive code-switching (Ali, 2023) as well as morphosyntactic simplification (Silva-Corvalán, 1994) and extension (Zahler & Leguisamon Tolentino, 2025). An open question remains as to how aware both in- and outgroup speakers are of these features and if there is a growing consciousness of a macro US Spanish dialect characterized by contact with English. To address this, the present study considers whether previously described Spanish-English contact phenomena are systematically associated with US Spanish speakers, if the degree of association differs for lexical versus morphosyntactic phenomena, and if these associations vary across participant populations.

206 Spanish speakers in Mexico and 208 Spanish speakers in the US completed a three-alternative forced choice preference task. Each participant was introduced to one of two fictional Spanish speakers: one who was born and currently lives in Mexico, or one who was born and currently lives in the US. They then selected which word or construction they believed the fictional speaker would use to complete various sentences. The phenomena of interest were decreased use of the subjunctive (1) (30 items), futurate uses of present progressive forms (2) (20 items) and semantic extensions of lexical items (3) (20 items).

A logistic mixed-effects regression model predicting the likelihood of selecting a contact variant found significant main effects for the type of phenomenon ($p < .001$), the type of speaker ($p < .001$), and the participant population ($p < .001$). Overall, contact variants were selected more frequently for the US Spanish speaker, and contact variants of lexical items were selected more frequently than morphosyntactic forms. Significant two- and three-way interactions showed that US participants were more likely than Mexican participants to attribute contact variants to the Mexican speaker, suggesting they may be less aware of dialectal variants different from their own. Together, this study provides initial evidence that Spanish speakers are aware that US Spanish is a variety of Spanish distinct from macro dialects such as Mexican Spanish, and that the degrees of awareness vary depending on the nature (and, perhaps, salience) of the contact phenomenon as well as speakers' in-group status.



Example survey items

- (1) Quiero que Ramón _____ temprano mañana.
a. viene (contact variant) b. venga (Mexican Spanish)
I want Ramón to come early tomorrow.
- (2) Mañana ella _____ a la ciudad.
a. está manejando (contact variant) b. va a manejar (Mexican Spanish)
Tomorrow she's driving/gonna drive to the city.
- (3) Estoy nerviosa porque mañana voy a **introducir / presentar** mi novio a mis padres.
a. introducir (contact variant) b. presentar (Mexican Spanish)
I'm nervous because tomorrow I'm going to introduce my boyfriend to my parents.

References

- Ali, F. (2023). Code-Switching Among Heritage Spanish Speakers: Attitudes, Practices, and Pedagogical Implications.
- Silva-Corvalán, C. (1994). The gradual loss of mood distinctions in Los Angeles Spanish. *Language Variation and Change* 6: 255–72.
- Waltermire, M., & Valtierrez, M. (2019). Spontaneous Loanwords and the Question of Lexical Proficiency among Spanish-English Bilinguals. *Hispania*, 102(3), 409–422. <https://www.jstor.org/stable/26867510>
- Zahler, S., & Leguisamon Tolentino, R. (2025) Acceptance of the Spanish present progressive as a future form among Spanish-English bilinguals and Spanish monolinguals. *Tense and Aspect in Multilingual Romance Language Education*, 319.

The production and perception of variation in accommodation: Three experimental approaches

Anna Kai Jørgensen

Convergence is often viewed as the default behaviour in interactions between speakers (Dragojevic et al., 2016; MacLeod, 2013). This extensive study of two regional varieties of Danish finds that phonetic features are often maintained in interaction and that the data are rich in individual variation. The study compares three experimental approaches to investigating linguistic variation in interaction, examined through the lens of accommodation, and shows that results vary widely depending on the method used.

Data come from 14 teacher-training students at university colleges in the north and south-east of the Jutland peninsula of Denmark, who completed a map task in pairs. Each participant read a word list of 32 landmarks before and after the interaction, and their spontaneous interaction during the task was recorded. The map task design updates the original HCRC Map Task (Anderson et al., 1991) to target phonetic features central to regional variation in Danish.

The data were subjected to a range of accommodation methods aimed at the segmental and word level. First, vowel difference was measured using linear models to test whether speakers' vowel spaces became more similar after interaction, a method widely applied in phonetic accommodation research. The second, less-used method compared the amplitude envelopes (Lewandowski & Jilka, 2019) of words, providing a more holistic measure of the similarity between two speakers' pronunciations. Finally, the same words were tested using an AXB design, in which listeners were asked to assess whether speakers sounded more similar after interacting. The linear models yielded mixed results, indicating convergence for some speakers, mainly in the F2 dimension. Comparisons of amplitude envelopes showed no signs of convergence, except for one dyad. The AXB results show that most speakers were judged as sounding more similar to their partner after interaction.

These heterogeneous findings have significant implications for investigating linguistic variation through experimental methods. As demonstrated, outcomes differ based on the approach used, indicating that (i) each method reveals different aspects of linguistic behaviour at various levels, and (ii) that some phonetic features might be more perceptually salient to listeners, but do not correspond directly to the tested acoustic phenomena, such as vowel spaces and word amplitudes. The widespread observation of maintenance—a lack of change in pronunciation after exposure to a partner—may reflect that participants operate within a linguistic 'safe space' in which convergence might not be necessary to negotiate social distance. This highlights the importance of considering linguistic variation and social meaning when studying accommodation, something only a few previous studies have done (Kim et al., 2011; Pardo et al., 2012).

References

- Anderson, A. H., Bader, M., Bard, E. G., Boyle, E., Doherty, G., Garrod, S., Isard, S., Kowtko, J., McAllister, J., Miller, J., Sotillo, C., Thompson, H. S., & Weinert, R. (1991). The HCRC Map Task Corpus. *Language and Speech*, 34(4), 351–366.
- Dragojevic, M., Gasiorek, J., & Giles, H. (2016). Accommodative strategies as core of the theory. In *Communication Accommodation Theory: Negotiating Personal Relationships and Social Identities across Contexts* (pp. 36–59). Cambridge University Press.
- Kim, M., Horton, W. S., & Bradlow, A. R. (2011). Phonetic convergence in spontaneous conversations as a function of interlocutor language distance. *Laboratory Phonology*, 2(1).
- Lewandowski, N., & Jilka, M. (2019). Phonetic Convergence, Language Talent, Personality and Attention. *Frontiers in Communication*, 4, 1–19.
- MacLeod, B. (2013). *What is the default behaviour in accommodation: Convergence or maintenance?* 1–5.
- Pardo, J. S., Gibbons, R., Suppes, A., & Krauss, R. M. (2012). Phonetic convergence in college roommates. *Journal of Phonetics*, 40(1), 190–197. <https://doi.org/10.1016/j.wocn.2011.10.001>

Pedagogical Translanguaging Practices from EFL Textbooks in Dutch Secondary Education

Lorena G. Tuica

This pilot study investigates pedagogical translanguaging practices (PTP) in English as Foreign Language (EFL) textbooks used in Dutch secondary education. In line with current European approaches to multilingual education, pedagogical translanguaging emphasises the strategic use of learners' full linguistic repertoires to support language acquisition. (Council of Europe, 2020; García & Wei, 2014; Cenoz & Gorter, 2020). Although Dutch educational policy increasingly promotes plurilingual competence and awareness (Nederlof & Smit, 2018; SLO, 2025), little research has examined how these principles are reflected in classroom materials. This study addresses this gap by proposing and testing a corpus-based procedure for identifying PTP in EFL textbooks.

The study analyses two textbooks currently used in Dutch pre-university secondary education (VWO), one published internationally, and one published locally in the Netherlands. The textbooks were compiled in Sketch Engine for automatic POS annotation and lemmatisation (Kilgariff et al., 2014). A reference corpus, the *Textbook English Corpus* (TEC) (Le Foll, 2024), was used as sanity check during query development. First, exploratory wordlists were extracted from the VWO textbooks to isolate lexical items potentially signalling translanguaging, including explicit mentions of languages (e.g., Dutch, French, German) and implicit references such as "your language", "translation", and "dictionary". In parallel, a second set of wordlists identified high-frequency imperative verbs typically used in textbook instructions, e.g., "write", "discuss", "translate", "compare", which served as indicators of student actions during task execution. These lexical sets were then combined into Corpus Query Language (CQL) searches in Sketch Engine to retrieve instructions in which explicit mentions of languages occurred within a defined textual span of instructional verbs. The resulting queries were subsequently tested on the reference corpus to evaluate noise levels and refine retrieval criteria before being applied to the VWO corpus. Finally, all concordance hits from the VWO corpus were manually filtered to remove duplicates and irrelevant instances, after which the remaining examples were qualitatively classified according to trained skill (reading, listening, speaking, and writing), translanguaging mode (bilingual or plurilingual), and agent of translanguaging (student-led or scaffolding).

The findings reveal that PTP in the VWO textbooks are relatively limited and predominantly bilingual rather than plurilingual. Most instances involved Dutch-English translation, or code-switching for vocabulary scaffolding and grammar-focused exercises. Tasks containing PTP were concentrated mainly in reading and form-focused activities, with occasional occurrences in speaking tasks, while writing and listening activities showed no instances of PTP. Furthermore, most PTP were student-led rather than teacher-led, although the local textbook employed consistent explicit bilingual scaffolding. Unlike examples identified in the reference corpus, VWO textbooks rarely contextualised PTP within authentic communicative scenarios or personalised multilingual experiences.

The study demonstrates both the potential and the limitations of corpus methods for identifying translanguaging practices in educational materials. While substantial manual refinement remains necessary, the proposed procedure offers a replicable starting point for larger-scale annotation and textbook analysis. The findings suggest that EFL textbooks used in VWO schools only partially reflect plurilingual pedagogical goals promoted in European educational policy and indicate the need for more contextualised and inclusive multilingual practices in classroom materials.

References

- Cenoz, J., & Gorter, D. (2020). Teaching English through pedagogical translanguaging. *World Englishes*, 39(2), 300–311.
- Council of Europe. (2020). *Common European Framework of Reference for Languages: Learning, teaching, assessment. Companion volume*. Council of Europe Publishing.
- García, O., & Wei, L. (2014). *Translanguaging: Language, bilingualism and education*. Palgrave Macmillan.
- Kilgariff, A., Baisa, V., Bušta, J., Makubíček, M., Kovář, V., Michelfeit, J., Rychlý, P., Suchomel, P. (2014). The Sketch Engine: Ten Years On. *Lexicography*, 1: 7-36.

Le Foll, E. (2024). *Textbook English: a multi-dimensional approach* (Studies in Corpus Linguistics 116). John Benjamins Publishing Company. <https://doi.org/10.1075/scl.116>

Nederlof, N., & Smit, J. (2018). Meertaligheid in primair en voortgezet onderwijs: een stand van zaken en curriculaire aanbevelingen. Enschede: SLO.

SLO (2025). Conceptexamenprogramma Engelse taal en cultuur – vwo (versie 2). SLO.

How pluricentric is the Dutch language really? Insights from an online survey in Aruba, Belgium, the Netherlands and Suriname

Frauke Vervaeke

In recent decades, the traditional monocentric view of standard languages has in Europe increasingly given way to a pluricentric perspective that acknowledges the coexistence of multiple national standard varieties. These *natiolects* now often serve as reference points for codification efforts and language policies, as seen in Dutch (cf. Adviescommissie Taalvariatie, 2019), even if their analytical relevance remains contested (Scherr & Ziegler, 2023; Van Oostendorp, 2023). As such, natiolects are increasingly well-established categories for linguists and policy makers, but much less is known about how non-specialist language users conceptualise and evaluate national variation. While recent sociolinguistic and policy developments might have increased public awareness of co-existing national standard varieties, there are also reasons to expect that natiolects are (i) of limited salience for language users and (ii) not all considered equally standard. Within nations, for instance, language variation encompasses regional, social and ethnic variation that national labels tend to obscure. Moreover, globalization, increased mobility, and digital communication increasingly blur linguistic boundaries and destabilize traditional language categories, including national ones (Wide et al., 2021, p. 2). Even when national variety distinctions are perceptually active, it does not mean that those varieties are deemed equally prestigious: asymmetric prestige relations between national varieties are well-documented across pluricentric languages (Muhr, 2016, p. 43). The same is historically true for Dutch (cf. Groeneboer, 1997; Van de Voorde, 2022), but language users' present-day prestige evaluations remain largely uncharted.

To explore the perceptual relevance and perceived standardness of Dutch national varieties today, we conducted an online survey among 773 respondents from Aruba, Belgium, the Netherlands and Suriname, combining perception and attitude measures at systematically varying levels of granularity. The survey contained (i) a map-based task asking respondents to indicate where they believe people speak or write Dutch differently from themselves, (ii) self-reported familiarity ratings per national variety, (iii) open-ended questions prompting respondents to describe inter-varietal differences, and (iv) direct ratings of correctness and prestige of national varieties. The maps were analysed in terms of the granularity of the drawn areas. Regression analyses then assessed the influence of respondents' nationality across the map task and the rating-scales. For the open-ended data, we linked thematic patterns to participants' national backgrounds.

The results reveal complex cross-national differences. On the map task, Belgian respondents orient most strongly towards national-level categories. Dutch participants more often delineate regions within nations, and Aruban respondents more frequently identify supra-national categories. Familiarity is highly asymmetric: all groups report strong familiarity with Netherlandic Dutch, whereas familiarity with Caribbean varieties is generally low, including among Surinamese and Arubans. Prestige and correctness ratings are more symmetric. Even though Netherlandic Dutch is consistently favoured, Belgians and Surinamese attribute high prestige to their own variety as well, placing it on par with Netherlandic Dutch. Interestingly, Arubans do not. Taken together, these patterns shed light on the status of Dutch as a pluricentric language from the perspective of non-specialist language users. While our focus is on Dutch, both the method and the identified patterns hold broader relevance for other European pluricentric languages.

References

- Adviescommissie Taalvariatie. (2019). *Visie op taalvariatie en taalvariatiebeleid—Taalunie*. <https://taalunie.org/publicaties/88/visie-op-taalvariatie-en-taalvariatiebeleid>.
- Groeneboer, K. (1997). *Koloniale taalpolitiek in Oost en West: Nederlands-Indië, Suriname, Nederlandse Antillen en Aruba*. Amsterdam University Press.
- Muhr, R. (2016). The state of the art of research on pluricentric languages: Where we were and where we are now. In R. Muhr, K. E. Fonyuy, Z. Ibrahim, & C. Miller (Eds), *Pluricentric languages and non-dominant varieties worldwide. Part I: pluricentric languages across continents. Features and usage*. (pp. 13–40).
- Scherr, E., & Ziegler, A. (2023). A question of dominance: Statistically approaching grammatical variation in German standard language across borders. *Journal of Linguistic Geography*, 11(2), 91–103. <https://doi.org/10.1017/jlg.2023.4>

Van de Voorde, I. (2022). *Pluricentriciteit in de taalgeschiedenis: Bouwstenen voor een geïntegreerde geschiedenis van het Nederlands (16de – 19de eeuw)*. Universiteit van Leiden.

Van Oostendorp, M. (2023). Waarom we het nooit eens worden over het Nederlands. *De Lage Landen - Nederlands Is Een Werkwoord*, 66(Februari), 12–18.

Wide, C., Norrby, C., & Oakes, L. (2021). New perspectives on pluricentricity. *Sociolinguistica*, 35(1), 1–7. <https://doi.org/10.1515/soci-2021-0001>

The fuzzy boundaries of standard language varieties: Insights from a citizen science experiment on Belgian Standard Dutch

Anne-Sophie Ghyselen, Iene De Meyer, Lyvia Diser, Marjan Doom & Alexander Jonckheere

The delineation of language varieties has long been considered problematic. Linguists have warned that attempts to draw clear boundaries between varieties may amount to ‘mere analyst’s play’ (Willemyns 1985), while languages and varieties themselves have been described as ‘myths we live and speak by’ (Davies 2012). At the same time, however, production and perception data suggest that language varieties are structurally and cognitively real. In production, linguistic features tend to cluster systematically across socio-situational contexts, indicating coherent variety structures (e.g. Ghyselen and De Vogelaer 2018), while in language perception speakers display strong intuitions about varieties (cf. Lenz 2004). To reconcile these observations, scholars have proposed prototype-based approaches to language varieties (e.g. Jørgensen 2008; Kristiansen 2008; Geeraerts 2010; Pickl 2013). From this perspective, varieties are not sharply delimited systems but are rather characterized by gradual transitions.

This paper investigates the fuzziness of variety boundaries by focussing on perceptions of Belgian Standard Dutch. Belgian Dutch constitutes a particularly relevant case because of its diaglossic nature, with a continuum of variations between dialect and standard language (labelled *tussentaal*) complicating language policy debates on (the definition of) Standard Dutch. Specifically, we examine (1) which types of Belgian Dutch language users categorise as Standard Dutch, and (2) whether the degree of variability in categorisation behaviour and response speed reflects a latent prototypicality hierarchy of standardness. A third objective (3) evaluates the methodological potential of citizen science experiments for addressing perceptual questions in sociolinguistics.

The experiment was implemented as part of the exhibition *BORDERS* at the Ghent University Museum (March 2026-April 2027). Museum visitors were invited to listen to short audio fragments produced by Dutch-speaking Belgians and categorize them as either “Standard Dutch” or “not Standard Dutch” as quickly as possible. The stimulus set included regionally neutral speech, regional L1 accents, L2 accents, regionally neutral speech with /t/-deletion, and regionally accented speech containing grammatical features commonly associated with *tussentaal*. Both categorization and reaction times were recorded.

At the time of writing (11/05/2026), 5,001 museum visitors have participated in the experiment. Preliminary analyses reveal highly consistent categorization patterns for regionally neutral fragments – classified as Standard Dutch by 96% of respondents – and for fragments combining regional accents with grammatical dialect features – rejected as standard by >94% of participants. Together, these findings suggest clear perceptual prototypes of both ‘standard’ and ‘non-standard’ speech.

Other stimuli, however, elicited substantially more variation and strong in-group bias, indicating fuzzy perceptual boundaries. Particularly striking is the sharp increase in categorization variability with the addition of one variant – /t/-deletion – to regionally neutral fragments. Further regression analyses will examine how stimulus type and listener characteristics jointly predict standardness judgments and reaction times, allowing to construct a prototypicality hierarchy of Belgian Standard Dutch and to examine how that hierarchy varies across social groups. Beyond these findings, the study demonstrates the potential of citizen science for experimental research on the production and perception of variation.

References

- Davies, Winifred. 2012. "Myths we live and speak by. Ways of imagining and managing language and languages." In *Standard Languages and Multilingualism in European History*, edited by Matthias Hünig, Ulrike Vogl and O. Moliner, 45–70. Amsterdam/Philadelphia: John Benjamins.
- Geeraerts, Dirk. 2010. "Schmidt redux: How systematic is the linguistic system if variation is rampant?" In *Language Usage and Language Structure*, edited by Kasper Boye and Elisabeth Engeberg-Pederson, 237–262. Berlin/New York: De Gruyter Mouton.
- Ghyselen, Anne-Sophie, and Gunther De Vogelaer. 2018. "Seeking Systematicity in Variation: Theoretical and Methodological Considerations on the ‘Variety’ Concept." *Frontiers in Psychology* 9 (art 385): 1–19.
- Jørgensen, Jens Normann. 2008. "Polylingual Languageing Around and Among Children and Adolescents."

International Journal of Multilingualism 5 (3): 161–176.

Kristiansen, Gitte. 2008. "Style-shifting and shifting styles: A socio-cognitive approach to lectal variation." In *Cognitive Sociolinguistics*, edited by Gitte Kristiansen and René Sirven, 45–88. Berlin/New York: Mouton de Gruyter.

Lenz, Alexandra. 2004. "Hyperforms and variety barriers." In *Language variation in Europe*, edited by Britt-Louise Gunnarson, Lena Bergström, Gerd Eklund, Staffan Fridell, Lise H. Hansen, Angela Karstadt, Bengt Nordberg, Eva Sundgren and Mats Thelander, 281–293. Uppsala: Uppsala Universitet.

Pickl, Simon. 2013. "Verdichtungen im sprachgeografischen Kontinuum." *Zeitschrift für Dialektologie und Linguistik* LXXX (1): 1–35.

Willemyns, Roland. 1985. "Diglossie en taalcontinuüm: twee omstreden begrippen." In *Brussels Boeket. Liber Discipulorum Adolphe Van Loey*, edited by Roland Willemyns, 187–229. Brussel: Vrije Universiteit Brussel.

Estonian speakers' attitudes towards language variation: Salience, acceptability, and standard language ideology

Maarja-Liisa Pilvik, Liina Lindström, Mari Aigro, Lydia Risberg, & Len Toots

This paper examines Estonian speakers' attitudes towards language variation and the role of standard language ideology in shaping evaluations of language use. We draw on two survey-based experiments that combine the study of metalinguistic awareness with the evaluation of concrete linguistic stimuli. Language attitudes can be understood as evaluative reactions to language that reveal the social meanings speakers attach to linguistic forms and their users (Garrett 2010; Dragojevic et al. 2021; Kircher & Zipp 2022). In the Estonian context, such attitudes are closely connected to the strong position of the standard language, which is often treated not as one register among others, but as the only legitimate or "correct" form of Estonian (Lindström, Risberg & Plado 2023; Algvere 2025), i.e. representing strongly rooted standard language ideology in the society (Milroy 2001).

The first experiment, a listing task conducted in 2025, asked participants to name up to ten linguistic phenomena that they frequently notice in Estonian language use and to rate, on a five-point scale, how much each phenomenon bothers them, with 1 indicating 'not at all' and 5 indicating 'very much'. They could also specify the context in which the phenomenon occurs. The task was designed to identify which linguistic features are most salient at the metalinguistic level. The experiment included 253 respondents (81% F, average age = 46), who listed a total of 1,159 phenomena. The most frequently mentioned phenomena concerned vocabulary and orthography, including the use of foreign expressions, non-standard lexical forms, and spelling. While all linguistic levels, except pronunciation, received median annoyance ratings of 4, the highest scores were given to phenomena related to morphology, expression skills, and syntax. This suggests a potential mismatch between the salience of linguistic features in speakers' metalinguistic awareness and the strength of their negative evaluations.

The results of the listing task were used as input for the stimuli in the second experiment, an acceptability judgment task conducted in 2026. In this experiment, participants evaluated 80 sentences containing variation at different linguistic levels, imagining them either in written Estonian web media or in spoken radio and television talk-show contexts. The design allows us to compare evaluations of variation explicitly treated as standard vs. non-standard in language-planning sources, such as *auto-sid* ~ *auto-si* 'car-PL.PAR' ('cars'), with other types of regular variation or accepted parallel forms, such as *sulge-d* ~ *sule-d* 'close-IND.2SG' ('you close'). The experiment also tests whether judgments differ depending on whether the same stimulus sentences are read or heard. Preliminary results from a pilot study with 18 participants (55% F, average age = 44) indicate that participants are more attentive to language use in written contexts, and that awareness of norms is especially visible in evaluations of morphology and semantics. At the same time, evaluations also appear to be shaped by the salience of particular lexical items, including widely circulated examples familiar from school materials and language-planning discussions.

In addition to the experimental task, participants completed a background questionnaire and two questionnaires targeting personality traits and prescriptivist attitudes. These data allow us to examine whether acceptability judgments are associated with participants' sociodemographic background, experience working with texts or language, previous linguistic training, personality traits, and degree of prescriptivism. The paper demonstrates how experimental methods can be used to investigate the social meaning of linguistic variation and to make visible the influence of standard language ideology on speakers' evaluations of Estonian.

References

- Algvere, Kristel 2025. Adult L1 users' attitudes towards their proficiency in written Estonian as evidence of deep-rooted language ideologies. *Eesti ja Soome-Ugri Keeleteaduse Ajakiri / Journal of Estonian and Finno-Ugric Linguistics* 16(2), 5–50.
- Dragojevic, Marko, Fasoli, Fabio, Cramer, Jennifer & Rakić, Tamara 2021. Toward a century of language attitudes research: Looking back and moving forward. *Journal of Language and Social Psychology* 40 (1), 60–79.
- Garrett, Peter 2010. *Attitudes to Language*. Cambridge: Cambridge University Press.
- Kircher, Ruth & Zipp, Lena (eds.) 2022. *Research Methods in Language Attitudes*. Cambridge: Cambridge

University Press.

Lindström, Liina, Risberg, Lydia & Plado, Helen 2023. Language ideologies and beliefs about language in Estonia and Estonian language planning. *Eesti ja Soome-Ugri Keeleteaduse Ajakiri / Journal of Estonian and Finno-Ugric Linguistics* 14(1), 7–48.

Milroy, John 2001. Language ideologies and the consequences of standardization. *Journal of Sociolinguistics* 5, 530–555.

What if you could have it all: three temporal perspectives on Frisian vowel breaking

Cesko Voeten & Martijn Kingma

Research in language change usually faces a tradeoff concerning time. *Real-time* data provide the highest-quality *temporal inference* – correct detection of generational language change – but provide poorer *data* quality, due to low participant numbers, dropouts (panel studies), and imperfect matching (trend studies). *Apparent-time* data provide extremely high data quality due to being able to sample a richer set of participants. However, tying time to a proxy such as birthyear limits their temporal inference: changes along that proxy variable (e.g. age-grading effects) will be inherently conflated with generational change. What are the inferential consequences of this tradeoff?

We use the recently-released Boarnsterhim Corpus [1] of spoken Frisian to investigate how this trade-off plays out in real data. The corpus contains spontaneous and read-speech recordings of 112 speakers from a single municipality. Speakers were born between 1897 and 2001 and were recorded in 1982-1984 and/or 2017-2019; the corpus thus spans ca. thirty-five years of real time and 104 years of apparent time. The 1980s cohort comprises 83 speakers, the 2010s cohort contains 51, 22 of whom are ‘returning’ individuals who were also recorded in the 1980s cohort. Thus, this dataset is simultaneously an apparent-time study (using birthyear as proxy for 104 years), a trend study (based on two cohorts 35 years apart), and a panel study (based on 22 individuals).

As a case study, we investigate Frisian vowel breaking, in which ingliding diphthongs [iə, yə, uə, eə, oə] alternate with downgliding diphthongs [ɪ, jø, wo, jɛ, wa] [2,3,4,5,6,7,8]. Its synchronic opacity makes it a likely site of regularization and language change [9]; cf. [10]. It is also relevant to Frisian-Dutch contact: Dutch lacks a comparable process, a fact linked to the late and initially imperfect acquisition of breaking by Frisian children [11].

We analyze the data from three temporal perspectives: change across birthyears, change between recording cohorts, and change within the 22 returning speakers. We use GAMs to analyze the nonlinear F1–F2 dynamics of the vowels types and the differences between ingliding and breaking variants, and the way these change over time; cf. [12]. The comparison shows that the three designs are not interchangeable. While most results converge across analyses, some are design-specific: F2 changes in front vowels emerge primarily as change over birthyears, whereas F2 changes in back vowels emerge only in the real-time studies.

These results suggest that, just as apparent-time studies are vulnerable to age-grading (which could explain why the front-vowel changes disappear in the real-time analyses), real-time studies are vulnerable to [12]’s ‘zeitgeist effect’, under which explanation the back-vowel changes are specific to the 4-decade timeframe in which data was collected, and do not represent generational change. Hence, apparent-time is not a ‘riskier’ version of real-time, just a *different* one. We recommend researchers be cautious in automatically favoring real time’s inferential profile over apparent time’s, and instead carefully weigh (1) the relative risks of age-grading vs zeitgeist effects; (2) which of these is harder to mitigate (e.g. mitigating age-grading by including multiple cohorts, or mitigating zeitgeist effects by including multiple generations per cohort); (3) effort/reward tradeoffs.

References

- [1] Kingma, M., Pinget, A-F., Heeringa, W. & Van de Velde, H. (submitted). The Boarnsterhim Corpus 2.0: A Frisian-Dutch bilingual speech corpus in apparent- and real-time. *Language Resources and Evaluation*.
- [2] Tiersma, P. M. (1978). Bidirectional leveling as evidence for relational rules. *Lingua* 45, 65-77.
- [3] Tiersma, P. M. (1979). Breaking in West Frisian: a historical and synchronic approach. *Utrecht Working papers in Linguistics* 8, 1-41.
- [4] Tiersma, P. M. (1979). Aspects of the phonology of Frisian based on the language of Grou. *Meidielingen fan de stúdzjerjochting Frysk oan de Frije Universiteit yn Amsterdam* 4.
- [5] Tiersma, P. M. (1980). *The lexicon in phonological theory*. PhD dissertation, Indiana University.
- [6] Tiersma, P. M. (1982). Local and general markedness. *Language* 58, 832-849.

- [7] Tiersma, P. M. (1983). The nature of phonological representation: evidence from breaking in Frisian. *Journal of Linguistics* 19, 59-78.
- [8] van der Meer, G. (1985). *Frisian breaking: Aspects of the origin and development of a sound change*. PhD dissertation, Rijksuniversiteit Groningen.
- [9] Arndt-Lappe, S., & Ernestus, M. (2020). Morpho-phonological alternations: The role of lexical storage. In V. Pirrelli, I. Plag, & W. U. Dressler (Eds.), *Trends in Linguistics: Studies and Monographs: Vol. 337. Word knowledge and word usage: A cross-disciplinary guide to the mental lexicon* (pp. 191-227). Mouton de Gruyter.
- [10] Sneller, B. (2018). *Mechanisms of phonological change*. PhD dissertation, University of Pennsylvania.
- [11] Boelens, K. (1987). Child language acquisition as an indicator of language change in the community Frisian breaking. *International Journal of the Sociology of Language* 64, 95-106.
- [12] Fruehwald, J. (2017). Generations, lifespans, and the Zeitgeist. *Language Variation and Change* 29: 1-27.

To Break or Not to Break: Morphological and Phonological Influences on Breaking in Frisian Adjectives

Fenna Bergsma, Kyle Elbaz Fingerhut, Martijn Kingma, & Marijn van 't Veer

This study examines the phenomenon of breaking in West Frisian (ISO 639-2: fry), in which centering diphthongs alternate with vowel-glide sequences in complex forms, for example *stien* 'stone' [stian] versus *stientsje* 'little stone' [stjentsjə] (Visser 2002). Breaking is not systematically applied across all forms and shows substantial variation in its distribution (Tiersma 1979; Boelens 1987). While earlier work has proposed both morphological and phonological factors as triggers, these accounts do not fully explain the observed patterns or reliably predict when alternations occur (van der Meer 1985; Visser 2002). Because broad approaches to the phenomenon have yielded limited results, this study narrows the focus to a single morphological context in order to better control relevant variables and identify potential regularities.

We specifically investigate adjective degree formation, a context involving the addition of morphemes and/or syllables. This setting allows us to assess how both morphological structure and phonological factors contribute to breaking. A purely morphological account predicts that both the comparative suffix *-er* and the superlative suffix *-st* should favor breaking, since both involve morpheme addition. A phonological account based on disyllabic shortening predicts a stronger preference for breaking in the comparative, where suffixation adds a syllable, than in the superlative, where *-st* does not add a syllable (Boelens 1980; de Graaf & Tiersma 1980; Boelens & Ytsma 1989; Visser 2002).

Adopting a novel perception-based approach, we conducted an online acceptability judgment experiment with native speakers of West Frisian. Participants listened to comparative and superlative adjective forms containing either broken or non-broken realizations of the target alternation [iə] ~ [je] and rated their acceptability on a five-point scale. The experiment focused on the adjectives *fier* 'far' and *swier* 'heavy', alongside control and filler items.

Our results indicate that the addition of morphemes and/or syllables can create conditions under which breaking becomes possible, though it remains optional. Broken forms were generally rated as more acceptable than non-broken forms, but this preference was significantly stronger in comparatives than in superlatives. Non-broken superlatives were accepted more often than non-broken comparatives, suggesting that disyllabic shortening increases the likelihood of breaking. At the same time, considerable variation within individual speakers suggests that the phenomenon is shaped by additional factors, potentially including paradigm-level pressures and speaker-specific variation.

References

- Boelens, Krine. 1980. Wat oer de brekking yn it Mitselwierster Frysk sûnt 1900. In Philippus Breuker, Keimpe Sikkema & Klaas van der Veen (eds.), *Coulonnade: Twa-en-tweintich FARiasjes oanbean oan mr. dr. K. de Vries*, 21-33. Ljouwert: Fryske Akademy.
- Boelens, Krine. 1987. Child language acquisition as an indicator of language change in the community: Frisian breaking. *International Journal of the Sociology of Language* 64. 95-106.
- Boelens, Krine & Jehannes Ytsma. 1989. Bern en brekking: In ûndersyk nei taalwinning en taalferoaring. *It Beaken* 51. 103-114.
- de Graaf, Tjeerd & Pieter M. Tiersma. 1980. Some phonetic aspects of breaking in West Frisian. *Phonetica* 37. 109-120.
- Tiersma, Pieter M. 1979. *Aspects of the phonology of Frisian*. Amsterdam: Stúdzjerjochting Frysk oan de Frije Universiteit Amsterdam.
- van der Meer, Geert. 1985. *Frisian breaking: Aspects of the origin and development of a sound change*. Groningen: Stifting FFYRUG.
- Visser, Willem. 2002. Brekking as ferkoarting: In diaagroane analyze. *It Beaken* 64. 187-246.

Variation across the Frisian Language Family: Infinitives, Language Contact, and Speaker Attitudes

Fenna Bergsma, Anne Merkuur, Suzanne Dekker, Eric Hoekstra, Wilbert Heeringa, Silke Oosterhof, Jildou Kooke, Kerrin Tadsen, Henk Wolf, Veronika Pugge, Lena Terhart, & Thede Thießen

The Frisian language family consists of three closely related minority languages: North Frisian, Saterland (East) Frisian, and West Frisian. These varieties are spoken in multilingual settings along the North Sea coast of the Netherlands and Germany and are in contact with different majority languages: West Frisian with Dutch (Hilton et al. 2020), and North and Sater Frisian with German (cf. Munske et. al 2001). Although the languages share a common historical origin in Old Frisian, they are typically studied in isolation. In this project, we adopt a comparative approach and treat them as a single language family to study how grammatical variation interacts with language contact and speaker attitudes.

The study focuses on a feature shared by all three languages: the use of two infinitive forms, typically marked by *-e* and *-en* (cf. Hoekstra 1997). This distinction is absent from the relevant majority languages. Traditionally, in the Frisian languages the two infinitives occur in different syntactic environments: *-e*-infinitives occur as complement of modal auxiliaries and *to* let, and as arguments with an internal object and adverbial clause, while *-en*-infinitives are used as the complement of perception verbs, verbs such as *have* and *stay*, the marker *to*, and progressive constructions with *on the*. Our paper investigates to what extent speakers of the three Frisian languages maintain this distinction, or whether alternative patterns emerge.

Beyond describing this distribution, we examine whether language contact with the respective majority languages, language attitudes, and standard language ideologies affect patterns of language use. First, we investigate whether the presence of competing structures in the majority language (Dutch or Low/High German) is associated with a lower use of Frisian-specific forms. In addition, we examine whether speakers' language attitudes and standard language ideologies predict a greater use of Frisian-specific forms.

Data are collected through a spoken questionnaire administered across the three Frisian speaking regions. The questionnaire consists of three sections: sociodemographic background, infinitive usage, and language attitudes/ideologies. To investigate the infinitive usage, participants will complete a cloze test designed to elicit infinitival constructions in different syntactic environments. Responses are self-recorded by participants. Language attitudes are measured using semantic differentials (e.g. ugly–beautiful) for both Frisian and the majority language (Kircher 2022). In addition, we assess standard language ideologies through statements about correctness (e.g. “There is one correct way of speaking Frisian that people should aim to use”) and moralization (e.g. “Speaking Frisian according to recognized norms reflects respect for the language”) (Lippi-Green 2004).

By comparing these three Frisian varieties across different contact settings, this study contributes to research on contact-induced variation in minority languages, and on the relationship between morpho-syntactic variation and language attitudes and standard language ideologies.

References

- Haug Hilton, N., Jensma, G. T., & Visser, W. (2020). Frisian. In L. Grenoble, P. Lane, & U. Røyneland (Eds.), *Linguistic Minorities in Europe Online*. De Gruyter.
- Hoekstra, Jarich F (1997). *The syntax of infinitives in Frisian*. Ljouwert: Fryske Akademy.
- Kircher, R. (2022). Questionnaires to elicit quantitative data. *Research methods in language attitudes*. In: R. Kircher, L. Zipp. Cambridge: Cambridge University Press, 129–144.
- Lippi-Green, R. (2004). Language ideology and language prejudice. *Language in the USA: Themes for the twenty-first century*, 289–304.
- Munske, H. H., Århammar, N., Faltings, V., Hoekstra, J., Vries, O., Walker, A., et al. (2001). *Handbook of Frisian Studies*. Tübingen: Max Niemeyer Verlag.

Switse, Harkje, Prate: Language identity, bilingual speech, and vitality in an A.I.-mediated future

Dylan Rose, Hans Van de Velde, & Matt Coler

Despite extensive work on language processing and code-switching, no research has examined how Frisian–Dutch language dominance (LD) and language identity (LI; Joseph, 2006) influence language production, perception, and interaction, nor how this connects to digital language vitality. This PhD project addresses this gap through a three-part, human-centric investigation of how LD and LI operate in Frisian–Dutch speakers. Here, LD and LI are operationalized as complementary constructs informed by executive control and default mode network research (Kemmerer & Dove, 2026), measured via a novel instrument, the Frisian–Dutch Language Dominance and Identity questionnaire (FD-LDI).

Study 1, *Switse*, examines how LD and LI shape production by testing Frisian–Dutch speakers in a language switching picture naming task (PNT) with cognate and non-cognate words (cf. Kirk et al., 2018; 2021). Study 2, *Harkje*, investigates how LD and LI shape perception. Speakers evaluate stimuli – human baseline and matched synthetic Frisian and Dutch voices – using sociolinguistic measures including authenticity, comprehensibility, sociability, trustworthiness, and competence (Fleisig et al., 2026; Hendriks et al., 2023). Harkje assesses how LD and LI influence speakers' evaluations of synthesized speech and their willingness to use Frisian-language A.I. tools. Study 3, *Prate*, explores how LD and LI shape real-time interaction, communicative accommodation, and trust (cf. Bailey et al., 2022; Dong & Zhou, 2023) across human-robot interaction (HRI) conditions, including a distinctly “Frisian” robot that produces local speech and dialectal patterns, a monolingual Dutch robot, and a Frisian–Dutch code-switching robot.

Together, these studies seek to establish how LD and LI function as complementary yet distinct cognitive and social filters that modulate how speakers activate languages, evaluate voices, and engage with interlocutors – whether human or artificial. *Switse, Harkje, Prate* will demonstrate that these mechanisms are essential in developing A.I. and language technologies that resonate with a diverse array of speakers, while providing a unique framework for incorporating human-centric approaches into tech and A.I. (312 words).

References

- Bailey, D. E., Faraj, S., Hinds, P. J., Leonardi, P. M., & von Krogh, G. (2022). We are all theorists of technology now: A relational perspective on emerging technology and organizing. *Organization Science*, 33(1), 1-18.
- Dong, Y., & Zhou, X. (2023). Advancements in AI-driven multilingual comprehension for social robot interactions: An extensive review. *Electronic Research Archive*, 31(11), 6600–6633.
- Fleisig, E., Vargo, J., Schwarz-Acosta, N., Grajeda, V., Roberts, A., Asmah, R. & Holliday, N. (2026). Identity and personality in the social perception of synthesized voices: perceptions of OpenAI’s text-to-speech technology. *Phonetica*.
- Hendriks, B., van Meurs, F., & Usmany, N. (2023). The effects of lecturers’ non-native accent strength in English on intelligibility and attitudinal evaluations by native and non-native English students. *Language Teaching Research*, 27(6), 1378–1407.
- Joseph, J. E. (2006). *Identity and language*. In K. Brown (Ed.), *Encyclopedia of Language & Linguistics* (2nd ed., pp. 486–492). Elsevier.
- Kemmerer, D., & Dove, G. (2026). The default mode network: A transmodal cortical system for enhancing cognition and sharing mental worlds in language-specific, culturally diverse ways. *Cortex; a Journal Devoted to the Study of the Nervous System and Behavior*, 197, 115–138.
- Kirk, N. W., Kempe, V., Scott-Brown, K. C., Philipp, A., & Declerck, M. (2018). Can monolinguals be like bilinguals? Evidence from dialect switching. *Cognition*, 170, 164–178.
- Kirk, N. W., Declerck, M., Kemp, R. J., & Kempe, V. (2021). Language control in regional dialect speakers - monolingual by name, bilingual by nature? *Bilingualism: Language and Cognition*, 25(3), 511–520.

Stylistic Variation of Singapore Hainanese Implosives: Experimental Evidence of Language Policy's Effect on Phonetics

Chuen Shin Yong

Hainan Min spoken in Singapore, henceforth Singapore Hainanese, is an endangered variety, affected in part by local language policy that encourages speaking Mandarin over other languages deemed administratively as Chinese dialects. Through the use of campaign material, this paper studies the priming effects of language policy that encourages speaking one language over another on the production of implosives, /d/ and /b/, in the language. These sounds are unique to Hainanese in Singapore's language ecology. 41 speakers of Singapore Hainanese were recruited for an inter-participant speech production task, whereby they were split into two speaking conditions. One condition had a prime in the background which discouraged the use of Hainanese; this prime was taken from actual campaign material. The other had a prime constructed for this project, which encouraged its use. Speakers were asked to translate a Mandarin word list into Hainanese in both conditions. Notable results of the experiment are as follows: (1) Implosives produced in the *encourage* condition were more pronounced, with significantly more negative voice onset times than those produced in the *discourage* condition. (2) Speakers in the *discourage* condition produce more corresponding sounds from the dominant languages in place of implosives (i.e. [d] or [t] instead of [ɗ], and [b] or [p] instead of [ɓ]). These results suggest that Singapore Hainanese speakers are using the production of implosives to regulate their performance as Hainanese speakers. If constantly subjected to a language environment that discourages the use of Hainanese, speakers may produce more sounds from the dominant languages in place of implosives, which may lead to language change. This study provides rare data on sociophonetic variation of voice onset times and implosives. It also provides rare, experimental evidence of the measurable effects language policy can have on phonetics, especially for endangered languages.

What Gets Lost in the Cluster: Comparing Broad and Fine-Grained Categories in DACH Speaker Evaluations

Elijah Liam King

Regional varieties across German-speaking Europe are embedded in different dialect– standard constellations and may consequently evoke different social meanings (Auer, 2005). Language-attitude research often turns to researcher-defined rating scales when investigating these meanings. While this methodology ensures that the data is easily quantifiable, asking how formal, competent, or likeable a speaker sounds makes that evaluative dimension available to participants even when it might not be salient to them (e.g., Soukup, 2013). Free-response tasks reduce this constraint by allowing participants to produce their own descriptions. However, these responses must be made analytically manageable before they can be incorporated into quantitative research. This study asks which characteristics arise when listeners describe speakers of regionally marked varieties from Germany, Austria, and Switzerland (referred to as the DACH region), and how the granularity of their categorisation affects the social meanings represented.

Participants (N=287) heard 12 spontaneous-speech samples representing regionally marked varieties across the DACH region. After each sample, they were asked: “After hearing this person, what do you think about this speaker? Give three adjectives or your own descriptions.” Responses were entered in an unrestricted text field, and the raw data was normalised. Of 2,251 unique response types, 417 occurred at least three times. Sixty-two primarily descriptive types (e.g., tall) were excluded, leaving 355 types for analysis. Following Grondelaers et al. (2020), responses were separated by valence before semantic analysis. Valence was represented on a seven-point pleasantness scale adapted from Moors et al. (2013). Following filtering and valence classification, the responses were analysed using an LLM-assisted k-medoids procedure inspired by Grondelaers et al.’s (2020) distributional approach and subsequently reviewed and refined by the research team. This study compares a fine-grained solution selected using silhouette-based admissibility criteria (25 positive and 23 negative clusters) with a broader, research-motivated solution containing nine clusters per valence category.

The two solutions provide different representations of participants’ evaluations. The fine-grained solution distinguishes, for example, INTELLIGENT/EDUCATED, COMPETENT/PROFESSIONAL, and THOUGHTFUL/REFLECTIVE, whereas the broader solution largely combines these meanings within an INTELLIGENT/COMPETENT category. Even though seemingly at odds with each other, both solutions can be useful for different analytical purposes. The broader solution provides manageable contrasts for applications such as creating closed-response perceptual tasks in the DACH region. The fine-grained solution preserves distinctions that could be relevant to investigating different forms of prestige in a region. These findings demonstrate that decisions about clustering granularity shape which participant-generated social meanings become visible in analysis. Free responses can be used as the basis for quantitative language-attitude research without relying on researcher-imposed scales. However, converting these responses into quantitative variables does not eliminate researcher intervention: the appropriate level of granularity must be justified in relation to the analytical purpose.

References

- Auer, P. (2005). Europe’s sociolinguistic unity, or: A typology of European dialect/standard constellations. In N. Delbecque, J. van der Auwera, & D. Geeraerts (Eds.), *Perspectives on variation: Sociolinguistic, historical, comparative* (pp. 7–42). Mouton de Gruyter.
- Grondelaers, S., Speelman, D., Lybaert, C., & van Gent, P. (2020). Getting a (big) data-based grip on ideological change: Evidence from Belgian Dutch. *Journal of Linguistic Geography*, 8(1), 49–65.
- Moors, A., De Houwer, J., Hermans, D., Wanmaker, S., van Schie, K., Van Harmelen, A.-L., De Schryver, M., De Winne, J., & Brysbaert, M. (2013). Norms of valence, arousal, dominance, and age of acquisition for 4,300 Dutch words. *Behavior Research Methods*, 45, 169–177.
- Soukup, B. (2013). The measurement of ‘language attitudes’—A reappraisal from a constructionist perspective. In T. Kristiansen & S. Grondelaers (Eds.), *Language (de)standardisation in late modern Europe: Experimental studies* (pp. 251–266). Novus Press.

The sound system of Surinamese Dutch: towards an empirical description

Mishko Bozhinoski

Edgar Charry notes in as early as 1983 that one can observe the development of “a distinct Surinamese-Dutch standard norm that applies to the pronunciation of Surinamese Dutch” (p. 139, author’s translation). He then asks what the specific features of that Surinamese pronunciation norm are; a question which, forty years on, still remains difficult to answer. While there are studies that point to a number of typical pronunciation features (Charry 1983, De Bies 2009), they either zoom in on very specific phenomena or are based more on intuition than on empirical phonetic research. As a result of this, it remains hard to determine precisely how Surinamese Dutch (SD) pronunciation differs from Netherlandic Dutch (ND) pronunciation.

This talk presents the first results of a research project that aims, on the basis of acoustic analyses of experimental data, to provide a systematic description of the Surinamese-Dutch sound system. This stage of the project bases itself on spoken pronunciation data of 19 Creole women from Paramaribo (cf. Ghyselen 2023), in which all vowels and consonants are elicited in the same non-word templates. These data are used to investigate (i) the extent to which their speech matches existing descriptions of SD, (ii) whether there are characteristic pronunciation features that have not yet been reported in the literature, and (iii) whether there are age differences indicating language change.

The results show, among other things, that several cited typical Surinamese-Dutch pronunciation features are not present in the women studied. The /y/, for example — traditionally described as “articulated less far back” in SD — shows large variability in the data and is in fact on average articulated further back in the oral cavity than in ND. Moreover, SD is found to differ from ND in a number of ways not previously reported in the literature, exhibiting a distinct vowel system and a systematic glottalization (tightening of the vocal folds) of word-final /p/, /t/ and /k/. The results thus provide greater insight into the endoglossic standardization of SD.

Additionally, these results will as part of the same research project be compared to spontaneous data from the same participants, through which I will reflect on the advantages and disadvantages of elicited reading experiments when describing low-resource languages.

References

- Charry, E., 1983. Een sociolinguistische verkenning van het Surinaams-Nederlands. In: Charry, E., Koefoed, G., Muysken, P.(Eds.), *De Talen van Suriname*. Coutinho, Muiderberg, pp. 138–161.
- de Bies, Renata. 2009. *Prisma woordenboek Surinaams Nederlands*. Houten: Het Spectrum
- Ghyselen, A.-S. (2023). Of versus als ter inleiding van afhankelijke ja/nee-vragen in het Surinaams-Nederlands: Een kwantitatieve verkenning. *Taal en Tongval*, 75(2), 135–168. <https://doi.org/10.5117/TET2023.2.001.GHYS>

POSTER SESSION I: Language Perception, Attitudes & Identity

The Perceived Trustworthiness of Languages in Fryslân

Nanna Haug Hilton & Julia Pennewaard

Most research has shown that people are rather unsuccessful at detecting lies, possibly because we are hardwired into believing others to be truthful (e.g. Vrij et al., 2006). Yet, in the current techno-political climate critical thinking and critical media literacy are highly necessary skills. Disinformation poses a threat to healthy and fair democratic processes, but a challenge in tackling disinformation is that we still lack clear evidence about the factors that influence what we do and do not *trust*. In this study we combine methods from experimental psycholinguistics and critical media studies to investigate a central, yet underexplored, question: does the language in which information is presented affect trustworthiness, i.e. perceived credibility?

Several studies in psycholinguistics have indicated that non-native accents sound less trustworthy to listeners than native ones (e.g. Lev-Ari & Keysar, 2010; Eliot & Leach, 2016), although it should also be noted that some studies have found no effect of accents on perceived credibility (e.g. Souza & Markman, 2013). When looking at how multilinguals trust information in writing some have found a trustworthiness bias towards one language over the other (Muda et al., 2023). However, no one has of yet tested the question above comprehensively, and in multilingual populations: Do multilinguals find information more credible when listening to it in one language over another? And, if so, does this bias also exist in reading?

In an experimental study we test how Frisian-Dutch multilinguals rate the credibility of trivia statements and fabricated and real news articles in their two local languages. Using a Qualtrics survey in two (listening and reading) parts we replicate the methodologies in Lev-Ari & Keysar (2010) and Hameleers (2024) to establish whether multilinguals in Fryslân find information in Frisian or Dutch more credible. The Qualtrics survey has been piloted. Data collection is due to start in June 2026. The survey will be shared privately by the researchers as well as through the channels of the Fryske Akademy. The results are expected to be analysed in August and September 2026.

References

- Elliott, E., & Leach, A. M. (2016). You must be lying because I don't understand you: Language proficiency and lie detection. *Journal of experimental psychology: applied*, 22(4), 488.
- Hameleers, M. (2024). This is clearly fake! Mis-and disinformation beliefs and the (accurate) recognition of pseudo-information—Evidence from the United States and the Netherlands. *American Behavioral Scientist*, 68(10), 1249-1268.
- 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.
- Muda, R., Pennycook, G., Hamerski, D., & Białek, M. (2023). People are worse at detecting fake news in their foreign language. *Journal of Experimental Psychology: Applied*, 29(4), 712.
- Souza, A. L., & Markman, A. B. (2013). Foreign accent does not influence cognitive judgments. In *Proceedings of the annual meeting of the cognitive science society* (Vol. 35, No. 35).

How do traditional speakers perceive new speakers of Gronings? An experimental study

Hedwig Sekeres, Remco Knooihuizen & Martijn Wieling

New speakers are increasingly seen as vital to language revitalisation efforts for minoritised languages (e. g., Hornsby, 2015). However, their speech can be delegitimised by traditional speakers of the language (e. g., Hornsby & Vigers, 2018), which can lead to them being discouraged to speak the language (e.g., Kircher et al., 2024; Sallabank & Marquis, 2018). More generally, the emergence of new speakers is often paired with a renegotiation of legitimacy, authenticity, belonging and ownership among new and traditional speakers (e.g., Selleck, 2018). With this study, we attempt to complement these qualitative findings with experimental data from speakers of Gronings. Gronings is spoken in the north of the Netherlands and is a variant of Low Saxon, which is recognised in the Netherlands under part II of the European Charter for Regional or Minority Languages (ECRML, 1998).

In this study, we investigate to what extent traditional speakers' perceptions of new speakers' speech is dependent on the speech that is actually produced or on (fictional) information that they have about the speakers' backgrounds. As acts of delegitimation are often related to pronunciation features (e.g., Sallabank & Marquis, 2018), we use identical reading passages in order to control for other factors that might distinguish new speakers, such as word order and lexical choice.

Via an online survey, participants (self-identified native speakers of Gronings) are presented with fragments of read speech by a native speaker, an experienced new speaker and an emerging new speaker. Each audio sample is accompanied by a guise in the form of a short fictional introduction of the speaker. The guise contains information about their speakerness (see Pujolar & O'Rourke, 2022) (native, experienced new or emerging new), their regional background (Groningen or Randstad, the urban conglomeration containing most of the Dutch population) and linguistic heritage (whether Gronings was spoken in their family). With each audio sample and guise, participants are asked to rate the speaker on three traits associated with the evaluative dimension of status and three with solidarity (Kircher & Zipp, 2022), as well as whether they would enjoy speaking Gronings with the speaker.

Data collection for this study is ongoing. We hypothesise that the ratings speakers receive do not only depend on their actual produced speech, but also on the manner in which they are presented. We expect that speakers who are presented as more 'other' to the traditional speaker (i.e., being a new speaker, from the Randstad area, and/or without a family connection to Gronings) receive lower ratings. In our presentation, we will present the quantitative results of this experiment and place them in the broader context of research on new speakers.

References

- Europees Handvest Voor Regionale Talen of Talen van Minderheden, Straatsburg, 05-11-1992 (1998). <https://wetten.overheid.nl/BWBV0001223/1998-03-01>
- Hornsby, M. (2015). *Revitalizing minority languages: New speakers of Breton, Yiddish and Lemko*. Springer.
- Hornsby, M., & Vigers, D. (2018). 'New' speakers in the heartlands: Struggles for speaker legitimacy in Wales. *Journal of Multilingual and Multicultural Development*, 39(5), 419–430.
- Kircher, R., Kutlu, E., & Vellinga, M. (2024). Promoting minority language use to foster revitalisation: Insights from new speakers of West Frisian. *Applied Linguistics*, 45(3), 514–532.
- Kircher, R., & Zipp, L. (2022). An introduction to language attitudes research. In R. Kircher & L. Zipp (Eds), *Research methods in language attitudes* (pp. 1–16). Cambridge University Press.
- Pujolar, J., & O'Rourke, B. (2022). Theorizing the speaker and speakerness in applied linguistics. *Journal of Applied Linguistics and Professional Practice*, 16(2), 207–231.
- Sallabank, J., & Marquis, Y. (2018). 'We don't say it like that': Language ownership and (de)legitimising the new speaker. In C. Smith-Christmas, N. P. Ó Murchadha, M. Hornsby, & M. Moriarty (Eds), *New speakers of minority languages* (pp. 67–90). Palgrave Macmillan UK.
- Selleck, C. (2018). 'We're not fully Welsh': Hierarchies of belonging and 'new' speakers of Welsh. In C. Smith-Christmas et al. (Eds), *New speakers of minority languages* (pp. 45–65). Palgrave Macmillan UK.

Language Attitudes in Fryslân: A Matched-Guise Study of Frisian, Dutch and English

Julia Pennewaard

This study investigates contemporary language attitudes towards Frisian, Dutch, and English among inhabitants of the Dutch province of Fryslân, with particular attention to the role of linguistic background in shaping these evaluations. Frisian, a minority language officially recognized in the Netherlands, occupies a distinctive sociolinguistic position: despite institutional support and cultural embeddedness, its perceived social status remains lower than that of Dutch. Previous research has consistently shown a divide in attitudes toward Frisian between speakers and non-speakers, with L1 Frisian speakers generally expressing more positive evaluations (Debreczeni et al., 2023; Dekker et al., 2021; Gorter & Ytsma, 1998; Günther-van der Meij, 2018; Hilton & Gooskens, 2013; Jongbloed-Faber, 2021; Klinkenberg et al., 2018; Ytsma, 1995, 2007). However, much of this research predates the growing prominence of English in the Netherlands and the increasingly multilingual landscape of Fryslân.

The rise of English as a language associated with education, mobility, and global opportunity may have affected the relative evaluation of Frisian and Dutch, while regional language policies aimed at promoting Frisian may have contributed to shifts in language perceptions. Against this background, this study provides an updated examination of language attitudes toward Frisian, Dutch, and English, focusing on three evaluative dimensions: dynamism, attractiveness and superiority. These dimensions capture perceptions of modernity and vitality, social appeal and likeability, and status and competence, respectively. The study also examines whether language attitudes have changed compared to earlier research and explores the extent to which evaluations are shaped by participants' sociolinguistic characteristics, including age, gender, home language, and self-reported proficiency.

The study employs a quantitative survey design using an online questionnaire distributed among inhabitants of Fryslân, in which participants evaluate speech fragments produced by the same speaker in Frisian, Dutch and English. While data analysis is ongoing, this research is expected to offer updated insight into the sociolinguistic position of Frisian in contemporary Fryslân and may provide valuable implications for regional language policy and educational practice aimed at supporting the Frisian language.

References

- Debreczeni, S., Duarte, J., & Günther-van der Meij, M. (2023). Potential new speakers of Frisian in educational settings—implicit and explicit attitudes in learning a minority language. In *The Minority Language as a Second Language* (pp. 159–189). Routledge.
- Dekker, S. V., Duarte, J., & Loerts, H. (2021). 'Who really speaks like that?' – Children's implicit and explicit attitudes towards multilingual speakers of Dutch. *International Journal of Multilingualism*, 18(4), 551–569.
- Gorter, D., & Ytsma, J. (1998). Social factors and language attitudes in Friesland. In R. van Hout & U. Knops (Eds.), *Language attitudes in the Dutch language area* (pp. 59–72). De Gruyter.
- Günther-van der Meij, M. T. (2018). The impact of degree of bilingualism on L3 development: English language development in early and later bilinguals in the Frisian context [PhD thesis, Rijksuniversiteit Groningen].
- Hilton, N. H., & Gooskens, C. (2013). Language policies and attitudes towards Frisian in the Netherlands. In C. Gooskens & R. van Bezooijen (Eds.), *Phonetics in Europe: Perception and production* (pp. 139–157). Peter Lang.
- Jongbloed-Faber, L. (2021). The vitality of minority languages in a multilingual online world (No.596) [Doctoral dissertation, University of Maastricht]. LOT Publications.
- Klinkenberg, E., Jonkman, R., & Stefan, N. (2018). *Taal yn Fryslân: De folgjende generaasje* [Language in Fryslân: The next generation]. Fryske Akademy.
- Ytsma, J. (1995). *Frisian as first and second language: Sociolinguistic and socio-psychological aspects of the acquisition of Frisian among Frisian and Dutch primary school children*. [Doctoral Thesis, Tilburg University]. Fryske Akademy.
- Ytsma, J. (2007). Language Use and Language Attitudes in Friesland. In D. Lasagabaster & Á. Huguete Canalís (Eds.), *Multilingualism in European Bilingual Contexts: Language Use and Attitudes* (pp. 144–163). Multilingual Matters.

Bridging Centuries: The Intelligibility of Middle High German Words for Present-Day Native Speakers of German

Kerstin Dierolf

Research on (mutual) intelligibility shows that speakers can often understand unknown but closely related languages and varieties to a considerable extent, even without prior knowledge, drawing on general mechanisms of language processing (e.g., van Heuven 2008; Gooskens et al. 2018; Tang et al. 2025 among others). Empirical studies have therefore focused on synchronic variation and identified a range of linguistic and extra-linguistic factors that shape intelligibility (e.g., Gooskens and Swarte 2017; Gooskens and van Heuven 2021).

An open question, however, is how these insights apply to the intelligibility of historical stages for present-day speakers of a language. To address this question, the present study examines the intelligibility of written Middle High German (MHG) among native speakers of New High German (NHG), based on data collected for my doctoral thesis, which investigated the intelligibility of the three major historical stages of German (Old High German, MHG, and Early New High German). The study draws on an online experiment with 71 native speakers of German, who translated 105 isolated MHG words into NHG. Intelligibility was measured as the proportion of correct translations and analyzed using a Cumulative Link Mixed Model, complemented by a qualitative examination of participants' translation responses.

Results reveal considerable variation in intelligibility across items, with an average rate of approximately 60 percent. Orthographic distance to NHG emerged as the strongest predictor, outweighing all other factors. Additional linguistic predictors, including word frequency, changes in the number of syllables, and the presence of a circumflex, also significantly influenced intelligibility. Among extra-linguistic factors, prior exposure, dialect competence, and foreign language experience contributed to performance.

Qualitative analyses show systematic strategies in participants' responses, including searching for identical or similar word forms, keeping the number of syllables constant, and avoiding archaic word forms in favor of more frequent NHG alternatives. In doing so, participants engage flexibly and creatively with MHG words, drawing on existing linguistic knowledge. These strategies show parallels to research on Germanic intercomprehension (cf. Kürschner 2013; Möller and Zeevaert 2015) while also revealing strategies specific to historical stages.

The findings of the study demonstrate that experimental methods from intelligibility research on closely related languages and varieties can be successfully applied to diachronic variation, highlighting the potential to leverage existing linguistic knowledge in the study and teaching of historical stages of German.

References

- Gooskens, Charlotte, Vincent J. van Heuven, Jelena Golubović, Anja Schüppert, Femke Swarte and Stefanie Voigt (2018): Mutual intelligibility between closely related languages in Europe. In: *International Journal of Multilingualism* 15 (2), 169–183.
- Gooskens, Charlotte and Vincent J. van Heuven (2021): Mutual Intelligibility. In: Marcos Zampieri and Preslav Nakov (eds.), *Similar Languages, Varieties, and Dialects*. Cambridge: Cambridge University Press, 51–95.
- Gooskens, Charlotte and Femke Swarte (2017): Linguistic and extra-linguistic predictors of mutual intelligibility between Germanic languages. In: *Nordic Journal of Linguistics* 40 (2), 123–147.
- Van Heuven, Vincent J. (2008): Making sense of strange sounds: (Mutual) intelligibility of related language varieties. A review. In: *International Journal of Humanities and Arts Computing* 2, 39–62.
- Kürschner, Sebastian (2013): Strategies in the recognition of Dutch words by Germans. In: Charlotte Gooskens and Renée van Bezooijen (eds.), *Phonetics in Europe. Perception and production*. Frankfurt: Peter Lang, 159–179.
- Möller, Robert and Ludger Zeevaert (2015): Investigating word recognition in intercomprehension. Methods and findings. In: *Linguistics* 53 (2), 313–352.
- Tang, Chaoju, Vincent J. van Heuven, Wilbert Heeringa and Charlotte Gooskens (2025): Chinese “Dialects” and European “Languages”: A Comparison of Lexico-Phonetic and Syntactic Distances. In: *Languages* 10 (6), 1–29.

Falling together, falling apart: Realizational differences between statements and wh-questions across European Portuguese varieties

Marisa Cruz

Wh-questions have been intonationally described, both in Romance and non-Romance languages, as exhibiting a falling contour (H+L* or L* L%), like statements' melody (e.g., Cruttenden, 1997; Frota, 2002; Estebas-Vilaplana & Prieto, 2008; Chen, 2012; Frota & Prieto, 2015; Gili Fivela et al., 2015). However, probably because wh-questions are syntactically and lexically marked, the realizational difference between this sentence type and statements is barely explored in production and perception, especially among varieties of the same language.

In this study, we compared the F0 contours of statements and wh-questions between two varieties of Portuguese – Standard European Portuguese (SEP) and Center-Southern Portuguese (CS) – to observe if there are any realizational differences (i) within sentence type between varieties, and (ii) between sentence types in each variety. Additionally, if (ii) is observed, we aim at exploring whether these differences occur at the same time-window(s) of the pitch contour between varieties, which might have an implication for perception across Portuguese varieties.

A total of 162 utterances (72 wh-questions and 90 statements), produced by three speakers from three regions, Lisbon (SEP), Alentejo (CS) and Algarve (CS), were intonationally analyzed using P-ToBI (Frota et al., 2015a), and only the wh-questions with a falling contour (81.3%) were then compared with statements. F0 was automatically extracted (Hz) from 100 datapoints over the time-normalized sentences using *Praat* (Boersma & Weenink, 2023). Generalized Additive Mixed Models (GAMMs) were run in *RStudio* with participant as random factor.

The results show that the F0 contour does not significantly differ across regions neither in statements nor in wh-questions ($p > .05$), as illustrated in Figure 1(next page). However, when comparing the F0 contour of these two sentence types within region, we found different patterns. Namely, in SEP the F0 contour is significantly higher in wh-questions than in statements ($\beta=69.09$, $SE=1.71$, $t=40.34$, $p<.001$), all over the production time-window (Figure 2A, next page). In the Center-Southern regions, there are also differences: in Alentejo, the F0 contour significantly differs ($\beta=30.46$, $SE=1.12$, $t=27.31$, $p<.001$) in two specific production time-windows – 1-60, in which the F0 contour is higher in wh-questions, and 70-92, in which the F0 contour is higher in statements instead (Figure 2B, next page); in Algarve, as in SEP, the F0 contour is significantly higher in wh-questions ($\beta=19.61$, $SE=1.26$, $t=15.54$, $p<.001$) almost all over the production time-window – 1-91 (Figure 2C, next page).

These findings allow to conclude that, although phonologically identical (Frota, 2002, 2014; Frota et al., 2015b), the consistent F0 elevation of wh-questions over statements — attested across all three regions, albeit with variety-specific time-windows — suggests that realizational differences encode sentence-type distinctions even in the absence of a phonological contrast. If listeners rely on different portions of the contour to discriminate sentence types, perception in noisy environments may be compromised in cross-variety communication. The ongoing AX discrimination task within a gating paradigm will allow us to determine precisely at which point in the unfolding signal these realizational differences become perceptually relevant, and whether this varies with the listener's native variety.

References

- Estebas Vilaplana, E., & Prieto, P. (2008). La notación prosódica del español: una revisión del Sp_TOBI. *Journal of Experimental Phonetics*, 17, 263–283.
- Frota, S. (2002). Nuclear falls and rises in European Portuguese: A phonological analysis of declarative and question intonation. *Probus*, 14(1), 113–146.
- Frota, S. (2014). The intonational phonology of European Portuguese. In S.-A. Jun (Ed.), *Prosodic Typology II* (pp. 6–42). Oxford University Press.
- Frota, S., Oliveira, P., Cruz, M., & Vigário, M. (2015). *P-ToBI: Tools for the transcription of Portuguese prosody*. Laboratório de Fonética, CLUL/FLUL.
- Gili Fivela, B., Avesani, C., Barone, M., Bocci, G., Crocco, C., D'Imperio, M., Giordano, R., Marotta, G., Savino, M., & Sorianello, P.(2015). Intonational phonology of the regional varieties of Italian. In S. Frota & P. Prieto (Eds.), *Intonation in Romance* (pp. 140–197).Oxford University Press.

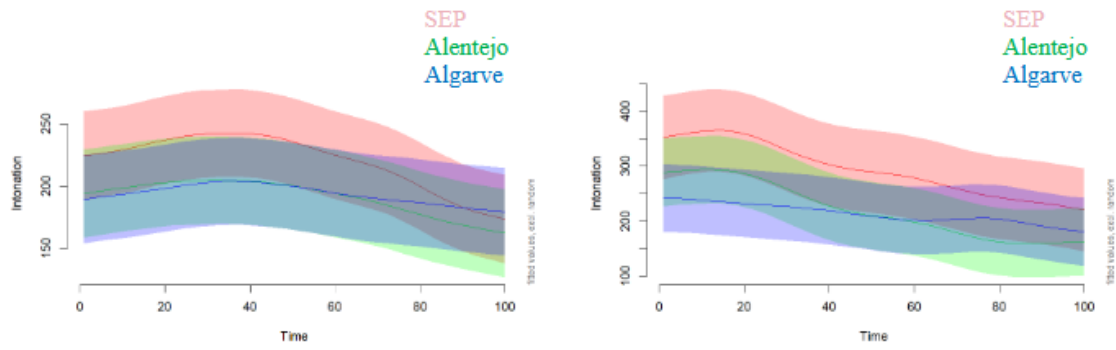


Figure 1 – Non-linear smooths (fitted values) for statements (left panel) and wh-questions (right panel) in SEP (Lisbon) and Center-Southern varieties (Alentejo and Algarve). 95% Confidence Intervals are shown by shaded bands.

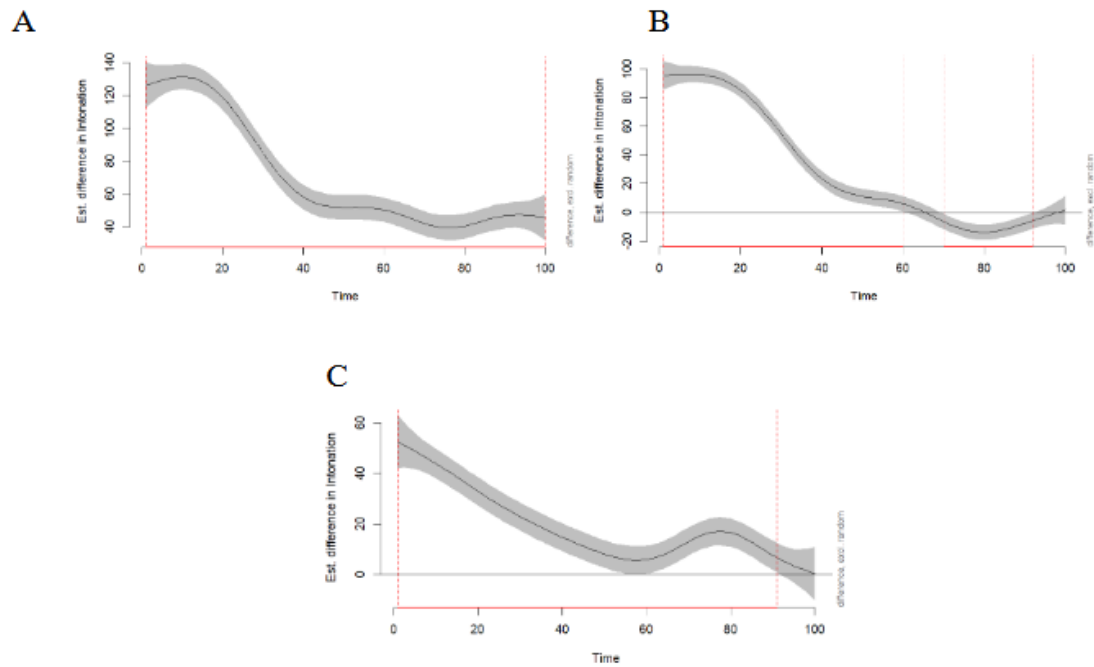


Figure 2 – Time-windows of differences between the falling F0 contour of wh-questions and statements per variety: SEP (panel A), and Alentejo (panel B) and Algarve (panel C) from the Center-South. Relevant time-windows are marked-up in red.

Not an Error but a Feature: Reframing /p/ and /b/ in Saudi English

Faten Abdullrahman Aqahtani

Aim: This study reframes the status of /p/ and /b/ in Saudi speakers' English. Traditionally treated as a learner error attributable to the absence of /p/ as a phoneme in Arabic, the contrast is examined here in production and perception as potentially systematic features of an emerging variety rather than as deviations from a native speaker norm. The study draws on World Englishes frameworks (Kachru, 1985; Schneider, 2007) and on models of second language speech learning and perception (Flege, 1995; Best & Tyler, 2007). It aims to establish whether the /p/ and /b/ realisations of advanced Saudi speakers form a systematic, internally coherent system rather than a scatter of unstructured errors, and to situate any such patterning within ongoing discussion in World Englishes about the codification of Gulf Englishes (Kirkpatrick, 2007).

Methodology: The design pairs production and perception of the same /p/ and /b/ tokens within each participant, using a single set of stimulus material across both tasks. The stimulus base is a corpus of authentic English audio recordings of native speakers, containing /p/ and /b/ tokens in word initial, medial, and final positions; verbatim transcriptions of these recordings were prepared by the researcher. 119 Saudi participants (67 female, 52 male), aged 18 to 35, with advanced English proficiency (IELTS band 7 to 8), were recruited from different regions across Saudi Arabia. Each participant first completed the production task, reading aloud the transcriptions; this was administered before any exposure to the source audio so that production data would not be primed by the native speaker model. The same participants then completed a forced choice perception task on lines drawn from the source recordings, identifying the target word they had heard. The design yields, for each speaker, perception accuracy and production VOT and closure voicing values for the same /p/ and /b/ tokens, supporting paired comparison of perception and production within speakers and across word positions.

Preliminary Findings: Data collection is complete and analysis is underway. The acoustic analysis is examining whether VOT and closure voicing values for /p/ and /b/ are distributed in a manner sensitive to word position and consistent with a coherent phonological system, and whether /p/ realisations cluster at values shorter than those typical of inner circle English while remaining acoustically distinct from /b/. The perception analysis is examining accuracy and word position effects, with a paired analysis testing whether individual speakers' perception accuracy aligns with their production values across positions. Full results will be presented at the conference, together with a discussion of whether the patterns observed are best understood as stable interlanguage, late stage L2 acquisition, or early phonological characteristics of an emerging Saudi or Gulf English. The present design constrains but does not settle this question, which motivates a fuller programme of work varied by proficiency, register, and region, with implications for English language teaching and assessment in the region.

References

- Best, C. T., & Tyler, M. D. (2007). Nonnative and second-language speech perception: Commonalities and complementarities. In O.-S. Bohn & M. J. Munro (Eds.), *Language experience in second language speech learning: In honor of James Emil Flege* (pp. 13–34). John Benjamins. <https://doi.org/10.1075/llt.17.07bes>
- Flege, J. E. (1995). Second language speech learning: Theory, findings, and problems. In W. Strange (Ed.), *Speech perception and linguistic experience: Issues in cross-language research* (pp. 233–277). York Press.
- Kachru, B. B. (1985). Standards, codification and sociolinguistic realism: The English language in the outer circle. In R. Quirk & H. G. Widdowson (Eds.), *English in the world: Teaching and learning the language and literatures* (pp. 11–30). Cambridge University Press.
- Kirkpatrick, A. (2007). *World Englishes: Implications for international communication and English language teaching*. Cambridge University Press.
- Schneider, E. W. (2007). *Postcolonial English: Varieties around the world*. Cambridge University Press.

FRIDAY 9 October 2026

	<i>Upstairs (Norman Building)</i>	<i>Downstairs (Norman Building)</i>
09:00 - 10:30	Social Meaning, Identity & Cognitive Sociolinguistics	Perception, Recognition & Media Effects
	Marc Barnard: <i>Implicit self-concept: a cognitive approach to identity in sociolinguistics</i>	Stefano Fiori: <i>Perceptual proximity and dialect recognition in the Quattro Province (Italy)</i>
	Célia Richy, Gabriel Thiberge & Céline Pozniak: <i>Does syntactic complexity reduce social meaning activation? Evidence from French subject-verb inversion in French</i>	Godelieve Laureys: <i>The Path of the least Effort. Inter-Nordic Language Comprehension facing new Challenges.</i>
	Anne Renzel & Gunther De Vogelaer: <i>Lead-lag dynamics in the cognitive internalization of permissive subjects: A cross-linguistic multi-method study</i>	Melissa Schuring, Steven Verheyen & Laura Rosseel: <i>On (pre)adolescents' perception of lexical variation: a mixed-methods approach to the identification of English loanwords in Dutch</i>
10:30 - 11:30	COFFEE BREAK and POSTER SESSION II	
11:30 - 13:00	Methodology & Research Design	Speech Perception, Production & Sociophonetics
	Anne-France Pinget, Marijn Struiksmā, Rianne van Lieburg: <i>The applications and challenges of preregistration in laboratory sociolinguistic research</i>	Pasquale Giuseppe Mandara, Sharon Peperkamp and Alan C. L. Yu: <i>Effects of Talker Gender on the Voicing Categorization of Stop Consonants: Cross-Linguistic and Individual Variation</i>
	Margot Janssens, Beatrijs Wille, Myriam Vermeerbergen, Mieke Van Herreweghe: <i>Focus Groups as an Exploratory Bridge Between Corpus Data and Experimental Design</i>	Roy Alderton & Marc Barnard: <i>Sociophonetic variation in nasal coarticulation in London English</i>
	Wouter Ernst, Hanneke Loerts, Maria Mazzoli: <i>Bekoffiën, opbelbaar or rather kunstelijk? What potential words can tell us about morphological productivity</i>	Caihong Weng; Alexander Martin; Martijn Wieling; Ioana Chitoran: <i>Perception and production link under contrast merger: Evidence from Quanzhou Southern Min–Mandarin bilingual speech</i>
13:00 – 14:00	LUNCH	
14:00 – 15:00	Address Forms, Indexicality & Interaction	Variation Across Modalities & Learner Communities
	Maria den Hartog, Lotte Hogeweg and Helen de Hoop: <i>'Waar ziet ge uzelf over vijf jaar?': Perception of address pronoun variation in Belgian Dutch job interviews</i>	Chloé Lybaert & Laura Rosseel: <i>Standard language ideology revisited: a contextualised perspective on standard-colloquial language variation in an educational setting</i>
	Yizhuo Zhang, Alexander Martin, Alexandra Lorson: <i>The Indexical Field of Address Forms: Mandarin T/V Distinction Perceived and Produced</i>	Vladislav Zubov: <i>Equal in Dictionaries, Unequal in Processing: Lexical Access to Russian Words with Variable Stress</i>
15:00 – 16:00	Plenary (Upstairs) Nicolai Pharao: Indexical decision: Exploring experimental approaches to social and lexical meaning	
16:00 – 17:00	Closing, coffee, tea and farewell!	

Implicit self-concept: a cognitive approach to identity in sociolinguistics

Marc Barnard

Previous sociolinguistic work has highlighted that an individual's identification with place or regional accent is a key factor in language variation and change (e.g., Labov, 1963). However, much of this work has quantified this identification through observation or self-report measures (e.g., Reed, 2020). While these approaches have proven valuable, another aspect of identity has so far not been explored in sociolinguistic research: implicit self-concept. Theories of social cognition propose that the self contains implicit aspects that are not available for conscious introspection (Greenwald & Banaji, 1995) and that these may correspond to different types of behaviour (e.g., Phrao & Kristiansen, 2019). The current work aims to adapt experimental measures of implicit self-concept to the field of sociolinguistics. Specifically, we wanted to examine whether implicit regional self-concept differed between participants of different regional backgrounds (North/South of England); whether it differed depending on whether individuals had moved away from their home region; and whether it corresponded to self-reported production patterns.

To do this, we adapted a version of the Implicit Association Test (IAT; Greenwald et al., 1998) to assess the implicit identity of three regional groups: Southern non-mobile (from the South of England and still living there); Northern non-mobile (from the North West and still living there); Northern mobile (from the North West and living in the South). The regional self-concept IAT required participants to categorise words related to the concept 'me' (e.g., *I, me*) and 'not-me' (e.g., *they, their*), while simultaneously categorising audio stimuli containing the salient STRUT variable into 'Northern English' (where it is back and rounded), and 'Southern English' (where it is low and unrounded). Participants received a score suggesting the degree to which they implicitly associated themselves with Northern English. They were also asked to self-report whether they considered the words 'foot' and 'cut' to rhyme, with an affirmative answer indicating a more Northern-like realisation of the vowels.

The results showed that the regional self-concept IAT did correlate with regional background, so that Northern speakers showed a bias towards identifying with Northern English and Southern speakers showed a bias towards identifying with Southern English. Regional migration did not appear to influence implicit regional self-concept, with Northern mobile participants showing a similar level of bias towards their own accent as their non-mobile counterparts. There was also no strong evidence that IAT scores influenced whether participants self-reported having a STRUT-FOOT split.

That group-level responses matched expectations is evidence that the paradigm is measuring the underlying construct of self-identification with the accent labels. This indicates that the adapted regional self-concept paradigm appears to be measuring self-association with regions. In contrast, the present study did not find any indication that, at a group-level, participants changed their sociolinguistic identity after spending time in another region, reflecting the relative stability of implicit self-associations. Finally, no correlation between IAT d-score and self-reported behaviour was found. This may be expected given that implicit associations have been shown to correlate with more automatic, unconscious behaviour (Forscher et al., 2019), unlike an introspective self-report measure.

References

- Forscher, P. S., Lai, C. K., Axt, J. R., Ebersole, C. R., Herman, M., Devine, P. G., & Nosek, B. A. (2019). A meta-analysis of procedures to change implicit measures. *Journal of Personality & Social Psychology*, 117(3), 522–559.
- Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102(1), 4–27.
- Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, 74(6), 1464–1480.
- Labov, W. (1963). The social motivation of a sound change. *WORD*, 19(3), 273–309.
- Phrao, N., & Kristiansen, T. (2019). Reflections on the relation between direct/indirect methods and explicit/implicit attitudes. *Linguistics Vanguard*, 5(s1), 20180010.
- Reed, P. E. (2020). Place and language: Links between speech, region, and connection to place. *WIREs Cognitive Science*, 11(3), e1524.

Does syntactic complexity reduce social meaning activation? New evidence from French subject-verb inversion in French

Célia Richy, Gabriel Thiberge & Céline Pozniak

Since Labov's (1993) *Interface Principle*, important debates have emerged regarding whether social meaning can attach to deeper levels of linguistic structure (e.g., Levon & Buchstaller 2015). Mackenzie & Robinson's (2025) meta-study indicates that, while both variable *realisation* and *word order* variation are available for socio-indexical work in production, research on perception has mostly focused on variable realisation, leaving word order understudied. As part of a larger project examining social meanings of variables across different linguistic levels in Hexagonal French (HF), our study contributes to the growing body of work on perception of ORDER variables. Building on evidence that subject-verb inversion in interrogatives activates clear social representations (e.g., education, wealth, age, literacy-commitment) (Thiberge et al. 2026), we test whether such effects persist in a more deeply embedded context: inversion in relative clauses (1b). In HF, sentence-internal factors such as long and non-agentive subjects favour inversion (Pozniak et al. 2021), while Badeau et al. (2025) suggest social evaluations emerge only for animate subjects, and solely in the Paris region. To examine whether this specific regional effect holds, we replicated Badeau et al. (2025)'s matched-guise study, comparing Paris to Toulouse, where the two varieties differ markedly in their relationship to the national (prescriptive) standard: While Parisian French corresponds and even might shape the standard variety, Toulouse French diverges from it. If the social meaning of subject-verb inversion is tied to standard language ideology, we expect evaluation patterns to differ across regions.

Method. The experiment consisted of 20 short invented dialogues between Speaker A and Speaker B, where Speaker A set the contextual register (formal or casual) and Speaker B produced, for target items, a sentence containing a relative clause with (1b) or without (1a) inversion. Conditions (2 CONTEXTS x 2 WORD-ORDERS) were counter-balanced in a Latin Square Design. 100 participants (fifty per region) took part in the experiment and were asked to rate Speaker B on several scales (age, friendliness, education level, social prestige, wealth and social skills).

- (1) a. La personne que Sacha déteste va au restaurant.
b. La personne que déteste Sacha va au restaurant. [inverted]
The person Sacha hates is going to the restaurant.

We ran a Bayesian ordinal model for each scale. Models included WORD ORDER, CONTEXT and REGION as predictors, along with their three-way interaction. Random effects were specified for participants (WORD-ORDER*CONTEXT) and items (WORD-ORDER*CONTEXT*REGION). Results reveal a puzzling pattern, which contrasts with previous findings and goes against our predictions. There is no clear effect of ORDER or CONTEXT, nor their interaction, on any scale except for *age*, where a main effect of REGION emerges. Toulouse participants rated speakers, overall, as older than Paris participants. Unexpectedly, Toulouse participants also rated inversion higher on status-related scales, while Parisian participants favoured non-inversion. We consider these results in contrast to the clear patterns found for inversion in interrogatives, and discuss possible implications for theories of socio-syntax and social meaning.

References

- Badeau, D., Thiberge, G., & Pozniak, C. (2025). "Inversion du sujet dans les relatives : approche expérimentale d'un phénomène d'alternance et rapport régionalisé à la norme". In: *Nouveaux regards sur la norme*, Fribourg.
- Labov, W. (1993). The unobservability of structure and its linguistic consequences. Paper presented at New Ways of Analyzing Variation in English (NWAYE) XXII, Ottawa, 16, October, 1993.
- Levon, E., & Buchstaller, I. (2015). Perception, cognition, and linguistic structure: The effect of linguistic modularity and cognitive style on sociolinguistic processing. *Language Variation and Change* 27(3). 319–348.
- Mackenzie, L. & Robinson, M. (2025). "Spelling out Grammatical variation." In *English Sociosyntax: Theory, Evidence, Approaches*, edited by D. Duncan and M. Robinson. Mouton De Gruyter.
- Pozniak, C., Abeillé, A., & Hemforth, B. (2021). Subject inversion in French object relatives: What's your preference? *Onetomany relations in morphology, syntax, and semantics*, 151.
- Thiberge, G., Burnett, H., & Hemforth, B. (2026). Developing sociolinguistic evaluative competence: the case of French WH- interrogatives. *Open Linguistics*, 12(1).

Lead-lag dynamics in the cognitive internalization of permissive subjects: A cross-linguistic multi-method study

Anne Renzel & Gunther De Vogelaer

Functional approaches to language propose that grammatical patterns emerge from efficiency-related pressures in language use (e.g., Jaeger & Tily 2011; Hawkins 2014; Fedzechkina & Jaeger 2020). Recent work further suggests that variation and change in grammatical properties arise from interactions among different dimensions of linguistic behavior, including acceptability and online processing (e.g., Bosch et al. 2020). The present study adopts a multi-method approach, combining three psycho- and neurolinguistic experiments to investigate these dimensions.

A speeded acceptability judgment task targeted speakers' metalinguistic evaluations under time pressure, while two additional experiments examined processing using different measures. A self-paced reading experiment assessed processing through reading times, and an EEG experiment investigated neurocognitive processing mechanisms as reflected in event-related potentials (ERPs). Using this approach, we examined how acceptability and processing interact and relate to cross-linguistic grammatical variation in three closely related West Germanic languages: English, Dutch, and German. Across all experiments, we focused on so-called *permissive subjects*, i.e., non-agentive subjects combined with action verbs in active form (e.g., *A few years ago a penny would buy you two or three pins; The tent sleeps four people*; cf. Dreschler 2020). While such constructions are common in English, they are rare in German, with Dutch occupying an intermediate position, allowing a somewhat broader range of subject roles (e.g., Doms & De Clerck 2015; Heilmann et al. 2021).

We examined how acceptability, decision dynamics, and processing cost pattern across languages and construction types. The results reveal a systematic cross-linguistic gradient: English and Dutch show lower processing costs in both the self-paced reading and EEG experiments, as well as higher acceptability of permissive subjects, compared to German. Crucially, the behavioral dimensions align with typological patterns but differ in how they are internalized in human cognition, revealing what we term a lead-lag relationship. Processing efficiency constitutes the leading edge of internalization, followed by acceptability. The observed asymmetry in usage preferences supports a scenario in which processing efficiency precedes and potentially drives shifts in acceptability, pointing to a gradual pathway from processing efficiency to linguistic uncertainty and grammatical change.

References

- Bosch, S., De Cesare, I., Demske, U., & Felser, C. New Empirical Approaches to Grammatical Variation and Change. *Languages*, 6(3), 113, 2021.
- Doms, S., & De Clerck, B. Translating English non-human subjects in agentive contexts: a closer look at Dutch. *Across Language Cultures* 16, 285-310, 2015.
- Dreschler, G. Fifty pounds will buy me a pair of horses for my carriage': The history of permissive subjects in English. *English Language and Linguistics*, 24, 719-744, 2020.
- Fedzechkina, M., & Jaeger, T. F. Production efficiency can cause grammatical change: Learners deviate from the input to better balance efficiency against robust message transmission. *Cognition*, 196, 104115, 2020.
- Hawkins, J. A. Cross-linguistic variation and efficiency, Oxford University Press, 2014.
- Heilmann, A., Serbina, T., Freiwald, J., & Neumann, S. Animacy and agentivity of subject themes in English-German translation. *Lingua*, 261, 102813, 2021.
- Jaeger, T. F., & Tily, H. On language 'utility': Processing complexity and communicative efficiency. *Wiley Interdisciplinary Reviews: Cognitive Science*, 2(3), 323-335, 2011.

Perceptual proximity and dialect recognition in the Quattro Province (Italy)

Stefano Fiori

This contribution reports on the results of a study in perceptual dialectology (PD), whose focus is a small region located in Italy's northwestern Apennines, known as the Quattro Province ("Four Provinces") because it straddles the official borders of four of Italy's administrative regions (Piedmont, Liguria, Lombardy and Emilia-Romagna). Because of this, the local languages or "dialetti" spoken there are at the crossroads of all four main groups of Gallo-Italic dialects, and in particular they find themselves in a transitional area, called "anfizona ligure-padana" (Petracco Sicardi 1992), caught between the dialects and those of the "Ligurian-type", whose eccentricity in the Gallo-Italic group has been the object of some debate (Ferrarotti 2025: 35-37).

The Quattro Province have been so far mostly overlooked by dialectological surveys; this is regrettable, since their dialectological position makes them very promising ground for studying hybrid dialect varieties, both from the production and the perception standpoint. Regarding the former, Fiori (2023) presents a dialectometric analysis of data from audio recordings of "The Wind and the Sun", while as to the latter Fiori & Colcuc (forthc.), using samples from those same recordings, analyze the geographical distributions of the results of an online free-placement task, where 73 participants were presented with a map and instructed to click where they thought the voice was from, in a manner similar to Pinget & Voeten (2024).

The present contribution, leveraging the same dataset, focuses instead on the relationship between the respondents' proximity to the stimulus (measured as the geographical distance from their own spoken dialect) and, respectively, the accuracy in stimulus placement and a variable called "perceptual proximity", which is the distance between the participant's spoken dialect and their placement of a stimulus. The role of proximity in PD is discussed by Montgomery (2012), who stresses the importance of taking into account the effect of psychological, as well as physical closeness; perceptual proximity is taken to provide insight into respondents' conceptions of linguistic space and attitudes towards certain dialect areas. In fact, our results show that physical proximity improves placement accuracy but only weakly, in line with Montgomery's observation that proximity plays a lesser role in the placement task than in the draw-a-map task (2007: 254), while the interaction with perceptual proximity is stronger and more significant. Moreover, the positive polarity items from similarity ratings of the dialects samples, on a 6-level Likert scale, tend to occur in placements scoring low on both physical and perceptual proximity, and vice-versa. Thus, in the case of the placement task, perceptual proximity seems more apt to reveal effects of "claiming" and "denial" of dialect areas by respondents than placement accuracy. Finally, a cluster analysis of the stimuli based on the similarity ratings will be presented, bearing out evidence for the perceived existence of transitional dialects occupying a middle ground between those in the ligurian Apennine and those closer to the Po Valley.

References

- Ferrarotti, Lorenzo (2025). *Dialetti d'Italia: Liguria*. Roma: Carocci.
- Fiori, Stefano (2023). Una prospettiva multivariata sulla produzione e percezione dei confini linguistici nelle Quattro Province. In Silvia Dal Negro & Daniela Mereu (eds.), *Confini nelle lingue e tra le lingue. Atti del LV Congresso della Società di Linguistica Italiana –Bolzano, 8-10 settembre 2022*. Milano: Officinaventuno. 31-46.
- Fiori, Stefano & Beatrice Colcuc. Perception and spatial classification of dialects: a comparative study of Ladinia and the Quattro Province through quantitative analysis. To appear in *Dialectologia*.
- Montgomery, Chris (2007). *Northern English dialects: A perceptual approach*. University of Sheffield dissertation.
- Montgomery, Chris (2012). The effect of proximity in perceptual dialectology. *J of Sociolinguistics* 16(5). 638-668.
- Petracco Sicardi, Giulia (1992). Per la definizione dell'anfizona ligure-padana. In Lorenzo Massobrio & Giulia Petracco Sicardi (eds.), *Studi linguistici sull'anfizona ligure-padana*. Alessandria: Dell'Orso, 12-25.
- Pinget, Anne-France & Cesko Voeten (2024). Social factors in accent recognition: a large-scale study in perceptual dialectology. *Journal of Linguistic Geography* 11(2), 78-90. <https://doi.org/10.1017/jlg.2023.3>
- Preston, Dennis R. (1999). Introduction. In Dennis Preston (ed.), *Handbook of Perceptual Dialectology (vol. 1)*. Amsterdam: John Benjamins, xxiii-xl.

The Path of the least Effort: Inter-Nordic Language Comprehension facing new Challenges

Godelieve Laureys

The Nordic language community shows a broad spectrum of linguistic variation, comprising North Germanic, Finno-Ugric languages and Inuit. It is important to distinguish between the area-linguistic concept comprising all languages spoken in the Nordic countries, and the Scandinavian languages proper. Swedish, Danish, Norwegian, Icelandic and Faroese have a common ancestor in Old Norse.

Inter-Nordic language comprehension has been a central element in the development of Nordic cooperation. The so-called "semicomunication model" coined by Einar Haugen has been officially promoted by the Nordic Council. The aim is for the Nordic citizens to reach a level of receptive multilingualism enabling them to use their native language when communicating with each other. This aim has been instrumented by relevant measures and tools (i.e. instruction in neighbour languages, monitoring of language usage in the media, promoting the parallel use of English and Nordic languages in academic teaching and research, developing strategies for the labour market to further the creative and innovative use of the languages at stake). At the same time it should be said that the Nordic language policy is crossed by the policy of the publishing houses and undermined by the media.

By measuring the differences between languages or dialects at the level of phonetics, morphology and lexicon the distance can be calculated mathematically. Vladimir Levenshtein designed an algorithm to compute distances. On the basis of these indexes the probability of mutual comprehension can be predicted, but the correlation between the registered objective distance indexes and the factual comprehension is distorted by interfering attitudinal and motivational factors. The explored asymmetry in the mutual understanding e.g. can be explained both by intra-linguistic and by extra-linguistic factors. The comprehensive research project conducted by Charlotte Gooskens and her team at Groningen University on intelligibility of related dialects and languages sheds a new light on the patterns of inter-Nordic comprehension.

Nowadays inter-Nordic language comprehension and the semi-communication model are challenged by several factors. Extended foreign language skills and especially the outstanding mastery of English challenges the inter-Nordic receptive multilingualism. English is increasingly used even among e.g. Danes and Swedes, as this appears to be the path of the least effort. Moreover the development of the Nordic countries into multi-ethnic and multilingual societies makes it less evident to uphold the ambition of inter-Nordic language comprehension. Finally globalisation makes the ideal of Nordicity less relevant.

On (pre)adolescents' perception of lexical variation: a mixed-methods approach to the identification of English loanwords in Dutch

Melissa Schuring, Steven Verheyen, & Laura Rosseel

Background | In developmental sociolinguistics, scholars investigate when and how children learn the link between language and social meaning. A well-studied lexical variable in this field is the use of English loanwords (*crazy, oh my god*) in Dutch. Previous work has for instance shown how children as young as 6 start inserting English words to construct a sense of belonging within their peer group (Authors 2024). However, a perspective that remains underexplored is children's perception of this type of lexical variation. Specifically, although we know that children can recognize boundaries between languages and varieties from a young age (Kristiansen 2010), it remains unclear whether and how they distinguish between English loans and a receptor language.

Research objectives | This paper aims to investigate how (pre)adolescents identify and differentiate English loanwords in contrast to Dutch. To this end, we implement a mixed-methods design. First, in a metalinguistic interview, we examine (pre)adolescents' overt reflection on the distinction between English and Dutch and identify the strategies they name to make that distinction (OBJ1). Second, we test the most frequently cited strategies in an experimental decision task to verify on a larger scale whether these strategies indeed inform (pre)adolescents' categorizations of words as English or Dutch (OBJ2).

Metalinguistic interview: method and results | The metalinguistic interview was conducted with N=26 preadolescents (6-13 y/o), individually in their homes. Based on a list of English items (e.g. *cool, gamen*), the interviewer asked the target question "How do you know the difference between an English and a Dutch word?". The corpus comprises 4 hours of video data and 1847 utterances. We implemented template analysis (Brooks et al. 2015) to identify identification strategies of English words in the interview data. The results indicate that 'recognizability' (Does the item sound English?) and 'avoidability' (can the item be avoided by using Dutch alternatives?) are most frequently cited by the participants.

Decision task: method and results | A group of N=173 adolescents (12-15 y/o) completed an experiment in which they rated the extent to which a word is English or Dutch on a visual analogue scale. We compiled two lists (between-subject) with 12 English items each, extracted from two English-oriented domains (Authors 2024). One list included **person-reference nouns related to sports** and **one list contained social media and internet nouns**. The items were balanced across the two most frequently cited strategies in the interview, recognizability and avoidability (see Table 1). Alongside large amounts of variation between items and participants, the results indicated 'recognizability' as an important predictor while 'avoidability' did not seem to guide the participants' categorization of words as English or Dutch.

	RECOGNIZABILITY: YES	RECOGNIZABILITY: NO
AVOIDABILITY: YES	keeper, outsider, jogger browser, meeting, game	sprinter, pingponger, supporter vlog, printer, adapter
AVOIDABILITY: NO	skater, bowler, paintballer like, mail, update	sporter, golfer, surfer link, internet, filter

Table 1: stimuli

Implications | The considerable variation across participants and items in both tasks emphasizes the importance of idiosyncrasies in (pre)adolescents' development of sociolinguistic variation. Thus, this paper illustrates the need for more usage-based perspectives to the identification and coding of variables in developmental sociolinguistics.

References

- Authors (2024). Brooks, Joanna, Serena McCluskey, Emma Turley & Nigel King. (2015). The Utility of Template Analysis in Qualitative Psychology Research, *Qualitative Research in Psychology*. 12(2). 202-222.
- Kristiansen, Gitte. (2010). Lectal acquisition and linguistic stereotype formation: an empirical study. In *Advances in cognitive sociolinguistics*, 225-263. De Gruyter Mouton.

The applications and challenges of preregistration in laboratory sociolinguistic research

Anne-France Pinget, Marijn Struiksma, & Rianne van Lieburg

In recent years, the field of sociolinguistics has witnessed a rise of experimental quantitative research in laboratory settings, building upon insights from traditional sociolinguistic research largely based on fieldwork and corpora (Van de Velde et al., 2021). When publishing results, sociolinguists are constrained by the publication bias of the current publication system. This publication system does neither incentivize publishing null results nor direct replication attempts, biasing the scientific record toward novel findings that confirm presented hypotheses. Moreover, there might be an overconfident belief in the robustness of statistical relationships due to flexibility in data collection, measurement, and analysis, which is also commonly found in sociolinguistic research.

One successful way within open science to systematically decrease publication bias and researcher degrees of freedom, as shown in other fields of linguistic research, is preregistration (Roettger, 2021). Preregistration is the practice of specifying research questions, hypotheses, and analytic strategies prior to data collection or analysis in a time-stamped document. While preregistration is a powerful tool to reduce bias, it also comes with certain challenges and limitations.

This paper illustrates the application and the challenges of preregistration for experimental sociolinguistics with our current EEG study of cue-weighting patterns in the perception of Dutch and English stops by speakers of L1 Dutch. The study raises the questions 1) how this cue-weighting between VOT and f0 is reflected in the neural processing of Dutch stops, and 2) how this impacts the processing of L2, as the primary cue (VOT) but not the secondary cue (f0) differs between the languages. In an EEG experiment looking for the Mismatch Negativity Effect (MMN, Näätänen, 2004) using the oddball paradigm, participants will be exposed to a series of standard stimuli, followed by a deviant. Stimuli are manipulated separately for both VOT and f0: e.g., the standard stimulus has p-like VOT and f0, and the deviant has p-like VOT and b-like f0. We hypothesize that the MMN will be larger for VOT as the primary cue than for f0 for the secondary cue. In addition, participants will perform a production task and a picture-matching perception task on both languages. These data allow for exploratory analyses to investigate the link between production, perception and processing, and, in the L2, the interaction with language proficiency, on both the group level and the individual level.

Taking the necessary time investment and possible pre-experimental delays into account, the application of preregistration helps committing to a transparent research plan in advance and distinguishing confirmatory from exploratory analyses. It reduces the likelihood of selective reporting and enhances reproducibility across studies and speech communities. Furthermore, preregistration can clarify theoretical predictions about language variation and change in both quantitative and qualitative research designs (see also Haven & Van Grootel, 2019). While it does not constrain exploratory inquiry, it provides a structured framework that complements the inherently interpretive nature of sociolinguistic work, ultimately contributing to more robust and trustworthy scientific outcomes.

References

- Haven, T. & L. Van Grootel (2019). Preregistering qualitative research. *Accountability in Research*, 26(3), 229–244.
- Roettger, T. B. (2021). Preregistration in experimental linguistics: Applications, challenges, and limitations. *Linguistics*, 59(5), 1227–1249.
- Van de Velde, H., Pinget, A.C.H. Voeten, C. & D. Demolin (2021). Laboratory Sociolinguistics: a new approach to language variation. In K. Franco, S. De Pascale, L. Rosseel, G. Kristiansen &
- Zhang, W. (eds.), *Cognitive sociolinguistics revisited*. Berlin: De Gruyter. pp. 557–571

Focus Groups as an Exploratory Bridge Between Corpus Data and Experimental Design

Margot Janssens, Beatrijs Wille, Myriam Vermeerbergen, &* Mieke Van Herreweghe

Experimental approaches to language variation critically depend on how linguistic variables are operationalized and controlled (Levon, 2023). This study investigates how focus groups can function as an exploratory methodological step bridging corpus-based observations of contact-induced constructional variation in Flemish Sign Language (VGT) with subsequent experimental perception research.

In contexts such as VGT, where all users are minimally bilingual (Vermeerbergen, 2021), the absence of a monolingual baseline as a reference point makes user-based categorization crucial for defining analytical boundaries between variants, constructions, and socially salient contrasts. Focus groups therefore contribute to the operationalization of variation by eliciting user-derived information on usage patterns, contextual associations, and interpretive frames that inform the design of subsequent experimental tasks and stimuli.

The study is situated within a usage-based project on contact-induced variation and change in VGT. Following usage-based approaches to language contact (Backus, 2020), contact is not seen as interaction between two bounded linguistic systems, but as emerging from differences in language experience, entrenchment, and usage conditions within a shared bilingual context. From this perspective, contact is reflected in differences in usage patterns across language users and contexts, observable as constructional variation (Bybee, 2010).

Building on this framework, the study operationalizes constructional variation through a multi-method design combining sign language corpus analysis and focus groups with deaf sign language users, thereby connecting production patterns with perceptual interpretation. Analyses of the VGT Corpus (Van Herreweghe et al., 2015) compare language data from younger signers (19–25 years) and older signers (51–70 years) to identify candidate constructions displaying possible age-related variation in form and meaning. Here, age (cf. Tagliamonte, 2012) functions as a proxy for differences in language experience shaped by recent sociolinguistic changes in deaf education and language socialization (Wille & Kusters, 2025). Candidate constructions include cases of formal competition and semantic expansion identified in semi-spontaneous corpus data (cf. Goldberg, 2006).

These corpus findings inform two focus group sessions with five to eight purposively sampled adult VGT users representing different generational language experiences. Conducted as guided perceptual elicitation, each 90-minute session discusses approximately twenty candidate constructions. The sessions explore how participants perceive, categorize, and socially interpret variation, including how they organize it into perceptual clusters reflecting functional similarity, partial overlap, and socially meaningful contrast. They further elicit underrepresented variants and contextual associations, while also providing user-based input for the selection of target constructions and the design of stimuli and evaluative dimensions for subsequent experimental perception tasks.

To conclude, this study argues that focus groups should not be treated as supplementary qualitative data, but as a key exploratory method that can inform the operationalization of linguistic variation and the design of subsequent experimental perception tasks and stimuli (cf. Krueger & Casey, 2015). By foregrounding language users' own perceptions and categorizations as input for experimental design, this approach strengthens the methodological link between corpus-based observation, perceptual interpretation, and experimental testing in variationist linguistics.

References

- Backus, A. (2020). Usage-based approaches. In *The Routledge handbook of language contact* (pp. 110-126). Routledge.
- Bybee, J. (2010). *Language, usage and cognition*. Cambridge University Press.
- Goldberg, A. E. (2006). *Constructions at work: The nature of generalization in language*. OUP Oxford.
- Krueger, R. A., & Casey, M. A. (2015). *Focus Groups: A Practical Guide for Applied Research* (5th edition). SAGE.
- Levon, E. (2023). Experimental sociolinguistics. *The Routledge Handbook of Experimental Linguistics*, 106-119.

- Tagliamonte, S. A. (2012). *Variationist sociolinguistics: change, observation, interpretation*. Wiley-Blackwell.
- Van Herreweghe, M., Vermeerbergen, M., Demey, E., De Durpel, H., Nyffels, H., & Verstraete, S. (2015). Het Corpus VGT. www.corpusvgt.be
- Vermeerbergen, M. (2021). Als gesproken taal niet vanzelfsprekend is. Van Home signing tot volwaardige gebarentalen. In W. Coudenys (red.) *Taal en de wereld* (pp 71-90), Universitaire Pers Leuven.
- Wille, B., & Kusters, M. (2025). Bilingual education with a sign language: the case of Flanders. *Deafness and Education International*, 1-30. <https://doi.org/10.1080/14643154.2025.2505276>

Bekoffiën, opbelbaar or rather kunstelijk? What potential words can tell us about morphological productivity

Wouter Ernst, Hanneke Loerts, & Maria Mazzoli

Potential words are morphologically well-formed but unattested lexical combinations that are structurally licensed by productive derivational schemas. Previous research on morphological productivity and neological intuition has shown that speakers are sensitive to affix productivity, base familiarity, and lexical regularity when evaluating attested neologisms, and that structurally transparent unattested forms can be rapidly interpreted as plausible lexical candidates (Lombard, Huyghe, & Gygax, 2024; Vaan, Schreuder, & Baayen, 2007). However, it remains unclear whether such sensitivity extends to the *acceptability* of potential words at first encounter.

To examine whether morphological well-formedness and lexical familiarity are sufficient to account for variation in the perceived acceptability of potential words, or whether they instead occupy a distinct evaluative category in lexical processing, the study addresses three research questions: (RQ1) whether potential words pattern with low-frequency words or form a distinct category in terms of understandability and acceptability; (RQ2) whether construction type predicts acceptability; and (RQ3) whether base frequency predicts judgments across conditions and within the potential-word subset.

The present study investigates acceptability and understandability judgments for Dutch auditory stimulus sentences containing high-frequency existing words, low-frequency existing words, potential words (morphologically well-formed but unattested derived forms with meaningful bases), and pseudoword controls (morpho-phonologically plausible strings with meaningless bases). Potential words are constructed using three productive derivational patterns (-baar, -lijk, and be-X-en) and systematically vary in whether they follow dominant or niche constructional schemas attested in corpus data, allowing for comparison between structurally typical and atypical derivations.

Preliminary results from 41 native Dutch speakers indicate that potential words are interpreted with a level of understandability comparable to low-frequency words, but differ in acceptability, suggesting that interpretability does not straightforwardly translate into perceived lexical viability. Construction type shows limited effects, while base frequency contributes modestly to variation within the potential-word subset.

This pattern suggests that morphologically licensed forms are not evaluated solely on structural grounds, but are additionally sensitive to lexical and usage-based properties of their bases. In this respect, variation in acceptability may reflect an early stage in the evaluation of lexical viability, in which speakers differ not only in their sensitivity to morphological structure, but also in their familiarity with and exposure to the lexical, cultural, and communicative domains associated with particular bases.

References

- Alizée Lombard, Richard Huyghe, & Pascal Gygax (2021). Neological intuition in French: A study of formal novelty and lexical regularity as predictors. *Lingua*, 254, 103055.
- Alizée Lombard, Richard Huyghe, & Pascal Gygax (2024). Morphological productivity and neological intuition. *Glossa Psycholinguistics*, 3.
- Laura Vaan, Robert Schreuder, & Harald Baayen (2007). Regular morphologically complex neologisms leave detectable traces in the mental lexicon. *The Mental Lexicon*, 2(1), 1–24.

Effects of Talker Gender on the Voicing Categorization of Stop Consonants: Cross-Linguistic and Individual Variation

Pasquale Giuseppe Mandara, Sharon Peperkamp, & Alan C. L. Yu

Sociophonetic studies have repeatedly found that the perceived gender of a talker can influence speech categorization (e.g., Johnson, 1991). In English, the effect of VOT on word-initial stop voicing perception is gender-mediated, with this cue being more important for female than male voices (Yu, 2022). Given that VOT and vowel onset F0 (hereafter: CF0) are in a trading relationship (e.g., Ou et al., 2021), we investigated whether the perceptual dependence of CF0 is also gender-mediated cross-linguistically (specifically, in English, French, and Italian), and whether this effect varies across listeners.

Stimuli were created from two natural /pe/ and /be/ productions by one male and one female French speaker. Each of the tokens was used to create continua crossing 2 values of CF0 (female: 200 and 240 Hz; male: 110 and 150 Hz) with 9 for VOT (from -30ms to +50ms). 40 participants per language performed a Visual Analog Scaling (VAS) task, which prompted them to rate the stimuli on a scale of 1 (“BE”) to 100 (“PE”), followed by a Gender Prototypicality task, which asked them to rate each of the voices they had heard from 1 (‘male’) to 100 (‘female’).

Mixed effects beta regression with fixed effects of GENDER RATING, CF0, VOT, LANGUAGE, and all interactions, in addition to by-subject intercepts and random slopes for CF0, and VOT, revealed a significant GENDER RATING x CF0 interaction, that is a larger CF0 influence on voicing categorization for voices rated as more masculine-sounding ($\beta=0.047$, $p<.001$). We also found a significant interaction between GENDER RATING x CF0 x LANGUAGE, suggesting that the gendered CF0 effect was larger in French than in Italian and English ($\beta = 0.021$, $p < .05$).

To examine the nature of individual variability in gender-mediation of the CF0 effect, we built a second beta regression model with fixed effects of GENDER RATING, CF0, VOT, LANGUAGE, response CONSISTENCY, and all interactions except the five-way one, in addition to by-subject intercepts and random slopes for CF0, and VOT; response CONSISTENCY, computed by averaging by speaker the squared residuals from the previous model, has been shown to predict secondary cue reliance (Kim et al., 2025). The model revealed a significant interaction between GENDER RATING, CF0, and CONSISTENCY, suggesting that the less consistent a listener is, the larger the gender-mediation of the CF0 effect ($\beta = 0.020$, $p < .001$). We also found a significant interaction between GENDER RATING, CF0, CONSISTENCY, and LANGUAGE, suggesting that the gendered CF0 effect varies less as a function of consistency among the French listeners compared to other language cohorts ($\beta = -0.037$, $p < .001$).

Overall, we provide cross-linguistic and cross-listener evidence for a gendered CF0 effect, with listeners displaying a heavier reliance on the CF0 cue when hearing male vs. female voices across all three languages. The direction of the effect is consistent with production data showing longer positive VOTs in female vs. male speech (English: Whiteside and Irving, 1998; French: Pépiot, 2015), and presumably greater reliance of CF0 for male talkers. The cross-linguistic findings observed accord well with existing production data as well. CF0 is of greater magnitude and lasts longer into the vowel in French when compared to English and Italian (Kirby and Ladd, 2016; Ting et al., 2025), which likely results in French listeners being more perceptually aware of this cue and more susceptible to a gendered CF0 effect. Finally, the effect is modulated by individual differences in categorization consistency, with less consistent perceivers exhibiting a larger gendered CF0 effect.

References

- Johnson, K. (1991). Differential effects of speaker and vowel variability on fricative perception. *Language and speech*, 34(3):265–279.
- Kim, H., Yang, T.-H., and Lee, J. (2025). Individual differences in speech categorization and perceptual cue reliance across phonological contrasts.
- Kirby, J. P. and Ladd, D. R. (2016). Effects of obstruent voicing on vowel F0: evidence from “true voicing” languages. *Journal of the Acoustical Society of America*, 140(4):2400–2411.
- Ou, J., Yu, A. C. L., and Xiang, M. (2021). Individual differences in categorization gradience as predicted by online processing of phonetic cues during spoken word recognition: Evidence from eye movements. *Cognitive Science*, 45(3):e12948.

Pépiot, E. (2015). Voice, speech and gender: male-female acoustic differences and cross-language variation in english and french speakers. *Corela. Cognition, repre'sentation, langage*, (HS-16).

Ting, C., Sonderegger, M., Clayards, M., and McAuliffe, M. (2025). The crosslinguistic distribu-tion of vowel and consonant intrinsic f0 effects. *Language*, 101(1):1–36.

Whiteside, S. P. and Irving, C. J. (1998). Speaker's sex differences in voice onset time: A study of isolated word production. *Perceptual and Motor Skills*, 86:651–654.

Yu, A. C. L. (2022). Perceptual cue weighting is influenced by the listener's gender and subjective evaluations of the speaker: The case of english stop voicing. *Frontiers in Psychology*, 13.

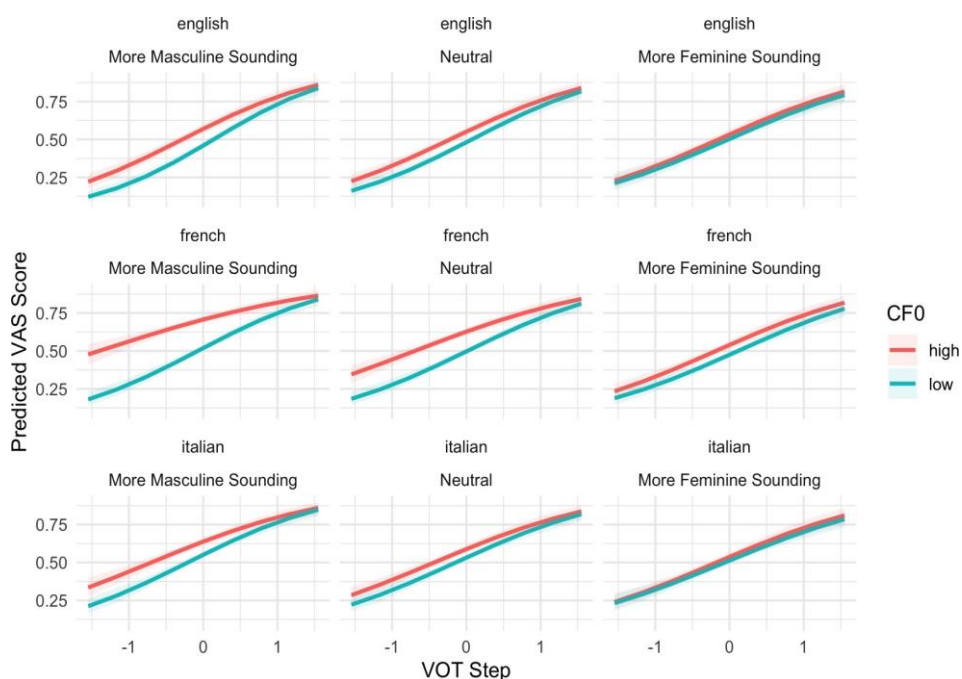


Figure 1: VAS Score as a function of Gender Rating, CF0, VOT and Language

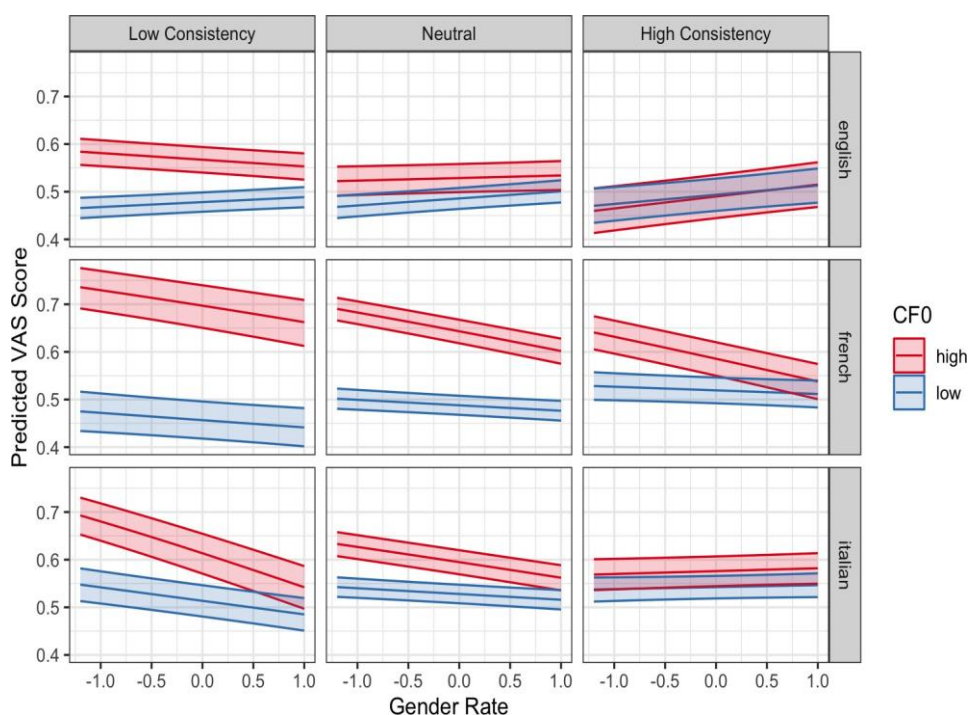


Figure 2: VAS Score as a function of Gender Rating, CF0, VOT and Consistency

Sociophonetic variation in nasal coarticulation in London English

Roy Alderton & Marc Barnard

One hypothesised driver of sound change is coarticulatory vowel nasalisation, whereby a sequence of a vowel plus nasal consonant (VN) is coalesced into a nasalised vowel ($\tilde{V}$) (Beddor 2009; Carignan et al. 2021; Cunha et al. 2024; Pouplier et al. 2024). What is less clear is how nasal coarticulation varies between different dialects of the same language and what this means for theories of sound change (Tamminga & Zellou 2015). Furthermore, many of the theoretical claims regarding nasal coarticulation derive from research on American English, in which vowel nasalisation is described as phonologised (Beddor 2009; Zellou 2017), but this is not the case for other varieties of English (e.g. Cunha et al. 2024; Dewhurst 2024; Lo 2025). Impressionistic descriptions of Received Pronunciation (RP) state that anticipatory vowel nasalisation is much weaker than in American English (Bladon 1979; Wells 1982), while descriptions of London English list strong nasal coarticulation and a nasal voice quality among its features (e.g. Wells 1982; Mott 2012), yet to our knowledge, the latter has never been measured empirically. It is clear, then, that building up our knowledge of anticipatory nasal coarticulation across different dialects of English will help us advance our understanding of the mechanics of speech production and sound change more generally.

Twenty L1 speakers of English who grew up in London and its surrounding areas were recorded at two London universities. Vowel nasalisation data were obtained via a word list of nasal–oral minimal pairs (e.g. *Lynn* and *lid*). Participants were recorded using an icSpeech handheld nasometer, which consists of two microphones separated by an acoustic baffle, yielding a stereo signal with different channels for the mouth and the nose. Nasalance values (the proportion of nasal amplitude) were calculated across the duration of the pre-nasal vowel and any preceding approximants. Speakers’ use of variables associated with two accents spoken in London (Standard Southern British English [SSBE] and Multicultural London English [MLE]) were tested via a separate word list recorded with a conventional microphone, enabling accent group classification.

While accent and ethnicity do not exhibit any significant differences in vowel nasalisation, our findings show that female speakers have higher overall nasalance, but in terms of nasal coarticulation, there are no gender differences in timing or magnitude (see Figure 1). This suggests that female speakers may have a more nasal overall voice quality than male speakers even though they do not coarticulate more strongly. While some previous work on American English has found nasal coarticulation to be a female-led change (Tamminga & Zellou 2015), we are not aware of any research that has found women to have higher overall nasalance. We interpret our findings in terms of the advantages and disadvantages of the nasalance methodology and how it may obscure variation that emerges when examining raw nasal amplitude.

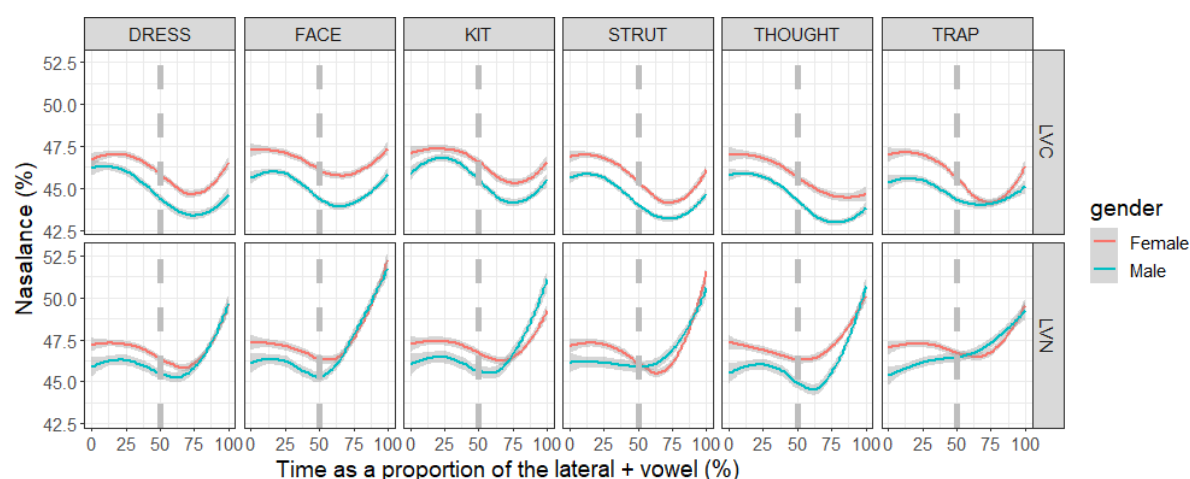


Figure 1: Nasalance across the duration of LV in LVC and LVN words (e.g. ‘lid’ and ‘Lynn’) by vowel (lexical set) and gender for 20 speakers (11 female, 9 male).

References

- Beddor, P. S. (2009). A coarticulatory path to sound change. *Language*, 85(4), 785-821.
- Bladon, R. A. W. (1979). Some control components of a speech production model. In H. Hollien & P. Hollien (Eds.), *Current Issues in the Phonetic Sciences: Proceedings of the IPS-77 Congress, Miami Beach, Florida, 17-19 December 1977* (pp. 63-70). Amsterdam: John Benjamins.
- Carignan, C., Coretta, S., Frahm, J., Harrington, J., Hoole, P., Joseph, A., Kunay, E., & Voit, D. (2021). Planting the seed for sound change: Evidence from real-time MRI of velum kinematics in German. *Language*, 97(2), 333-364.
- Cunha, C., Hoole, P., Voit, D., Frahm, J., & Harrington, J. (2024). The physiological basis of the phonologization of vowel nasalization: A real-time MRI analysis of American and Southern British English. *Journal of Phonetics*, 105, 101329.
- Dewhurst, M. (2024). Multi-dimensional acoustic analysis of sociophonetic nasality. *University of Pennsylvania Working Papers in Linguistics*, 30(2), 30-39.
- Kunay, E., Hoole, P., Gubian, M., Harrington, J., Joseph, A., Voit, D., & Frahm, J. (2022). Vowel height and velum position in German: Insights from a real-time magnetic resonance imaging study. *Journal of the Acoustical Society of America*, 152, 3483-3501.
- Lo, J. J. H. (2025). Nasal coarticulation in Lombard speech. *Speech Communication*, 169, 103205.
- Mott, B. L. (2012). Traditional Cockney and popular London speech. *Dialectologia: revista electrònica*, 9, 69-94.
- Pouplier, M., Rodriguez, F., Lo, J. J. H., Alderton, R., Evans, B. G., Reinisch, E., & Carignan, C. (2024). Language-specific and individual variation in anticipatory nasal coarticulation: A comparative study of American English, French, and German. *Journal of Phonetics*, 107, 101365.
- Tamminga, M., & Zellou, G. (2015). Cross-dialectal differences in nasal coarticulation in American English. In *Proceedings of the 18th International Congress of Phonetic Sciences, Glasgow, UK, 10-14 August 2015*.
- Wells, J. C. (1982). *Accents of English: Volume 2 – The British Isles*. Cambridge: Cambridge University Press.
- Zellou, G. (2017). Individual differences in the production of nasal coarticulation and perceptual compensation. *Journal of Phonetics*, 61, 13-29.

Perception and production link under contrast merger: Evidence from Quanzhou Southern Min–Mandarin bilingual speech

Caihong Weng; Alexander Martin; Martijn Wieling; & Ioana Chitoran

Phonological contrast mergers offer a revealing window into perception-production relationships. While individual-level alignment has received growing attention in contexts of sound change and variation [3,5,6], less is known about how this relationship behaves when contrasts are socially stratified within a bilingual community [2]. This study examines two mergers in a Quanzhou Southern Min (QSM)-Mandarin bilingual community: the /f/~/x/ merger, associated with local Fujian identity but negatively evaluated locally as a marker of limited education [7] and the /s/~/ʃ/ merger, perceived as a broader southern accent feature [8]. Using a perception-production design, we investigate whether perceptual discrimination predicts production behavior for each contrast, and whether this relationship is modulated by contrasts and by speaker characteristics such as Mandarin usage and generational exposure.

METHOD: 58 QSM–Mandarin bilinguals (younger generation 18–30: 27; older generation 31–55: 34) from Quanzhou, China completed a sentence-reading task and an ABX discrimination task. Production accuracy was assessed through a perceptual identification judgment task by 10 L1 Mandarin listeners. For the ABX task, we compared perception of a control contrast /m/~/p/ (present in both languages: *Two-Category Assimilation, as predicted by PAM-L2* [1]) to /f/~/x/ (/f/ is assimilated to QSM /h^w/ and /x/ to /h/: *Category-Goodness Assimilation*) and /s/~/ʃ/ (both assimilated to QSM /s/: *Single-Category Assimilation*). For the analyses of the perception-production link, both perception and production accuracy measures were aggregated to one value per speaker × contrast × vowel combination.

RESULTS: Perception accuracy. Both target contrasts showed significantly lower discrimination accuracy than the control contrast /m/~/p/ (see Figure 1, /f/~/x/: $\theta = -2.38$, $p < .001$; /s/~/ʃ/: $\theta = -2.88$, $p < .001$), with /s/~/ʃ/ showing the lowest discriminability in both vowel contexts compared to /f/~/x/, in line with PAM predictions (see Figure 2). **Production accuracy.** For production, Mandarin fricatives present in the QSM inventory (/s/, /x/) were identified more accurately than absent ones (/f/, /ʃ/). Overall production accuracy was higher for /f/~/x/ than /s/~/ʃ/ in both vowel contexts (see Figure 3). **Perception-production link.** We fitted a linear mixed-effects model of production accuracy with three-way interactions among ABX accuracy, contrast, and each of the vowels, generation, and Mandarin–QSM usage, plus by-speaker random intercepts and by-speaker random slopes for contrast. None of the three-way interactions reached significance ($\alpha = .01$). After dropping non-significant interactions, the final resulting model (see Table 1) is: $\text{prod_accuracy} \sim \text{abx_accuracy} + \text{contrast} + \text{generation} + (1 \mid \text{speaker})$. Contrast was the strongest predictor: /s/~/ʃ/ was produced less accurately than /f/~/x/ ($p < .001$). Older speakers produced both contrasts less accurately than younger speakers ($p < .001$). ABX accuracy showed a positive, non-significant ($p = .038$) relationship with production. Predicted production values by ABX accuracy and contrast are shown in Figure 4.

CONCLUSION AND DISCUSSION: Across QSM–Mandarin bilinguals, /f/~/x/ was discriminated and produced more accurately than /s/~/ʃ/, consistent with PAM-L2, acoustic-articulatory differences, and divergent social meanings. At the individual level, however, the perception–production correlation was weak, fell below our conservative significance threshold, and was not modulated by vowel context, generation or Mandarin–QSM usage. Perception and production thus agree at the group level on which contrast is harder, but the speaker who perceives better is not reliably the one who produces better: the central prediction of perception-first frameworks, which our data do not robustly support. Whether this reflects a real limit on the prediction or on our measurement strategy remains an open question, and future work with finer perceptual and articulatory probes and longitudinal or apparent-time designs are necessary to settle this question.

References

- [1] Best, C. T., Tyler, M., Bohn, O., & Munro, M. (2007). Nonnative and second-language speech perception. *Language experience in second language speech learning*, 13–34.
- [2] Coetzee, A. W., Beddor, P. S., Styler, W., Tobin, S., Bekker, I., & Wissing, D. (2022). Producing and perceiving socially structured coarticulation: Coarticulatory nasalization in Afrikaans. *Laboratory Phonology*, 13(1), 1–31.
- [3] de Leeuw, E., Stockall, L., Lazaridou-Chatzigoga, D., & Gorba Masip, C. (2019). Illusory vowels in Spanish

English sequential bilinguals: Evidence that accurate L2 perception is neither necessary nor sufficient for accurate L2 production. *Second Language Research*, 37(4), 587-618.

[4] Flege, J. E., Aoyama, K., & Bohn, O.-S. (2021). The revised Speech Learning Model (SLM-r) applied. In *Second Language Speech Learning: Theoretical and Empirical Progress* (pp. 84-118). Cambridge University Press.

[5] Lindblom, B. (1990). "Explaining phonetic variation: A sketch of the H&H theory," in *Speech production and speech modelling*. Dordrecht: Springer Netherlands. 403-439.

[6] Melnik-Leroy, G. A., Turnbull, R., & Peperkamp, S. (2021). On the relationship between perception and production of L2 sounds: Evidence from Anglophones' processing of the French /u/-/y/ contrast. *Second Language Research*, 38(3), 581-605.

[7] Weng, C., Chitoran, I., & Martin, A. (2023). Bilingual phonological contrast perception: The influence of Quanzhou Southern Min on Mandarin non-sibilant fricative discrimination. *JASA Express Letters*, 3(7), 075202.

[8] Weng, C., Chitoran, I., & Martin, A. (2026). Variability in fricative contrast merger: Evidence from Quanzhou Southern Min and Mandarin., *JASA* 159(2), 1659-1673.

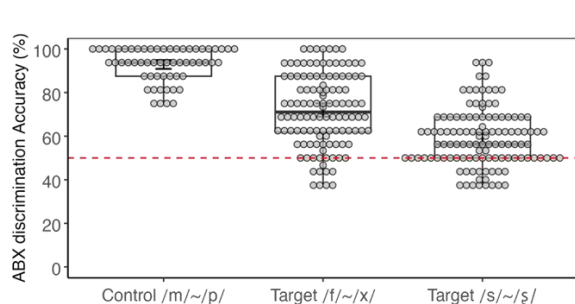


Figure 1: ABX discrimination accuracy of bilingual QSM-Mandarin speakers across control and target contrasts. Each point represents an individual participant's mean accuracy for a given contrast. The red dashed line indicates chance performance at 50%.

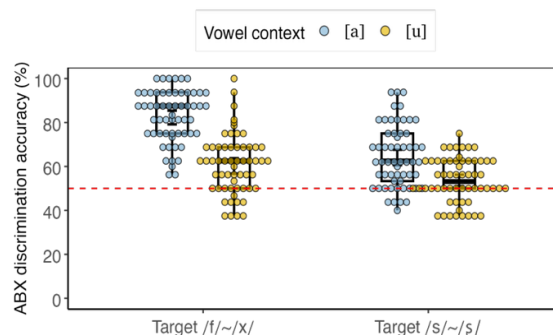


Figure 2: ABX discrimination accuracy of bilingual QSM-Mandarin speakers for target contrasts across two vowel contexts. Each point represents an individual participant's mean accuracy for a given contrast. The red dashed line indicates chance performance at 50%.

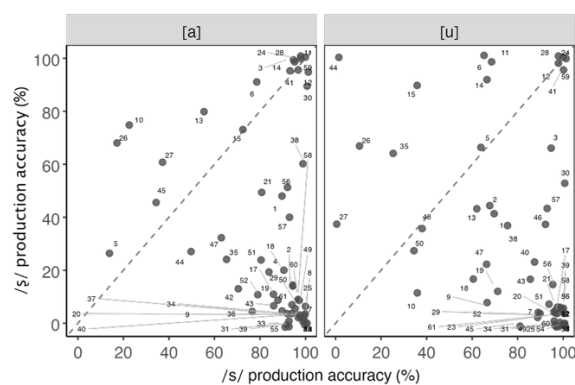
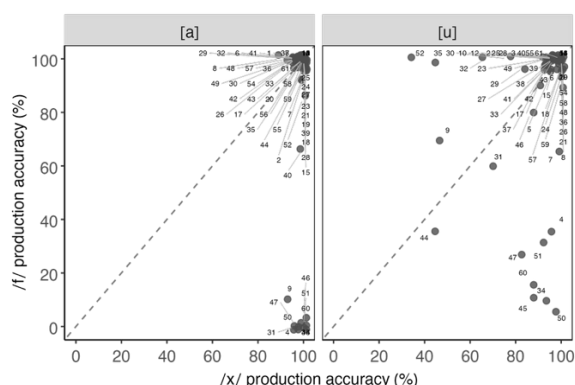


Figure 3: Participant-level production accuracy (based on L1 Mandarin speakers' perceptual evaluation) for the target contrasts in both vowel contexts. Each point represents one speaker. The x-axis shows production accuracy (%) for one fricative, and the y-axis shows production accuracy (%) for its paired fricative within the contrast. The dashed diagonal line indicates equal accuracy for the two categories.

Predictor	β	SE	t	p
(Intercept)	0.859	0.055	15.49	< .001***
ABX accuracy	0.137	0.066	2.08	.038†
Contrast /s/~/ʃ/	-0.303	0.020	-15.44	< .001***
Generation [older]	-0.115	0.033	-3.51	< .001***

Table 1: Fixed-effects estimates from the final reduced model predicting production accuracy from ABX perception accuracy, contrast, and generation, with by-speaker random intercepts. Significance is evaluated against $\alpha = .01$. Coefficients with $.01 \leq p < .05$ are flagged with † and noted in the text as trends but not treated as reliable evidence of an effect.

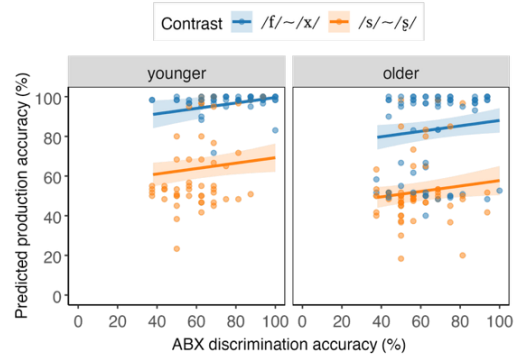


Figure 4: Model-based predicted production accuracy as a function of ABX discrimination accuracy, shown separately for the /f/~/x/ (blue) and /s/~/ʃ/ (orange) contrasts. Lines show predicted values from the linear mixed-effects model reported in Table 1 (i.e. without an interaction).

‘Waar ziet ge uzelf over vijf jaar?’: Perception of address pronoun variation in Belgian Dutch job interviews

Maria den Hartog, Lotte Hogeweg, & Helen de Hoop

In Belgian Dutch, speakers have access to three pronominal forms of address: the colloquial *ge/gij*, the informal standard *je/jij*, and the formal standard *u* (Vandekerckhove, 2005). While *je/jij* and *u* are conventionally expected in institutional contexts such as job interviews, work by De Dijn et. al. (2025) shows that *gij* can occur in such settings as well. This raises a question: how are different address forms are perceived when used in a context where expectations about register and formality are relatively strong?

In the present study, we experimentally investigated the perception of variation in pronouns of address by manipulating address form (*ge/gij*, *je/jij*, *u*) in a simulated job interview, replicating a previous study by den Hartog and Sánchez Carrasco et al. (2024). Participants ($n = 148$) answered job interview questions posed to them by a recruiter in a video, read a subsequent rejection letter and evaluated the interaction on a range of constructs capturing both interpersonal and organizational impressions. In our analysis, we contrasted the colloquial form *ge/gij* with the standard forms, and the standard formal form *u* with the standard informal *je/jij*. We also took into account moderating factors which are potentially relevant to the choice between formal and informal pronouns of address (Vismans, 2018): addressees’ age, gender, education level and region of origin.

Use of the formal pronoun *u* compared to *je/jij* led to significantly less favourable evaluations in **interpersonal relations** (rapport with and perceived closeness to the recruiter), except in the provinces of Oost-Vlaanderen and Vlaams-Brabant, where the effect was reversed (see Fig. 1, next page). Participants from these regions ($n = 61$) experienced greater closeness when the recruiter used *u* rather than *je/jij*. We also found a main effect favouring *je/jij* compared to *u* and a reversal thereof for Oost-Vlaanderen and Vlaams-Brabant for **attitude towards the company** (see Fig. 2, next page). This construct measured perceived organizational appeal, approachability, and fairness. For Vlaams-Brabant only, an effect appeared for the construct of **attitude towards the recruiter**: participants from Vlaams-Brabant saw the recruiter more positively (e.g., friendly, respectful) when the recruiter used standard *u* or *je/jij* rather than the colloquial form *ge/gij* (see Fig. 3, next page).

Taken together, our findings show that variation in address forms in Belgian Dutch affects interpersonal and affective evaluations in highly conventionalized institutional contexts. Of particular note is the regional variation in this effect: participants from Oost-Vlaanderen and Vlaams-Brabant favour *u* over *je/jij* and *ge/gij*. Regional differences in the occurrence of pronouns of address in Belgium have previously been attested: Plevoets et al. (2008) identified Oost-Vlaanderen as a transitional region where, *ge/gij*, *je/jij* and *u* are used approximately equally. These findings highlight that listeners’ evaluations of address forms are shaped not only by language-specific norms of formality, but also by region-specific expectations about appropriateness.

References

- De Dijn, M., Van De Mierop, D., Zenner, E., & Speelman, D. (2025). Indexing traditional and modern professional values: T/V-pronouns in Flemish New Work Order job interviews. *Pragmatics. Quarterly Publication of the International Pragmatics Association (IPrA)*.
- Den Hartog, M., Sánchez Carrasco, P., Schoenmakers, G.-J., Hogeweg, L., & De Hoop, H. (2024). Processing pronouns of address in a job interview in French and German. *Applied Linguistics*.
- Plevoets, K., Speelman, D., & Geeraerts, D. (2008). The distribution of T/V pronouns in Netherlandic and Belgian Dutch. In K. P. Schneider & A. Barron (Eds.), *Pragmatics & Beyond New Series* (Vol. 178, pp. 181–209). John Benjamins Publishing Company.
- Vandekerckhove, R. (2005). Belgian Dutch versus Netherlandic Dutch: New patterns of divergence? On pronouns of address and diminutives. *Multilingua - Journal of Cross-Cultural and Interlanguage Communication*, 24(4), 379–397.
- Vismans, R. (2018). Address choice in Dutch 2: Pragmatic principles of address choice in Dutch. *Dutch Crossing*, 42(3), 279–302.

Figures

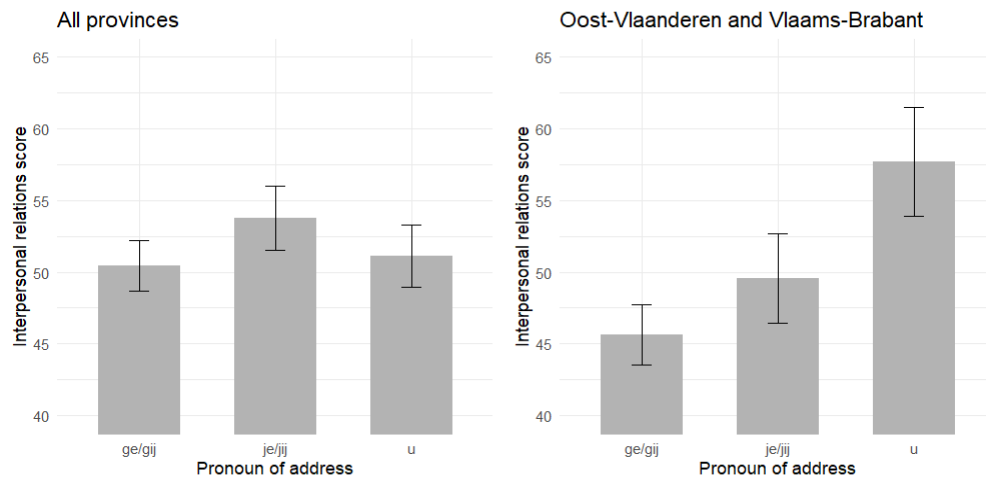


Figure 1. The effect of pronouns of address on interpersonal relations in Belgian Dutch ($n = 148$; left panel) and in Oost-Vlaanderen and Vlaams-Brabant ($n = 61$; right panel) in particular. Error bars represent *SE*.

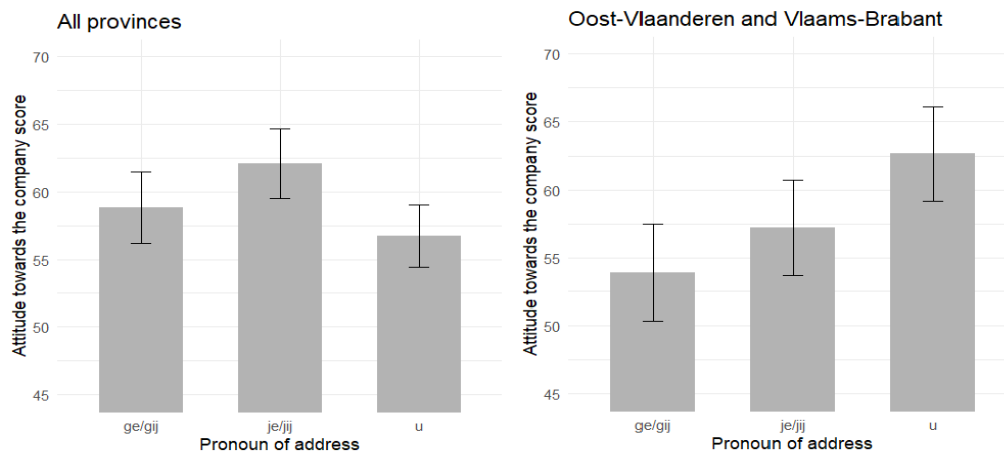


Figure 2. The effect of pronouns of address on attitude towards the company in Belgian Dutch ($n = 148$; left panel) and in Oost-Vlaanderen and Vlaams-Brabant ($n = 61$; right panel) in particular. Error bars represent *SE*.

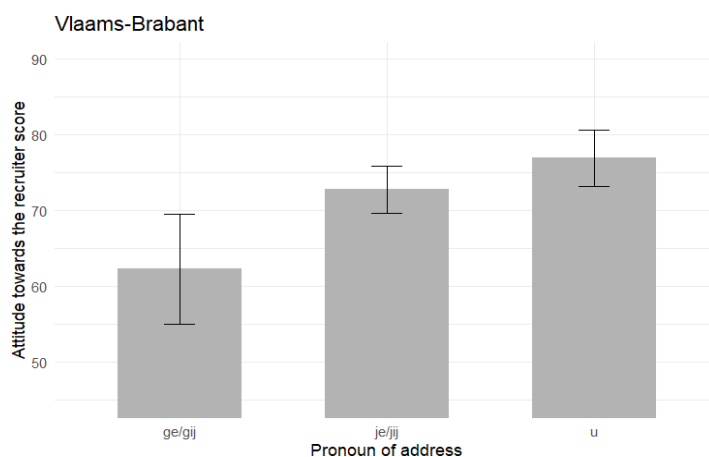


Figure 3. The effect of pronouns of address on attitude towards recruiter in Vlaams-Brabant ($n = 25$; right panel). Error bars represent *SE*.

The Indexical Field of Address Forms: Mandarin T/V Distinction Perceived and Produced

Yizhuo Zhang, Alexander Martin, & Alexandra Lorson

The T/V distinction is attested crosslinguistically as a contrast between “informal” T forms (from Latin *tu*) and “formal” V forms (from Latin *vos*). Foundational work on T/V distinction has argued that indexical meanings of T/V forms are organized along multiple social dimensions, most prominently Brown and Gilman’s (1960) framework of power-solidarity. In addition to this dyad, later sociolinguistic critiques suggested that the T/V distinction is also manipulated by another dimension concerning contextual settings (e.g., Clyne et al., 2009). Therefore, *formality* should be introduced as a third dimension alongside *power* and *solidarity* to model the indexical meanings of T/V forms. Another line of indexicality research suggested that indexical meanings also differ in degrees of conventionality (Potts, 2007; Silverstein, 2003). Given this, Sinnott (2013) proposed a layered indexical field for Spanish T/V forms, in which more stable meanings are positioned in inner layers and give rise to more context-dependent interpretations in outer layers. However, issues arise as the innermost layer groups together heterogeneous attributes, while interlocutors may perceive these meaning types along distinct social dimensions. Moreover, the indexical field is constructed with isolated T/V forms rather than exchanges, which may overlook the dynamic nature of indexicality in interactions (Eckert, 2019).

The present study addresses these issues through three experiments on the Mandarin Chinese T/V system (*nǐ* vs. *nín*). Experiment 1 was an elicitation task in which participants read conversations with different T/V exchanges and generated possible interpretations about the speakers and their relation to each other. Results identified *occupational asymmetry*, *acquaintance*, and *institutional setting* as the most reported social meanings associated with the linguistic variation. These were then used as rating dimensions in Experiment 2.

Experiment 2 explores how different T/V exchange conditions predict speakers’ perceptions of conventionalized indexical meanings. Participants rated the likelihood that the two speakers 1) exhibit significant occupational asymmetry, 2) are acquaintances, and 3) are in an institutional setting. Multivariate Bayesian regression analyses based on pilot data (N = 48) revealed a systematic effect of the introduction of V form in exchange: compared to T-T baseline, the V form generally increased perceived power asymmetry and contextual formality, while decreasing perceived solidarity. Specifically, T-V exchange led to the strongest increase in perceived power asymmetry ($\beta = 0.53$, 95% CrI [0.33, 0.73]) and contextual formality ($\beta = 0.40$, 95% CrI [0.19, 0.61]). By contrast, V-V exchange produced the strongest decrease in perceived solidarity ($\beta = -0.50$, 95% CrI [-0.72, -0.28]) (see fig.1, next page).

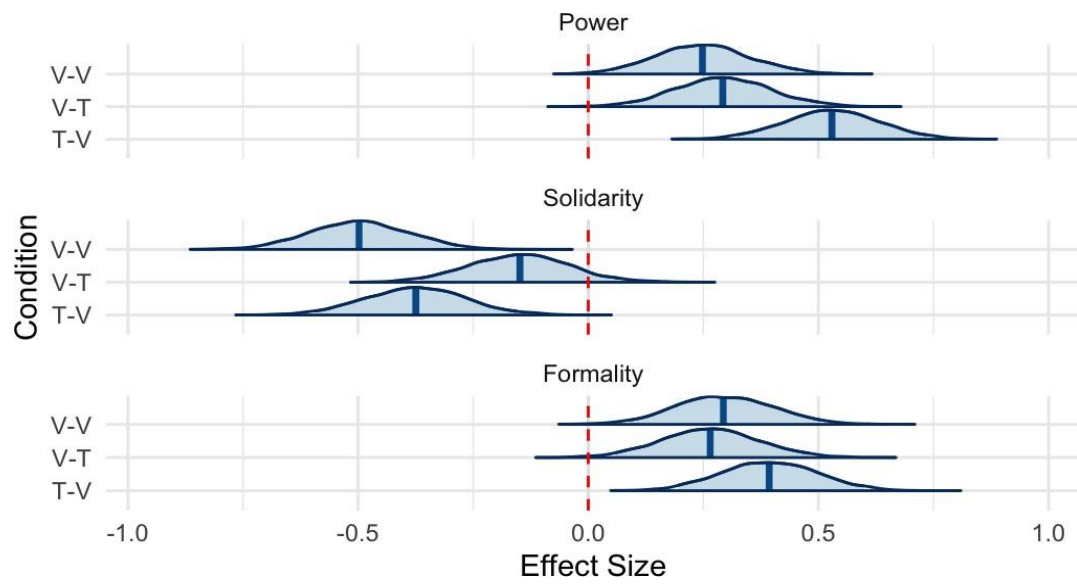
Further analyses indicated that reciprocity (T-T and V-V vs. T-V and V-T) predicts variation in perceived power asymmetry and contextual formality. Within non-reciprocal exchanges (T-V vs. V-T), directionality of T/V use was associated with differences in perceived power asymmetry and solidarity. Collectively, these findings suggest that the construction of the indexical field depends not on the selection of a single form alone, but on the exchange pattern that dynamically shapes perceptions of indexical meanings. Full-scale data collection is underway and will be analyzed as pre-registered.

References

- Brown, R., & Gilman, A. (1960). THE PRONOUNS OF POWER AND SOLIDARITY. In J. A. Fishman (Ed.), *Readings in the Sociology of Language* (pp. 252–275). De Gruyter Mouton.
- Clyne, M., Norrby, C., & Warren, J. (2009). *Language and Human Relations Styles of Address in Contemporary Language*.
- Eckert, P. (2019). The limits of meaning: Social indexicality, variation, and the cline of interiority. *Language*, 95(4), 751–776.
- McCready, E. (2014). Expressives and Expressivity. *Open Linguistics*, 1(1).
- Potts, C. (2007). The expressive dimension. *Theoretical Linguistics*, 33(2), 165–198.
- Silverstein, M. (2003). Indexical order and the dialectics of sociolinguistic life. *Language & Communication, Words and Beyond: Linguistic and Semiotic Studies of Sociocultural Order*, 23(3), 193–229.
- Sinnott, S. (2013). The Role of Implicature in Castilian Pronominal Address Forms. *Studies in Hispanic and Lusophone Linguistics*, 6(2), 301–324.

Figure 1

Estimated Effects of T/V Exchange on Perceived Social Dimensions (reference: T-T)



Standard language ideology revisited: a contextualised perspective on standard - colloquial language variation in an educational setting

Chloé Lybaert & Laura Rosseel

Decades of research in Dutch-speaking Belgium has shown that standard language ideology reigns supreme in this speech community (Van Hoof & Jaspers 2012). More recently, however, a number of language attitudes studies have begun to challenge these findings by researching standard-vernacular variation from a contextualized perspective. These studies suggest that even in traditionally normative contexts like higher education or speech therapy, the standard variety is not univocally appreciated or regarded as the most appropriate variety (Lybaert et al. 2022; 2024; Zenner et al. 2021). With this study, we aim to deepen our understanding of how language attitudes interact with contextual factors such as speaker background and speech situation by focussing on a novel context where Standard Belgian Dutch is generally assumed (or at least expected) to hold a strong position: secondary education. Specifically, we aim to find out how Standard and Colloquial Belgian Dutch are evaluated depending on situational characteristics (relational vs. transactional, e.g. class management vs. knowledge transfer), speaker profile (language vs. other teachers) and listener profile (pupils vs. (language) teachers).

We conducted a speaker evaluation experiment with a 2 (language variety: standard vs. colloquial; between-subject) x 2 (speech situation: relational vs. transactional; within-subject) x 3 (participant profile: pupil vs. language teacher vs. non-language teacher) design. A sample of 250+ teachers and pupils in the final 2 years of secondary school evaluated short audio recordings of a teacher addressing their class. The recordings were controlled for content and degree of colloquiality. Data is analysed using mixed effects regression modelling.

We expect evaluations to depend on both speech context and listener profile. While a strong standard language ideology would predict consistent preference for Standard Belgian Dutch, we anticipate a more differentiated pattern. In line with previous contextualised experimental research, Standard Belgian Dutch is expected to score higher in transactional contexts, whereas Colloquial Belgian Dutch may be valued more positively in relational interactions where rapport between interactants is emphasized (cf. Zenner et al. 2021). Pupils are predicted to show greater sensitivity to this contextual variation, while teachers (and perhaps especially language teachers) – often perceived as the “guardians of the standard language” upholding and spreading the standard language norm (Van de Velde & Houtermans 1999) – may remain more conservative in their evaluations. Finally, we anticipate that expectations regarding language use will vary by subject area, with stricter norms applying to the subject Dutch than to other disciplines.

The study contributes to discussions on the importance of contextualization in language attitude research. The educational setting is particularly relevant, as it remains a key domain closely associated with standard language usage. Contextualized approaches such as this one also provide a more nuanced understanding of how attitudes are cognitively represented and how they relate to processes of linguistic variation and change. Beyond its theoretical contribution, the findings have practical relevance for teacher education and language policy, particularly for promoting language-focused instruction across different school subjects.

References

- Lybaert, C., Van Hoof, S., & Deygers, B. (2022). The influence of ethnicity and language variation on undergraduates' evaluations of Dutch-speaking instructors in Belgium : a contextualized speaker evaluation experiment. *LANGUAGE & COMMUNICATION*, 84, 1–19.
- Lybaert, C., Van Hoof, S., & Plevoets, K. (2024). Students' attitudes towards an instructor's foreign accent and non-standard language variety. *NORDIC JOURNAL OF LINGUISTICS*, 47(3), 328–354.
- Van de Velde, H., & Houtermans, M. (1999). Vlamingen en Nederlanders over de uitspraak van nieuwslezers. In E. Huls & B. Weltens (Eds.), *Artikelen van de Derde Sociolinguïstische Conferentie* (pp. 451–462). Delft: Eburon.
- Van Hoof, S., & Jaspers, J. (2012). Hyperstandaardisering. *Tijdschrift voor Nederlandse Taal- en Letterkunde*, 128(1), 97–125.
- Zenner, E., Grondelaers, S., Rosseel, L., Speelman, D., Esselinckx, M., & Rombouts, E. (2021). The competence of the professional standard language speaker in flux? Support from the speech therapy context. *Language & Communication*, 81, 1-16.



Figure 1: Example of an AI generated picture stimulus used in the experiments

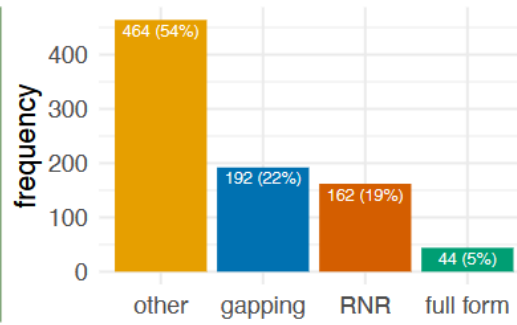


Figure 2: Frequency and proportion of response categories in exp. 1

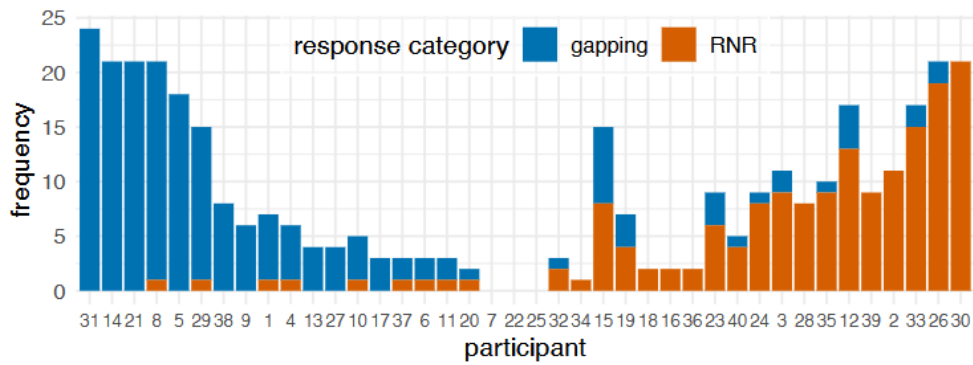


Figure 1: Frequency of gapping and RNR across participants in exp. 1 (24 data points by subject)

Equal in Dictionaries, Unequal in Processing: Lexical Access to Russian Words with Variable Stress

Vladislav Zubov

Previous studies have shown that Russian words with variable stress are processed more slowly than comparable words with fixed stress (Zubov & Riekhakaynen 2024). The present study asks whether this processing cost is the same for all variable-stress words, or whether it depends on how strongly the pronunciation variants compete with each other. The study is based on usage-based and exemplar-oriented approaches: lexical representations may store distributions of variants encountered in use, individual usage events gradually shape representational strength, including pronunciation variation (Goldinger, 1998; Bybee, 2002; Pierrehumbert, 2016). This is in line with studies on phonological variant recognition, which discuss the storage of multiple variants and the role of variant frequency in lexical access (Connine, 2004; Connine & Pinnow, 2006). We therefore hypothesized that two normatively accepted variants are not necessarily represented as equally strong alternatives. Lexical access should be slower when preferences are more evenly distributed between them, that is, when competition in usage is stronger.

The material consisted of 48 Russian words with two normatively accepted stress variants, selected from two modern orthoepic dictionaries. Both variants have the same meaning and grammatical form, for example *márketing/markéting* ‘marketing’ and *simmétriya/simmetriya* ‘symmetry’. The experiment used a visual lexical decision task (LDT), including these 48 words, 48 fixed-stress words, and 96 pseudowords. Stress was not marked. After the LDT, 69 participants saw both pronunciation variants for each variable-stress word and chose the variant they prefer to use. For each lexeme, we calculated a variant balance score: the number of choices for the less preferred variant divided by the number of choices for the more preferred variant, based on the post-task responses. Values close to 0 indicate dominance of one variant; values close to 1 indicate balanced preferences.

For the LDT analysis, we included only correctly recognized variable-stress words from 62 participants, after excluding participants with overall LDT accuracy below 80%. Reaction times (RTs) in the LDT were analysed with a linear mixed-effects model on log-transformed values, with fixed effects of variant balance score, log word-form frequency, length in letters, and part of speech, and random intercepts for participant and lexeme. The variant balance score significantly predicted RTs: the more evenly preferences were distributed, the more slowly the word was recognized, $\beta = 0.202$, $SE = 0.062$, $t = 3.26$, $p = .002$. An increase in the variant balance score from 0 to 1 was associated with an increase of about 22% in predicted RT, 95% CI $\approx$ [8%, 38%].

These results show that the cost of variable stress in visual word recognition depends not just on the presence of two normatively accepted variants, but also on their distribution in speakers’ preferences. We interpret this as evidence for gradient competition between phonological variants during lexical access. Since stress is usually not marked in written Russian, the visual form may activate competing representations. We do not assume the same effect in auditory word recognition: there, the participant receives one specific variant directly, and the nature of competition may be different. [The study is supported by the grant #25-28-03180 from the Russian Science Foundation (RSF): <https://rscf.ru/en/project/25-28-03180>]

References

- Bybee, J. (2002). Word frequency and context of use in the lexical diffusion of phonetically conditioned sound change. *Language Variation and Change*, 14(3), 261–290.
- Connine, C. M. (2004). It’s not what you hear but how often you hear it: On the neglected role of phonological variant frequency in auditory word recognition. *Psychonomic Bulletin & Review*, 11, 1084–1089.
- Connine, C. M., & Pinnow, E. (2006). Phonological variation in spoken word recognition: Episodes and abstractions. *The Linguistic Review*, 23, 235–245.
- Goldinger, S. D. (1998). Echoes of echoes? An episodic theory of lexical access. *Psycho. Review*, 105(2), 251–279.
- Pierrehumbert, J. B. (2016). Phonological representation: Beyond abstract versus episodic. *Annual Review of Linguistics*, 2, 33–52.
- Zubov, V. I., & Riekhakaynen, E. (2024). Listen, Repeat, Decide: Investigating Pronunciation Variation in Spoken Word Recognition among Russian Speakers. *Proceedings of Workshop on Cogn. Aspects of the Lexicon*, 129–132.

Poster Session II: Structural, Phonetic & Grammatical Production

Investigating Chinese and European Listeners' Perception of English Accent Similarity: Evidence from a free-classification task

Runyu Wu, Anja Schüppert, Charlotte Gooskens, & Remco Knooihuizen

Previous research has often relied on expert-based phonological classifications to compare English accents, but such classifications may not fully reflect how listeners perceive accent similarity. Listener perception is central to designing effective pronunciation training, yet most studies have focused on American regional dialects and native English listeners (e.g., Bent et al., 2016). This study therefore examined how two listener groups, Chinese learners of English and a comparison group of participants from European countries perceived similarity and dissimilarity among ten English accents, including native (Glasgow, Manchester, Irish, Northern Irish, New Zealand, Australian, Indian, South African) and non-native varieties (Chinese-accented, Japanese-accented English).

Using an auditory free-classification paradigm (Clopper, 2008), participants grouped 20 talkers (two per accent) by perceived similarity via a drag-and-drop interface. Stimuli were matched scripted sentences drawn from the Speech Accent Archive (Weinberger, 2015). Listener responses were converted into similarity matrices, and hierarchical clustering and multidimensional scaling (MDS) were used to visualize perceptual structures. Perceptual similarity was also compared with acoustic distances computed from Mel-frequency cepstral coefficients (MFCCs) using an MFCC-WTP procedure to obtain pairwise distances between speech samples.

The results showed that Chinese listeners' clustering partly aligned with expert-based classifications, indicating shared broad perceptual structure despite limited experience with some accents. Statistical modelling further showed a significant association between acoustic distance and perceptual distance, however, acoustic distance accounted for only a small portion of Chinese listeners' grouping behaviour, suggesting that additional factors (e.g., sociolinguistic expectations, familiarity, and salience) also contributed. In direct comparison, European participants demonstrated stronger accent discrimination, with higher accuracy in grouping same-accent talkers together. This pattern suggested that Chinese learners' accent discrimination was more limited, possibly reflecting reduced day-to-day exposure to diverse English accents in an EFL context.

References:

- Bent, T., Atagi, E., Akbik, A., & Bonifield, E. (2016). Classification of regional dialects, international dialects, and nonnative accents. *Journal of Phonetics*, 58, 104–117. <https://doi.org/10.1016/j.wocn.2016.08.004>
- Clopper, C. G. (2008). Auditory free classification: Methods and analysis. *Behavior Research Methods*, 40(2), 575–581. <https://doi.org/10.3758/brm.40.2.575>
- Weinberger, S. H. (2015). *Speech Accent Archive*. George Mason University. <http://accent.gmu.edu>

Acquiring the social meaning of language variation: Investigating the potential of semi-artificial sociolinguistic language learning

Moira Van Puyvelde, Laura Rosseel, Dirk Spielman

According to the usage-based framework, listeners derive sociolinguistic knowledge directly from their input: they form mental associations based on co-occurring linguistic variants and social attributes (Foulkes 2010). However, the exact amount of input a listener receives for a pattern of sociolinguistic variation is difficult to quantify with observational data (Van Puyvelde et al. 2025), which is why recent research shows a growing body of lab-based experiments to study the influence of input on sociolinguistic learning (e.g. Rácz et al. 2017, 2020; Samara et al. 2017; Li & Roberts 2023; Foster & Cole 2026). The laboratory permits researchers to isolate specific aspects of the input while controlling for contextual influences. We present two studies examining the potential of one such lab-based paradigm, namely artificial sociolinguistic language learning (Van Puyvelde et al. 2025). In this paradigm, participants are first exposed to a novel sociolinguistic pattern in a training phase and subsequently tested on their having acquired knowledge of this pattern in a production and/or perception task. Our experiments focus on two aspects of the input in sociolinguistic learning: (1) the frequency with which linguistic variants co-occur with social attributes, and (2) socio-contextual relevance.

Experiment 1 | frequency of co-occurrence. 84 students from Flemish universities were trained on a semi-artificial language consisting of Dutch sentences with an added pseudonoun (e.g. *Ik zie een lopat*. 'I see a *lopat*.'). These pseudonouns were subject to a novel pattern of phonetic variation, i.e. (de)voicing of word medial stops (e.g. *lopat* vs. *lobat*), associated with perceived speaker gender (male vs. female). In 4 experimental conditions, these associations varied from strong (co-occurrence of either gender with a specific variant in 90% of input) to weak (co-occurrence in 60% of input). After exposure, participants completed a perception task to test whether they had learned the association between consonant usage and gender. Results show limited learning in all conditions, as participants' focus had shifted towards acquiring form-meaning associations instead. As such, our results suggest that both salience of a sociolinguistic pattern and its relevance (i.e. participants' personal goals) within the communicative context need to align for learning to occur.

Experiment 2 | socio-contextual relevance. In this ongoing study, the semi-artificial language is more contextualized: participants are hired as an internal communicator between two departments at a fictional pharmaceutical company, i.e. marketing and the laboratory. Colleagues in these departments use different lexical variants to refer to a list of products made by the company. We compare a high-stakes and a low-stakes condition, which differ in terms of whether the instructions emphasise evaluation of participants' performance during a production task. We hypothesise that raising participants' personal stakes in the communication will boost learning, since they benefit from adopting the department-based variation to perform their job well. Together, these studies demonstrate the potential of an experimental paradigm to investigate questions of sociolinguistic learning. Yet, given the effects of specific design choices on learning performance, we argue and give suggestions for critical consideration of study design in future research.

References

- Foster, S. & Cole, J. (2026). Competing effects of exposure frequency and social preference on phonetic detail: An artificial language learning study. *Lab. Phonology: Journal of the Association for Lab. Phonology*, 17, 1-27.
- Foulkes, P. (2010). Exploring social-indexical knowledge: A long past but a short history. *Lab. Phonology*, 1, 5-39.
- Li, A. & Roberts, G. (2023). Co-occurrence, extension and social salience: The emergence of indexicality in an artificial language. *Cognitive Science*, 47(5): e13290.
- Rácz, P., Hay, J. B. & Pierrehumbert, J. B. (2017). Social Salience Discriminates Learnability of Contextual Cues in an Artificial Language. *Frontiers in Psychology*, 8, Article 51.
- Rácz, P., Hay, J. B. & Pierrehumbert, J. B. (2020). Not All Indexical Cues Are Equal: Differential Sensitivity to Dimensions of Indexical Meaning in an Artificial Language. *Language Learning*, 70(3): 848-85.
- Samara, A., Smith, K., Brown, H. & Wonnacott, E. (2017). Acquiring variation in an artificial language: Children and adults are sensitive to socially conditioned linguistic variation. *Cognitive Psychology*, 94: 85-114.
- Van Puyvelde, M., Rosseel, L., Zenner, E. & Spielman, D. (2025). Laboratory Studies on Artificial Sociolinguistic Language Learning: A PRISMA Systematic Review. *Taal en Tongval*, 77(1): 8-41.

Mutual intelligibility of West Nordic varieties

Remco Knooihuizen

The continental Scandinavian languages — Norwegian, Swedish, and Danish — are famous for being mutually intelligible: speakers of these languages can normally hold a conversation or engage in written correspondence with each other, with each using their own language. This observation was the starting point for Charlotte Gooskens's work in mutual intelligibility, culminating in her book, *Mutual intelligibility between closely related languages* (2024). Usually left out of the framework of mutual intelligibility in Scandinavia are the Insular Scandinavian (or Insular West Nordic) languages, Faroese and Icelandic. These languages have developed isolated from continental Scandinavian and retain more of the Old Norse nominal and verbal morphological system. The Faroese written standard is inspired by Icelandic and Old Norse (Lindqvist, 2003), but due to sound change is considerably less phonologically transparent (Thráinsson et al., 2004). It is therefore not clear that (spoken) Faroese and Icelandic are directly mutually intelligible, even though there are ideological claims to this effect (e.g., the Faroese-Icelandic scientific conference *Frændafundur* with contributions in both languages without translation).

Faroese and Icelandic

This project investigates mutual intelligibility between Faroese and Icelandic, using the methodology developed for Gooskens's project, "Mutual Intelligibility between Closely Related Languages" (Gooskens, 2024). Participants are presented in an online environment with

- a word translation task, using one of four lists of 25 words
- a cloze test, using one of four texts with 12 gaps

One of the tasks is (randomly) presented with spoken stimuli, the other with written stimuli. Task order is counter-balanced. Participants also complete a demographic and language background questionnaire. Answers are scored for correctness, with the outcome measurement being the number of correct answers in each of the tasks. We hypothesise that the mutual intelligibility between Faroese and Icelandic is relatively high in written mode, but much lower in spoken mode. In spoken mode, we expect higher scores in the word translation task than in the cloze test, given the more focused presentation of relevant tokens.

Norwegian

In addition, the Faroese and Icelandic stimuli were also presented to Norwegian participants, in order to make the link between insular and continental West Nordic languages. The methodology is identical. As an extra aspect in the Norwegian experiment, we introduced proficiency in the two written standards of Norwegian, *Bokmål* and *Nynorsk*. The *Nynorsk* standard is in some ways closer to Faroese and Icelandic than the *Bokmål* standard, e.g., in its use of diphthongs, full vowels in endings, and strong verbal morphology. We also expect *Nynorsk* users to be more used to dealing with the type of variation that would help them understand Faroese and Icelandic (Vinichenko et al., subm.). Moreover, the West Norwegian dialects that form the basis for *Nynorsk* and that are spoken by most *Nynorsk* users are linguistically the most similar to, in particular, Faroese (Sandøy, 1996). We therefore hypothesise that *Nynorsk* users and speakers of West Norwegian dialects perform better at the tasks than *Bokmål* users and speakers of other Norwegian dialects. Data collection is currently ongoing. The results of the study will be put in the context of wider patterns of mutual intelligibility between closely related languages in Europe (Gooskens, 2024).

References

- Gooskens, C. (2024). *Mutual intelligibility between closely related languages*. De Gruyter Mouton.
- Lindqvist, C. (2003). Sprachideologische Einflüsse auf die färöische Orthographieforschung. *NOWELE* 43, 77–144.
- Sandøy, H. (1996). *Talemål*. Novus.
- Thráinsson, H., Petersen, H. P., Jacobsen, J. í Lon, & Hansen, Z. S. (eds.) (2004). *Faroese: An overview and reference grammar*. Føroya Fróðskaparfelag.
- Vinichenko, A., Vangsnes, Ø. A., & Røyneland, U. (subm.). Spotting the lect: Asymmetric literacy competencies in multilectal contexts.

Sociophonetic variation in Dutch schwa epenthesis: an auditive, acoustical and automatic analysis

Mats Baltus & Anne-France Pinget

Schwa epenthesis, the insertion of a schwa in consonant clusters involving /r/ or /l/ (e.g., *werk* ['ʊɛ.rək] and *melk* ['mɛ.lək]), is a well-known sociolinguistic variable in Standard Dutch. Previous variationist studies (Kloots et al., 2002, 2009) have shown that older generations of speakers insert schwas more frequently than younger generations and that the speaker's region, speech style and, to a lesser extent, the speaker's gender influence the production patterns. However, these findings are based on data collected almost three decades ago and rely on a rough distinction between the Netherlands and Flanders.

The present study provides an updated and refined picture of variation patterns in schwa epenthesis by focusing on young Standard Dutch speakers (N=100) across five regions of Flanders and the Netherlands. Using an experimental word-reading task and a semi-spontaneous elicitation task, ten mono- and bimorphemic words are analyzed for each speaker. Schwa epenthesis is determined in a three-steps phonetic analysis: 1) an auditory analysis, 2) an acoustical analysis in *Praat* (Boersma & Weenink, 2024), 3) an automatic phonetic alignment in *WebMAUS* (Kisler et al., 2017; Schiel, 1999).

Logistic regression analyses reveal significant effects of region and speech style, but no effect of gender. The highest rates of schwa epenthesis are found in Netherlandic Limburg and Flemish-Brabant. Semi-spontaneous speech shows significantly more schwa epenthesis than read speech. Furthermore, a comparison with earlier studies suggests a decline of schwa epenthesis, possibly pointing towards an ongoing sound change in Standard Dutch. The results also highlight limitations of automatic phonetic alignment for this type of variable.

The schwa detection appeared to strongly depend on the chosen language model ('Dutch (NL)' vs. 'Dutch (BE)'), suggesting biases depending on the variety that the aligner was trained on. By combining a refined regional distinction with current speech data and a three-steps analysis, this study contributes new insights into the variation of schwa epenthesis in Standard Dutch.

References

- Boersma, P., & Weenink, D. (2024). *Praat: doing phonetics by computer* (Version 6.4.10) [Computer software].
- Kisler, T., Reichel, U. D., & Schiel, F. (2017). Multilingual processing of speech via web services. *Computer Speech & Language*, 45, 326–347.
- Kloots, H., De Schutter, G., Gillis, S. & Swerts, M. (2002). Sjwa-insertie in eindclusters: variatiepatronen in het Standaardnederlands. *Nederlandse Taalkunde*, 7(2), 97-126.
- Kloots, H., Gillis, S., & Verhoeven, J. (2009). Merk toch hoe sterk - Sjwa-insertie in spontaan gesproken Standaardnederlands. *Nederlandse Taalkunde*, 14(1), 45-65.
- Schiel, F. (1999). Automatic phonetic transcription of non-prompted speech. In *Proceedings of the International Congress of Phonetic Sciences* (pp. 607–610).

New Englishes in Academic Writing: Innovative Uses of Conditional Clauses

Lorena G. Tuica

This paper investigates innovative uses of conditional clauses in academic English produced by both Dutch and German speakers, focusing specifically on conditional constructions introduced by “when” rather than the more standard “if”. Building on debates surrounding New Englishes in terms of linguistic acceptability and editorial gatekeeping, the study examines whether such construction may constitute an emergent variety feature rather than mere learner errors. The analysis is framed through competing models of conventionalisation proposed by Bertus van Rooy and Hans Kruger (2017), who emphasise the role of editors and publishers in standardisation, and Alex Baratta (2021), who argues that linguistic innovation emerges primarily from community usage.

The study draws on uses found in two small ad hoc corpora compiled in Sketch Engine (Kilgariff et al., 2014) from academic books written by multilingual professors affiliated with the University of Amsterdam. One corpus contains publications issued by Dutch and German publishers, while the other corpus contains publications issued by British publishers. The results from these corpora are compared with data extracted from two reference corpora, deTenTen23 and nTenTen20. The comparison aims to reveal whether innovative uses of when-clauses display sufficient syntactic stability to qualify as features of Dutch or German Englishes.

The findings reveal that semantically overlapping when-clauses occur in both Dutch and German web corpora, suggesting the possible emergence of a shared innovative tendency across the two linguistic communities. However, the constructions display considerable syntactic variability, including combinations with modal verbs, past tense forms and present tense constructions, indicating low levels of conventionalisation. No clear instances of these innovative forms were found in the corpora of academic publications, regardless of whether the publishers were local or British. Even semantically ambiguous constructions occupying the boundary between temporality and conditionality appeared to be systematically avoided. These results suggest that academic publishing environments continue to privilege intelligibility and adherence to Inner Circle norms of English, particularly when addressing international audiences. The absence of innovative conditional structures in published academic texts supports the argument that editorial practices remain a significant mechanism in regulating linguistic acceptability. At the same time, the variability observed in online corpora points to ongoing experimentation in non-edited contexts. The paper concludes that while innovative when-conditionals may reflect contextualised perceptions of certainty and semantic flexibility, they have not yet achieved the degree of stability or institutional acceptance required for recognition as established features of New Englishes.

References

- Baratta, A. (2021). *The societal codification of Korean English*. Bloomsbury Publishing. <https://doi.org/10.5040/9781350188587>
- Kilgariff, A., Baisa, V., Bušta, J., Makubíček, M., Kovář, V., Michelfeit, J., Rychlý, P., Suchomel, P. (2014). The Sketch Engine: Ten Years On. *Lexicography*, 1: 7-36. <http://www.sketchengine.eu>
- Kruger, H., van Rooy, B. (2017). Editorial practice and the progressive in Black South African English. *World Englishes*, 36(1), 20–41. <https://doi.org/10.1111/weng.12202>

Refutational *too* between semantics, pragmatics, and social meaning in American English

William Thomas

The "refutational" use of *too* in American English (term due to Schwenter & Waltireit 2010) can be understood to index conflict between interlocutors, as it occurs only in contexts where the speaker and addressee disagree, as in (1).

(1) A: You didn't water the plants! / B: I did too!

Refutational *too* is stereotyped as children's speech, but it is also available to adults as a resource for stance-taking and style construction. This experimental study investigates the meaning of refutational *too* as an index of speaker qualities, examining how that meaning depends on context and exploring the relationship between refutational *too*'s semantics (as an index of disagreement) and its social meaning (as an index of speaker qualities).

Methods: 200 participants recruited on Prolific heard dialogues in which one member of a fictional family (parents with two children) utters an accusation, a self-deprecatory statement, or a trivial factual error and then another disagrees using *yes*, *certainly*, refutational *too*, or its near-synonym refutational *so*. Participants then rated various qualities of the second speaker on semantic differential scales. Best-fit cumulative link mixed-effect regression models of those ratings were then constructed for each speaker quality.

Results: Speakers were rated significantly more childish, playful, and unintelligent when using *too* or *so* than when using *yes* or *certainly*. Other indexical meanings varied with context: *Too* responses were rated as sounding kinder and less aggressive than *yes* and *certainly* responses in Accusation contexts but less kind and more aggressive in Self-Deprecation contexts.

Discussion: These results have implications for our understanding of the relationship between semantics/pragmatics and sociolinguistic meaning. The absence of any significant contrast between *too* and *so* while both of them contrast with *yes* and *certainly* suggests that it is the semantic property of indexing disagreement—rather than the lexical items *too* and *so* in particular or the act of disagreement more generally—that serves as the sign vehicle for the social indexical meanings under consideration here (cf. Beltrama & Staum Casasanto 2017 on *totally*).

Can the observed social meanings then be related to the semantics of refutational *too/so* in a principled way? Indeed, some recent work (e.g. Burnett 2019; Beltrama et al. 2023) has sought to derive particular social indexical meanings from conventional meanings by general pragmatic principles, à la Gricean implicatures. However, the effect of *too* in Accusation contexts is rather surprising from the perspective of neo-Gricean approaches to politeness, according to which we expect speakers to use indirect linguistic forms to soften disagreement (see Brown & Levinson 1987). Refutational *too* is not indirect but nonetheless produces a softening effect in responses to accusations (sounding kinder and less aggressive). Placing formal pragmatics in dialogue with the sociolinguistic and anthropological literature on indexicality (see Silverstein 1976, 2003; Eckert 2008), I argue that the observed meanings are not best understood as implicatures and instead explore how ideology might motivate the extension of *too*'s meaning from childishness (*n*th-order) to the interactionally emergent (*n*+1st-order) meanings observed in accusation and self-deprecation contexts.

References

- Beltrama, Andrea, Stephanie Solt & Heather Burnett. 2023. Context, precision, and social perception: A sociopragmatic study. *Language in Society* 52. 805–835.
- Beltrama, Andrea & Laura Staum Casasanto. 2017. Totally tall sounds totally younger: Intensification at the socio-semantics interface. *Journal of Sociolinguistics* 21(2). 154–182.
- Brown, Penelope & Stephen C. Levinson. 1987. *Politeness: Some Universals in Language Usage*. Cambridge, UK: Cambridge University Press.
- Burnett, Heather. 2019. Signalling games, sociolinguistic variation and the construction of style. *Linguistics and Philosophy* 42. 419–450.

- Eckert, Penelope. 2008. Variation and the indexical field. *Journal of Sociolinguistics* 12(4). 453–476.
- Schwenter, Scott & Richard Walerit. 2010. Presupposition accommodation and language change. In Kristin Davidse, Lieven Vandelanotte & Hubert Cuyckens (eds.), *Subjectification, Intersubjectification, and Grammaticalization* (Topics in English Linguistics 66), Berlin: De Gruyter Mouton.
- Silverstein, Michael. 1976. Shifters, linguistic categories, and cultural description. In Henry A. Selby & Keith H. Basso (eds.), *Meaning in Anthropology*, 11–55. University of New Mexico Press.
- Silverstein, Michael. 2003. Indexical order and the dialectics of sociolinguistic life. *Language & Communication* 23(3-4). 193–229.