Stefania Marzo, Eline Zenner and Dorien Van de Mieroop

4 When ~~third-wave~~ sociolinguistics and prototype analysis meet: the social meaning of sibilant palatalizaion in a Flemish Urban Vernacular

Abstract: This paper reveals how the study of contact-induced variation and change can benefit from a cross-fertilization between a third-wave perspective on the social meaning of variation and a prototype-theoretical representation of meaning.

As a case study we analyse the use of palatalized and non-palatalized /s/ in a corpus of self-recorded speech of speakers living in Flemish Limburg. Sibilant palatalization is one of the distinctive features of what is often called *Citétaal*, a contemporary urban vernacular that is spreading in the region.

We hypothesize that the social meaning of sibilant palatalization results from a combination of social and interactional categories at play in variant selection and that this combination adopts a prototype structure, characterized by salient and less salient categories and by fuzzy boundaries between the categories. This prototype-based representation of social meaning not only has the potential to add to our understanding of the social meaning of variation, it also furthers the incipient social turn in Cognitive Linguistic research, as we will analyze the social meaning of specific linguistic variants (*viz.* palatalized and non-palatalized /s/), rather than of whole sets of varieties and lects as was done so far.

Keywords: prototype theory, third-wave sociolinguistics, social meaning, urban vernaculars

1 Introduction

This paper explores the possibilities that follow from cross-fertilizing a third-wave perspective on the social meaning of variation and a prototype-theoretical representation of meaning. We argue that a sociolinguistic representation of social meaning has quite some commonalities with a prototype-based representation of meaning. At the same time, both perspectives can benefit from being brought

closer together: we will show how the sociolinguistic methods for studying social meaning offer a strong empirical basis for cognitive linguistic representations and that, in turn, a prototype representation of social meaning will reveal a series of conceptual characteristics that remain latent in sociolinguistic analyses.

Although the study of meaning has always been pivotal in Cognitive Linguistic theory, its interest in the *social* meaning of language has only grown systematically since the advent of Cognitive Sociolinguistics (see e.g. Kristiansen and Dirven 2008, Geeraerts et al. 2010). This paper wishes to contribute to this social turn in Cognitive Linguistics by investigating how sociolinguistic theories and methods can provide new insights and empirical input for a Cognitive (Socio) Linguistic representation of the social meaning of variation, focusing particularly on contact-induced variation and change. When combining these perspectives, two important challenges will however need to be addressed.

In terms of the sociolinguistic theories and methods followed, we adopt a third-wave sociolinguistic approach. The third-wave defines social meaning as a speaker's expression of its identity through stylistic practices (see Eckert 2012), entailing that at least two perspectives need to be taken into account when aiming for a comprehensive account: a quantitative variationist method that derives the social meaning potential of variation from the correlation between linguistic features (e.g. -ing/-in variation) and social categories (e.g. gender), and an interactional method that defines variation as the 'practice' of constructing social meaning in discourse.

The second challenge concerns our aim to ground these sociolinguistic perspectives on social meaning in a Cognitive Linguistic framework of meaning. This particularly entails that we need to reflect on the relationship between what we consider an empirical definition of social meaning, based on external, objectively verifiable parameters (generally used by sociolinguists) and a more cognitive definition of (social) meaning as a mental representation (used by cognitive linguists).

In this chapter, we hypothesise that the social meaning of variation results from a combination of social and interactional categories at play in variant selection and that this combination adopts a prototype structure, characterized by salient and less salient categories and by fuzzy boundaries between the categories (Geeraerts, Grondelaers, and Bakema 1994). This prototype-based representation of social meaning not only has the potential to add to our understanding of the social meaning of variation, it also furthers the incipient social turn in Cognitive Linguistic research, where prototype structures are already relied on for the representation of lects and varieties. We will try to push this social turn further by applying prototype theory to the social meaning indexed by specific linguistic variants rather than to whole sets of varieties and lects.

Additionally, we reveal the opportunities of this approach for the study of contact-induced variation and change. As a case in point we look at /s/ palatalization in a contact variety called *Citëtaal*, a contemporary urban vernacular that is spreading in the easternmost province of Flanders (Limburg). Our analysis relies on data drawn from the use of palatalized and non-palatalized /s/ in a corpus of self-recorded speech. This empirical background will be further presented in Section 2, which also presents the methodological guidelines of our study of this particular urban vernacular, and succinctly presents the social turn in prototype theory. Section 3 then presents the corpus and the variables used in our investigation. Section 4 proceeds with an initial quantitative scrutiny of sibilant palatalization in *Citëtaal*, based on a number of variationist parameters, which will be complemented by a qualitative discursive analysis in Section 5 and a multifactorial regression analysis (random forest and conditional inference tree) in Section 6, where discursive and variationist parameters are brought together. Based on the results of this combined approach to the study of /s/ palatalisation, in section 7 we reflect on the possibilities of representing the social meaning of this feature while discussing the opportunities offered by Cognitive Linguistics for future discussion on the social meaning of variation. We specifically represent our results in a prototype structure characterized by family resemblance. In the last section, we discuss in more detail which crucial next steps need to be taken to further corroborate the applicability of this proof of concept.

2 Laying the necessary groundwork

Before we proceed to a description of the data and variables used for our study of the social meaning of sibilant palatalization, it is necessary to introduce the three cornerstones of this contribution in some more detail: (1) from a theoretical perspective, we briefly describe the social turn in prototype theory; (2) from an empirical perspective, we introduce *Citëtaal* as Flemish Contemporary Urban Vernacular; (3) from a methodological perspective, we highlight the importance of a mixed method approach in the study of the social meaning of markers of Contemporary Urban Vernaculars.

2.1 Towards a prototypical structure of social meaning

Prototype research (first applied by Eleanor Rosch for charting the psychological principles behind information processing, see Mervis and Rosch 1981) has

long been part and parcel of the Cognitive Linguistic enterprise (see Polzenhagen and Xia 2015 for a well-focused overview, and see section 7 below). Starting with semantic descriptions of lexical categories (Geeraerts, Gondelaers, and Bakema 1994) and later turning to acoustic descriptions of phonological categories (Mompéan 2004, Kristiansen 2008) or prototype analyses of grammatical structures (Ramoulin-Brunberg 1994), researchers demonstrated the importance of key concepts of prototype theory, such as family resemblance, flexibility and salience for language categorization and processing. Although these studies took the cultural embedding of prototypes into account to some degree, only minimal attention was paid to socio-lectal variation. Socio-lectal components were included in prototype analysis only when the interest in the lectal component of language started to grow with the advent of Cognitive Sociolinguistics (Kristiansen and Dirven 2008, Geeraerts et al. 2010). Typically, researchers have verified how prototype structures for linguistic categories differ between lects (e.g. Grondelaers and Geeraerts 2003, see also Polzenhagen and Xia 2015) or how varieties are built up by prototypically organized linguistic variants (e.g. Pustka 2009, Altendorf 2016). In this paper, we aim to push this interest in the social component further by switching the perspective and upgrading the social dimension to the centre of the Cognitive Linguistics analysis. Instead of charting socio-lectal variation in the prototype structure of linguistic categories, we aim to describe the prototypical structure of the social meaning indexed by linguistic variants. Specifically, we will focus on the social meaning structure of sibilant palatalization in *Citétaal*.

2.2 *Citétaal*

We use the term *Citétaal* as an umbrella term for Contemporary Urban Vernaculars (CUVs) observed among adolescents and young adults in the former ghettoized areas (*cités*) in the easternmost region of Flanders (Belgian Limburg). These vernaculars emerged in small mining neighborhoods of the city of Genk and are now used and diffused by local youngsters with heritage background in the broader area of Limburg. The term *cité* in *Citétaal* refers to the former mining neighbourhoods, where these ways of speaking emerged and have been diffused, probably since the 1970s (Marzo and Ceuleers 2011). The *cités* were the ghettoized mining areas built especially to accommodate the first wave of migrant workers from Southern Europe. Continuous first-hand language contact between Dutch and the present heritage languages ensued over an extended period. This, in turn, led to the emergence of a contact variety (Dutch with features from other present minority languages), which served as input for the next generations. *Citétaal* now generally

refers to the linguistic practices of (native and non-native Flemish) youngsters in and beyond the cité-neighbourhoods who use, diffuse and further elaborate the linguistic resources of the previous generations (Svendsen and Marzo 2015).

The most salient feature of the Citétaal repertoire is the palato-alveolarization of /s/ followed by a consonant, e.g. in words as *stijl* ‘style’, that are then pronounced as [tʃeil] instead of [steil]). Other recurrent features are the generalization of the definite article *de* instead of the neutre *het* (*de meisje*, ‘the girl’) and the generalized use of non-neuter gender in the demonstrative pronoun paradigm (*die meisje*, ‘that girl’). Both the palato-alveolarization and the loss of grammatical gender also occur in Netherlandic CUVs (see Mourigh 2017 for sibilant palatalization and Cornips 2008 for grammatical gender).

Our paper focuses on /s/ palatalization. The reason for this is that /s/ palatalization has become a “stereotype” in Labov’s terms (Labov 1972): it is a variable that has been subject to considerable metapragmatic discussion (Marzo and Ceuleers 2011) and that has acquired a social value that language users are typically aware of (Johnstone et al. 2006; Eckert 2008). The broad diffusion of /s/ palatalization results, among others, from its use in social media, in local hip hop scenes and in fiction series. It is now spreading in and across other Flemish provinces, but according to attitude research, it is still associated with urban speech styles of youngsters in the larger Limburg area (Marzo 2016). Stereotype features of this kind are particularly interesting for our multi-methodological analysis, because speakers are more likely to consciously exploit them as discursive strategies in interaction.

2.3 An integrated mixed methods approach

As speakers typically rely on CUVs for social profiling of all sorts, scholars have been trying to fathom the CUVs’ indexical meaning potential. Roughly speaking, variationist scholars generally explain the shifts to CUV features by correlating linguistic (e.g. frequency of use of a given CUV-variant, such as palatalized /s/, versus standard use) and macro-social (e.g. ethnic background, gender) categories (Van Meel, Hinskens and, Van Hout 2016). Discourse-oriented scholars pay more attention to the way speakers use CUV-resources to actively (re-)create social meaning in discourse: they study *in-situ* meaning creation through ethnographic (interactional or discursive) and micro-sociolinguistic methods, explaining the use of CUV features as a tool that speakers can freely deploy in identity construction (e.g. Rampton 2011).

In line with other authors (Quist 2008; Svendsen 2015) and with third-wave sociolinguistic and Cognitive Sociolinguistic views on social meaning, we argue

that an integrative approach is needed in which a macro-social perspective is combined with a fine-grained micro-social analysis. Only through such a combined approach can we offer an encompassing insight into the social meaning of urban vernaculars.

3 Data and methods

We draw on a corpus of 20 hours of manually transcribed spontaneous interactions that took place in the easternmost province of Limburg. The conversations were recorded by youngsters in two interactional settings, viz. at home and during leisure time with peers. While the youngsters responsible for the recordings are actively participating in most interactions, there are also recordings of interactions between their parents or between other adults (e.g. siblings, family friends).

The 20 hours of high-quality audio recordings were transcribed using the Chat-conventions of the Childes project (MacWhinney 2000). Fragments that were analyzed in more detail in the discursive analyses (section 5) were additionally transcribed using the Jeffersonian system. All statistical analyses were conducted in R.

Our analysis zooms in on those utterances that contain standard [s] and palatalized [ʃ]. Instances of standard [s] are only considered in sequences of [s] + consonant, as palatalization only occurs in this specific phonetic context. Although the original corpus contains 34 speakers, our analysis for this paper is based on those 20 speakers with more than 10 observations of /s/. Table 1 lists all information about these speakers together with the total number of utterances for the speakers, the number of standard and palatalized /s/ (respectively ST and PAL in the tables), and the proportion of palatalized /s/.

As Table 1 reveals, our speakers are relatively homogeneously distributed over four dimensions: gender (12 female and 8 male speakers), age (10 adolescents – 4 informants and 6 friends of the informants – 2 young adults – the older siblings of the informants – and 8 adults, who are the parents of the informants), migration background (13 speakers are of Italian descent and 7 speakers are native-born Flemish), and role of the speaker (4 informants or main speakers, 6 peers, 2 older siblings and 8 parents). Once we start crossing the dimensions, the distributions are however no longer perfectly balanced. For example, among the group of adolescents, there are 4 boys, and among them 2 have immigrant roots and 2 are native born Flemish speakers), and 6 girls, of whom only 1 speaker is a native born Flemish speaker. Such asymmetries in the dataset will be further discussed and

remediated in Section 6, where we will bring the discussed parameters together in an encompassing multifactorial analysis.

Table 1: Overview of the dataset with the four dimensions and proportions of palatalizations.

Alias	Gender	Migration background	Age	Role	PAL	ST Dutch	% PAL
Seppe	MALE	native-born	adolescent	informant	8	29	0.216
Cindy	FEM	native-born	adolescent	peer	1	10	0.910
Anja	FEM	native-born	young adult	sibling	4	7	0.364
Francesco	MALE	migrant background	adolescent	informant	77	94	0.450
Finn	MALE	native-born	adolescent	peer	18	36	0.333
Sabrina	FEM	migrant background	young adult	sibling	0	64	0.000
Marie	FEM	native-born	adult	parent	5	67	0.69
Mark	MALE	native-born	adult	parent	0	86	0
Paolo	MALE	migrant background	adolescent	informant	33	61	0.351
Moira	FEM	migrant background	adolescent	peer	39	74	0.345
Antonella	FEM	migrant background	adult	parent	6	73	0.760
Franco	MALE	migrant background	adult	parent	8	37	0.178
Sofia	FEM	migrant background	adolescent	peer	9	61	0.129
Cinzia	FEM	migrant background	adolescent	peer	8	27	0.229
Anita	FEM	native-born	adult	parent	3	15	0.167
Alberto	MALE	migrant background	adult	parent	3	14	0.176
Chiara	FEM	migrant background	adolescent	informant	34	98	0.258
Alessia	FEM	migrant background	adolescent	peer	8	24	0.250
Mauro	MALE	migrant background	adult	sibling	6	7	0.462
Maria	FEM	migrant background	adult	parent	4	41	0.890

In all, our data contain 1199 observations of /s/ + consonant, 925 (or 77%) of which are Standard Dutch and 274 (or 23%) are palatalized. Although there is a clear preference for the standard variant, it is particularly interesting to study

the linguistic, social and interactional circumstances that explain the 23% palatalized /s/ in our corpus.

4 Linguistic and variationist parameters

This section starts off with a brief discussion of the impact of three quantifiable linguistic features (phonetic context, priming, and part of speech of the observed occurrence). Next, we will consider a few variationist parameters (age, gender, migration background and role of speaker). In this first stage ~~of the analyses~~, the data are analyzed using Chi-square tests for significance (with Bonferroni correction) and Cramer's V tests to measure effect size. The latter test captures the strength of association between two nominal variables, expressed in a value between zero and one that can be interpreted in a way that is similar to Pearson's correlation for numerical data, such that zero means "no association" and one means "complete association".

To complement these typically variationist analyses, section 5 will study the variation between standard and palatalized /s/ through a discourse analytical lens. Both variationist and discursive perspectives will serve as a final input of an encompassing regression tree, which reveals the relative impact of the discussed variables on the choice of the palatalized /s/ (Section 7).

4.1 Linguistic features

Three linguistic features have been examined. First of all, we analyze whether priming can explain the alternation between standard and palatalized /s/. Although different types of priming can be studied (e.g. one can look at the prime in the entire discourse of all the interlocutors or at the prime in the utterance of the speaker himself), we here look at the standard (ST) or palatalized (CT) sibilant that was used most recently in the five previous utterances in the conversation by any of the interlocutors, as this concerns the most straightforwardly coded type of autocorrelation we can attest in the data. Future research will of course need to study the effect of other types of priming. As a second linguistic parameter, we verify the effect of the phonetic context in which the palatalized /s/ occurs. We have coded for two phonetic contexts: /s/ followed by a single consonant (as in *stijl* [steil]) and /s/ followed by [x] (as in *school* [sxo:l]). Finally, we analyze the impact of the part of speech of the palatalized /s/ word, contrasting palatalization in nouns (N), verbs (V) and adjectives/adverbs (ADJ/ADV).

Table 2: Linguistic features

PRIMING	PAL	ST	Proportion PAL	
Noprime	237	650	0.267	Chisquare < 0.0001
ST-prime	6	272	0.022	Cramer's V 0.371
CT-prime	31	3	0.912	
PHONETIC CONTEXT	PAL	ST	Proportion PAL	
S+cons	134	781	0.146	Chisquare < 0.0001
S+X	140	144	0.493	Cramer's V 0.349
POS	PAL	ST	Proportion PAL	
N	98	396	0.198	Chisquare < 0.0001
V	70	334	0.173	Cramer's V 0.172
ADJ/ADV	106	195	0.352	

Table 2 reveals a strong priming effect. The pattern is significant ($p < 0.0001$) and Cramer's V reveals a fair association (0.316). This means that speakers palatalize significantly more when a palatalized /s/ occurs in the preceding five utterances and use it significantly less when a standard prime was used. Palatalization also increases in the [sx] clusters, with, once again, a fair association value (0.349). Finally, palatalization is significantly more frequent in adverbs and adjectives, although Cramer's V detects only a weak association (0.172).

4.2 Macro-social variables

We have also examined the effect of four macro-social variables, viz. gender (male/female), ethnicity (migrant background/native born speaker), age (adolescent/young adult/adult) and role of the speaker (informant/peer/family member). The selection of these parameters is based on existing literature on the use and diffusion of CUV among youngsters. According to various studies (for an overview, see Nortier and Svendsen 2015), CUVs generally emerge in areas shaped by migration (Rampton 2011) and they are directly linked to the local youngsters' heritage languages. Moreover, as these vernaculars are highly stigmatized in different European countries (Svendsen 2015), they are spoken predominantly in youngsters' in-group interactions and less in interactions with adults or persons with authority (e.g. teachers). Also, an important number of investigations have shown that male youngsters are the most frequent users of CUVs (e.g. Cheshire et al. 2011). Of course, exceptions can be noted, whereby female youngsters

seemed to be more innovative concerning the use and spread of these vernaculars (Svendsen and Røpyneland 2008).

In our dataset, the effect of these variables on /s/ palatalization is however not clear at all. Although males are using more palatalization (with a significant effect), Cramer's V reveals only a weak correlation between gender and palatalization. The same is true for ethnicity: speakers with a migration background use significantly more palatalized /s/, but the association is again very weak. The association is somewhat stronger for age and for role of the speaker, and we have significantly higher use of palatalization among the informants (with a proportion of 0.350) in our datasets who are still adolescents (with a proportion of 0.314). All details are shown in Table 3.

Table 3: Macro-linguistic variables.

Gender	PAL	ST	Proportion PAL	
Female	121	561	0.177	Chisquare < 0.0001
Male	153	364	0.296	Cramer's V 0.138
Ethnicity	PAL	ST	Proportion PAL	
Migrant background	235	675	0.258	Chisquare < 0.001
Native-born speaker	39	250	0.135	Cramer's V 0.123
Age	PAL	ST	Proportion PAL	
Adolescent	235	514	0.314	Chisquare < 0.0001
Young adult	4	71	0.053	Cramer's V 0.268
Adult	35	340	0.093	
Role	PAL	ST	Proportion PAL	
Informant	152	282	0.350	Chisquare < 0.0001
Peer	83	232	0.263	Cramer's V 0.274
Family	39	411	0.087	

Although we need to take into account the relatively limited number of speakers in our database, it appears that a purely variationist analysis of /s/ palatalization does not provide us with a sufficient explanation for the alternation between palatalized and non palatalized /s/ in our corpus. To allow a better understanding of the attested variation, we switch to a discursive perspective in the next section, complementing our first results with a qualitative and in-depth exploration of the interactions containing /s/ sibilants. These discursive analyses will demonstrate that the alternation between palatalized and non-palatalized /s/ strongly depends on the type of discursive context in which /s/ occurs, and on the loading of the utterance. These insights will be translated in two new variables that can be integrated in a final quantitative model.

5 From discursive analyses to discursive variables

Given the relative infrequency of palatalization in the corpus, we now focus on the question why some users, who, according to our expectations, use less Citétaal features, palatalize their /s/ in some specific instances. Put differently, we focus on interactions which typically should have a (even) lower-than-average palatalization rate which do however contain palatalization. In particular, we will focus on three speakers in a few inter-peer interactions, viz.

- Seppe, a youngster who is not expected to be a core user of Citétaal due to his Flemish roots.
- Chiara, a youngster with Italian roots who is situated outside the prototypical core due to her gender.
- Maria, a middle-aged adult with Italian roots, who is situated outside the prototypical core due to the fact that she is not a youngster, nor a man. As Maria is an adult, the inter-peer interaction in which she participates is situated outside the prototypical core as it does not involve youngsters.

On the basis of our discursive analyses, we have identified two such commonalities: s-palatalizations occur frequently among these atypical speakers in (1) commenting negatively on others or oneself and (2) telling sensational stories. We now discuss these two types successively.

5.1 Commenting negatively on others or oneself

In the subset of our data under scrutiny, the interlocutors often utter negative comments which occur in both serious and jocular contexts. These comments may target the speakers themselves, or they may address co-present or absent others. During such commenting activities – which include the comment as well as its follow-up – speakers frequently palatalize their s-sounds. We now discuss a few examples selected from the various types of commenting activities.

In a first fragment, we zoom in on Seppe who is watching a TV-show together with his sister Anja. In particular, Seppe is commenting on the looks of a Flemish fashionista celebrity on TV. The palatalized sound occurs in the word that is in boldface¹:

¹ The fragments were transcribed using transcription conventions that are based on the Jeffersonian transcription system. One important exception, however, is that boldface is used here for indicating the words in which the /s/ is palatalized.

Fragment 1 – Seppe

- 1 SEP hh. Edie lijkt op dinge (.) van da **sjpelleke** @@
 2 ((celebrity's name)) die lijkt=op
 3 (1.1)
 4 SEP .h flappybird [@@@
 5 ANJ [@@@
 6 (.)
 7 SEP .hh Eop di[e vogelE @@@
 8 ANJ [°flappybird ja:::°
- 1 SEP hh. Eshe looks like thingy (.) of that **little game** @@
 2 ((celebrity's name)) she looks=like
 3 (1.1)
 4 SEP .h flappybird [@@@
 5 ANJ [@@@
 6 (.)
 7 SEP .hh Elike th[at birdE @@@
 8 ANJ [° flappybird ye:::s°

In this fragment the negative comment is uttered in a jocular frame, which is clear from the start of the interaction due to the smiley voice that Seppe almost consistently uses in this fragment. Within this frame, the palatalization (of the word *spelleke*, ‘little game’) is uttered in the introduction to the comment. There are many such jocular commenting activities in this interaction, which happens parallel with the TV-show, and in many of these, palatalizations occur. In another example, we see Seppe commenting on a guitar player’s bad hairstyle: “mè die man die [...] op die gitaar **sjpeel**- die zijn kapper is dood denk ik” (‘mè that man who [...] **plays** on that guitar, his hairdresser died I think’). Again, in this jocular phrase, he palatalizes the onset consonant of ‘spelen’ (to play) in the lead-up to the actual jocular comment.

Besides in comments that target absent others, palatalization also occurs in jocular commenting activities that focus on co-present others. To illustrate this, we focus on Chiara (CHI), whose behavior is being challenged in a jocular way by one of her friends Alessia (ALE):

Fragment 2 – Chiara

- 1 ALE ↑WA (.) doet gij nu?
 2 CHI mijn **handsjchoene** [aandoen
 3 ALE [wilt ge michael jackson

- 4 nadoen of wa?
 5 CAT [↑AUW
 6 [((mimicking Michael Jackson))
 7 ? ()
 8 ALE nee doe 'ns (.) who's tha::t
 9 CHI who's ba::d
- 1 ALE ↑WHAT (.) are you doing now?
 2 CHI putting on my **glo**[ves
 3 ALE [do you want to imitate
 4 michael jackson or what?
 5 CAT [↑AUW
 6 [((mimicking Michael Jackson))
 7 ? ()
 8 ALE no do it once (.) who's tha::t
 9 CHI who's ba::d

In this extract, Alessia's question in line 1 is clearly not a request for information, since both the marked prosody (the initial loud volume and the pause) and the visual input of Chiara's action are sufficient to understand what the latter is doing. Yet, Chiara treats Alessia's utterance as a request for information, and provides her with a mock informative response in which the word *handsjchoenen* 'gloves' is palatalized. In overlap, Alessia utters a challenge of Chiara's behavior by framing it as an attempt to imitate Michael Jackson. Catherine (CAT) immediately jumps in by loudly mimicking Michael Jackson's signature sound (*auw*, line 5) after which Alessia prompts Chiara to imitate the chorus line of Michael Jackson's song *Bad*. Interestingly, though Alessia mimicks the lengthened sound of the chorus line, she utters the wrong word (*tha::t*, line 8), and while complying with the request in line 9, Chiara executes an embedded correction (Jefferson 1983), as such preventing any potential face loss for Alessia which might have occurred in case of an exposed correction. This choice for an embedded correction further underscores the fact that the initial challenge does not pose a real face threat to Chiara, since, otherwise, one might have expected that she, in turn, would have challenged Alessia's pronunciation mistake. So again, the negative comment – and its response in which palatalization occurs – is situated in a jocular frame.

However, the jocular nature of the comment is not a prerequisite for palatalization, as we see in the following serious negative comment uttered by Maria, who challenges her husband's (Enrico, ENR) lack of adherence to the rules they agreed on regarding their respective cars.

Fragment 3 – Maria

- 1 ENR dan moet ge luisteren als ik iets zeg (.)
 2 ge doet da maar op [juist als de vorige keer]
 3 MAR [ge moet van de mijne] (.)
 4 Gij moet van de mijne ↑af↓ blijven (.)
 5 da heb ik u nog al ↑ge↓ zegd (.)
 6 al zes jaar lang zeg ik u ↓da
 7 ENR ([)
 8 MAR [nee en die van u want die heeft een **sjch**↓**onere**]
- 1 ENR *then you have to listen when I say something (.)*
 2 *you just spend that [just like the last time]*
 3 MAR *[you have to off mine] (.)*
 4 *YOU have to stay away from ↑mi↓ne (.)*
 5 *I have told you that ↑al↓ ready (.)*
 6 *already for six years I tell you ↓that*
 7 ENR ([)
 8 MAR [*no and yours because he has a more **beautiful** ↓one*]

In this fragment, negative comments on co-present others are ubiquitous, as the two interlocutors blame each other for not listening (line 1, line 5–6) and for not abiding to the rules of spending money (line 2) or handling each other's cars (line 4). The overlaps (lines 3 and 8), the marked falling turn-final intonation (lines 4–6 and line 8) as well as the loud voice that Maria is using (lines 4–6, line 8) all paralinguistically mark the interaction as a discussion. This is further supported linguistically by the fact that in every turn, the addressee is directly linked to an accusation – hence the presence of second person pronominal forms in each line of this fragment – and that these accusations have a preferred turn shape. At the end of the discussion, Maria responds to an unintelligible turn by her husband (line 7), which, in turn, does not make the exact meaning of her utterance clear either. Yet, it is clear that her response is another challenge, as the turn-initial negative particle ('no', line 8) indicates. In this final turn, we observe the occurrence of a palatalization, this time thus situated in a non-jocular commenting activity.

Finally, besides while uttering negative comments vis-à-vis absent third parties or vis-à-vis each other, there are also many cases of negative self-evaluations in which palatalizations occur. This can be seen in the following short extract, in which Chiara has forgotten to bring her own sandwiches to school and, due to her diet, she refuses to order food from the school canteen. She thus watches her friend Alessia eat and comments as follows:

Fragment 4 – Chiara

- 1 CHI >ah da's zo kut da' k geen boterhamme meegepakt heb<
 2 ik ben da zo vergeten
 3 ALE ja ik zou u een koe- een euh koek wille meegeven ma-
 4 (4.7)
 5 CHI °ik ben zo **sĳtom** ↓eh°
- 1 CHI >ah *that's so crappy that I didn't take any sandwiches*<
 2 *I just forgot*
 3 ALE *yes I would like to give you a bis- a erm biscuit but-*
 4 (4.7)
 5 CHI °I'm so **stupid** ↓eh°

After Chiara utters her frustration with her own forgetfulness (line 1–2), Alessia expresses her empathy by hypothetically wanting to help her friend out by giving her one of her own biscuits. By means of the ‘but’ at the end of line 3, this first part takes the form of a preliminary turn constructional unit (Lerner 1991) in a contrastive pattern (“I would like to do that but I can’t because...”). So this second part of the turn would normally contain an account concerning the infeasibility of the biscuit-remedy. Yet, Alessia breaks off her turn and no account is uttered for her lack of helpfulness. A long pause follows in which this broken-off turn is sort of hanging in the air, after which Chiara self-selects with another expression of her own frustration. This takes the form of a self-deprecating comment uttered with an s-palatalization. The falling intonation as well as the low speaking volume all indicate that Chiara now resigns herself to the situation of being hungry for the rest of the day.

Thus, irrespective of the commenting target (be it another person, co-present or not, or oneself) or the jocular or serious nature of the commenting activity, these negative commenting activities form contexts in which palatalizations occur frequently. These may either occur in the negative comments themselves, as well as in the turns surrounding the comments, thus demonstrating that it is the commenting activity as a whole – rather than the evaluations – that elicit the occurrence of this Citétaal feature.

5.2 Telling sensational stories

In mundane interactions, competition amongst interlocutors to obtain the floor is often high, and this is especially the case in the youngsters’ inter-peer interactions

in our corpus. However, telling stories requires extensive floor-holding rights for the narrator and so the story in question had better largely surpass the lower boundary of tellability (Labov 2006; Norrick 2005) in order to justify such an extensive monopolization of the floor. Hence it is not surprising that there are quite a few stories with sensational content in our dataset.

Due to the length of the stories and space limitations, we only show excerpts from stories here. First, we present the complicating action and resolution (Labov and Waletzky 1966) of a narrative of vicarious experience that Chiara tells her friend. The story focuses on a robbery that occurred in her favorite chip shop, owned by a man whom she refers to by his last name (pseudonymized Valotos). The 'he' in the initial line of the fragment refers to the anonymous robber:

Fragment 5 – Chiara

1	CHI	en die heeft daarna gewoon alles m-
2		heel die kassa die die dag heeft verdiend
3		heeft die gewoon allemaal () (.) uitgehaald
4		die heeft <u>hem</u> een sjlag op z'n kop ge ↑geven (.)
5		en euhm (.) .h ja d'erna zo een paar weken daarna
6		was Valotos was die terug opengegaan (.)
7		en waren we geweest en
8		had die echt zo hier zo'n sjchaafwonde echt
9		ma ja Valotos is kaal ↑eh=
10	ALE	=ja
11	CHI	dus zag echt zo hier die die ↑ <u>bult</u> en zo eh
12		waar dat die die op gesjlagen had en zo he
1	CHI	<i>and he then just t- the lot</i>
2		<i>the whole cash register that he earned that day</i>
3		<i>he just took it all () (.) out</i>
4		<i>he gave <u>him</u> a whack on his ↑head (.)</i>
5		<i>and erm (.) .h yes later on a few weeks later</i>
6		<i>had Valotos had he opened again (.)</i>
7		<i>and we went there</i>
8		<i>and he had really here such a graze really</i>
9		<i>but yes Valotos is bald ↑eh=</i>
10	ALE	<i>=yes</i>
11	CHI	<i>so you really saw here that that ↑<u>bump</u> and all eh</i>
12		<i>where that he had whacked him and all hey</i>

In this excerpt, we see the end of the complicating action that culminates in the blow the chip shop owner receives to his head (line 4). Chiara's story then moves into the resolution phase, shifting the time frame to 'a few weeks later' (line 5), in which she had eye-witness access (line 7) to the physically visual result of this blow. This is discussed extensively (line 8 and 11–12) and the level of detail is accounted for by the victim's baldness which allows for an unimpeded view of his head-wounds. So these wounds are topicalized both in the story climax and the resolution phase, and they receive emphasis through the elaborated discussion and through prosodic stress (pitch rises in *head*, line 4, and *bump*, line 11). Throughout this excerpt, we can observe the repeated use of s-palatalizations in keywords in this story (*sjlag* 'whack', line 4, *sjchaafwonde* 'graze', line 8, *gesjlagen* 'whacked', line 12).

Palatalizations are observable in various youngsters' storytelling activities in our dataset, but, as in the fragment above, these tend to occur in the local context immediately surrounding the story climax. Another case in point is a story Seppe (SEP) tells his sister about an aggressive dog. This example also demonstrates that the switch to palatalization is hardly ever a total shift:

Fragment 6 – Seppe

1	SEP	gisteren (.) iemand van ((<i>organisation</i>)) die kwam
2		de sleutels halen van de speelplein he (.) .h en euhm
3		die belt aan die hond die ontploft gewoon he
4		ik was gek aan 't worde he
5		t was tien uur 's ochtends
6		ik was nog gans moe o[p mijn ()
7	ANJ	[ja::
8	(.)	
9	SEP	.hh he:he:
10		maar=die kom gewoon de sleutel hale he
11		ma nee die hond die sjtond bijna op h'r op h'r rug
1	SEP	yesterday (.) someone from ((<i>organisation</i>)) she came
2		to fetch the keys of the playground hey (.) .h and erm
3		she rings the bell that dog he just explodes hey
4		I was going mad hey
5		it was ten o' clock in the morning
6		I was still very tired t[o my ()
7	ANJ	[yes::s
8	(.)	

- 9 *SEP* *.hh he:he:*
 10 *but=she just comes to fetch the key hey*
 11 *but no that dog that almost **stood** on her on her back*

In this story, we only see one out of three forms that is palatalized, but, importantly, it is in the repetition of the story climax that we observe the palatalization (*sjtond* ‘stood’, line 11), while the non-palatalized forms (*sleutel* ‘key’) are uttered in the orientation phase (line 2) or in a repetition of this orientation phase that serves as an account for the innocent nature of the visitor’s action (line 10). So this segment of Seppe’s story is a further illustration of the tendency described above, viz. that palatalizations are mainly used in the most sensational parts of the story.

5.3 Defining discursive variables

As palatalization tends to occur when speakers are commenting negatively and telling the climaxes of sensational stories, the question is now what these contexts have in common on a more abstract level and how we can translate this into quantifiable variables. When comparing the examples presented above, we can conclude that all these local contexts are characterized by strong and intensified language use. This is visible on various levels. Firstly, on a content level, contrasts are often established, either between evaluations of speakers (e.g. the discussion of Maria and her husband in fragment 3) or within a story (e.g. the peaceful action of fetching a key versus the aggressive reaction of the dog in the final example). Secondly, prosodically, these fragments are marked by pitch rises and falls, as well as by a louder speaking volume (see especially fragments 2 and 3). And finally, particularly in the stories, palatalization tends to occur in the most dramatic parts of these interactions and their indexical value is thus to add even more emphasis to these utterances.

Resulting, in order to quantify and test these discursive explorations, all utterances with standard or palatalized /s/ in the initial database (including all 1199 utterances) were coded for two new variables: context of the interaction (general, storytelling or commenting) and loading of the interaction (viz. neutral loading or emotionally – positively or negatively-loaded interaction). As shown in Table 4, the discursive insights acquired above are validated through quantitative analyses for the entire database: the palatalized /s/ occurs more frequently when speakers comment negatively on others or themselves and in emotionally-loaded interactions. The differences are significant and the correlation between the two variables is moderate.

Table 4: Discursive variables.

Context of interaction	PAL	ST	Proportion PAL	
General	162	736	0.180	Chisquare < 0.0001
Storytelling	44	125	0.260	Cramer's V 0.261
Comments	68	64	0.515	
load	PAL	ST	Proportion PAL	
Neutral	164	762	0.177	Chisquare < 0.0001
Emotional	110	163	0.403	Cramer's V 0.226

As a final step in our process, after having identified a group of factors that explain the choice in favour of palatalized and non-palatalized /s/, we need to bring the different (linguistic, macro-social and discursive) variables together. Relying on regression trees, we below wish to reveal which of these factors is significant when simultaneously considering the effect of all predictors in the calculations.

6 Bringing the perspectives together

Given that our dataset is built on individual speakers' preferences in the use of palatalization, the best option for a multi-factorial statistical analysis for this study would be a mixed-effect logistic regression, as it takes into account potential speaker-level variation (Speelman, Heylen and Geeraerts 2018). However, due to the combination of data sparseness on different levels and an uneven distribution of independent variables ('multicollinearity', see section 3.2), a mixed-effect regression model will not provide robust, reliable results.

As shown in Tagliamonte and Baayen (2012), the best solution in this case is to construct random forests and conditional inference trees. Random forests provide information about the importance of predictors, even in the case of unbalanced designs with high multicollinearity. Like logistic models, random forests seek to predict, based on a set of predictors, which of the alternatives [s] or [ʃ] is most probable. However, whereas traditional logistic models estimate the effect of predictors with various simplifying assumptions, which makes them again problematic in case of data sparseness, random forests work through the data and establish whether a variable is a useful predictor. Also, as we aim to reflect on how the social meaning of variation can be represented in a prototype structure, we need a model that selects the strongest and, hence, most representative factors predicting the variation. The output of a random forest is a visual representation highly comparable to typical visualizations of anova's for regression

models, viz. a dotplot showing the relative importance of the different predictors included in a model. What is not revealed is the precise effects attested for the different predictors.

For this, we turn to conditional inference trees. These trees visualize how multiple predictors operate together. They provide estimates of the likelihood of the value of the response variable (in our case palatalized vs. non palatalized /s/) on the basis of a series of binary questions about the values of predictor variables (age, ethnicity, context, etc.). For instance, for the variable ETHNICITY it considers whether splitting the data into migrant background and no migrant background implies the creation of one set of data points where palatalized /s/ occurs more often and another dataset where standard /s/ is used more often. As such, this algorithm works through all predictors, splitting the data into binary subsets in consecutive runs until further splitting is no longer justified (in other words, until no statistically significant patterns remain). The result of these binary splits is visualized in a conditional inference tree.

For the analyses of our dataset, we made use of the implementation of Random forests and inference trees available in the `PARTY` and `PARTYKIT` packages in R. We imported all the nine parameters discussed in the descriptive sections, viz. the three linguistic variables, the four social-demographic factors and the two discursive variables.

The random forest selected seven factors that predict the use of sibilant palatalization in Citétaal. The results are visualized in the variable importance plot in Figure 1.

A variable importance plot shows how important each parameter is when data are being classified. The predictor variables are plotted on the y-axis, the

Figure 1: Random forest.

x-axis displays the mean decrease in node impurity. This mean decrease in node impurity is a measure of how each variable contributes to the purity on each node in a tree. Interestingly, the strongest predictors are not socio-demographic factors, but rather linguistic and interactional factors. As such, phonetic context (phoncon) most strongly predicts the use of palatalized /s/, followed by role as the second most important predictor and priming as the third most important predictor. Other important predictors are, in order of importance, context of interaction (context), load, gender, ethnicity and POS (part of speech).

The conditional inference tree as it is visualized in Figure 2² highlights the complex interaction that characterizes our dataset. The tree specifically shows that some predictors are relevant only in particular subsets of data, and that other predictors have a different effect depending on the subset under scrutiny. For instance, gender (which is selected only at the bottom of the tree, and which is slightly significant) is relevant only for s (not sch) in general and neutral discursive contexts, where no priming occurs. This means that only in those discursive contexts, the men in our dataset palatalize significantly more than the women.

Priming, however, seems to be relevant for the whole dataset, and outwings the other predictors in importance, which is visible in the fact that the first binary split in the tree is made for “CTprime” vs. “noprime”/“STprime”. It also returns as an important variable in other subsets, for example in peer and family interactions, where a further split is made between “noprime” and “STprime”.

The output generated by the random forest and conditional inference tree analysis offers not only an inclusive account of the linguistic, social and interactional motivations for /s/ palatalization. It also highlights the extremely complex interaction of these motivations. For example, it shows how social factors as gender or ethnicity which seemed to explain variation in the first descriptions become almost marginal when factoring in other predictors.

Despite the rich conclusions to be drawn from the conditional inference tree, the visualization is however impaired in the sense that it – in a typical variationist fashion – reduces the empirical reality to branched structures of binary splits. The way people mentally represent social meaning most likely works in quite a different fashion. In the next two paragraphs we compare the prototype theoretical representation of (social) meaning with the tree shown here, and we try to determine how they can be combined in a way that captures the strengths of both.

² This model obtained a classification accuracy of 85% (which is fairly good compared to a baseline of 77%), with a C-value of 0.881, which is also good, compared to a customary threshold of 0.8.

Figure 2: Conditional inference tree.

7 Towards a prototype model of social meaning

Comparing the conditional inference tree to prototype-based classifications of meaning in Cognitive Linguistics, we see several common denominators. Before discussing these, we briefly revisit the main principles of prototype theory through the renowned BIRD category (see Figure 3), as shown in Geeraerts, Grondelaers, and Bakema's work (1994).

The core principles underlying prototype theory are graded membership, a family resemblance structure and salience. This means that the different descriptive features that define a category (in the figure indicated by the letters *a* to *g*) cluster in different combinations and in different degrees of overlap, and that no single set of attributes can exclusively define one category. Natural consequences of this family resemblance structure are that the boundaries between categories are blurred (making it hard to delineate where one category ends and the next begins) and that not all members are equally typical, or representative, of a category. Representative members, then, are to be found in areas of the category that overlap the most. Applied to our example, psycholinguistic experiments for instance revealed that the more descriptive features a certain bird possesses, the more it is considered as a representative member of the category BIRD. This means that the robin, which is centred in the area of maximal overlap of descriptive features, is considered a far more (proto)typical instance of the category BIRD than the kiwi.

Crucial for prototype theory is also that the descriptive features that can be used to describe the category BIRD are not manifested in each and every bird. Where some birds fly, have feathers and are not domesticated (such as robins), others might also have feathers and wings but are not able to fly (such as ostriches). Still other birds, like kiwis, do not have wings and cannot fly but come in the traditional S-shape that other birds such as penguins lack. Finally, according to prototype theory, no set of sufficient and necessary criteria can be produced that neatly delineates the category BIRD from other categories. Even the two common features “being born from eggs” and “having a beak or bill” are together not sufficient. The duck-billed platypus, a mammal that possesses both characteristics, provides a rare, but crucial, counterexample.

Comparing the prototype structure to our variable importance plot and inference tree, we see a few similarities. First of all, our random forest and inference tree have selected a set of features or parameters that, together, define the most ‘typical’ social meaning of /s/ palatalization. These are, in other words, the most typical, or representative, circumstances for a speaker to palatalize /s/. According to the parameters selected in our tree, the prototypical social meaning of /s/ is found by combining all typical triggers of palatalization: being one of

our informants, using words with consonant cluster [sx], being primed in a previous utterance, commenting on other or yourself, interacting in emotionally loaded interactions, and being male. Parameters that did not reach significance in the tree, but that played a role in the exploratory analyses, reveal two other – weaker – components of the prototypical social meaning of s-palatalization: having a migrant background and using adverbs of adjectives. The most representative interaction in our dataset would then be a setting where a speaker who combines all these parameters, as for example Francesco, uses /s/ in a primed context, with consonant clusters [sx] and in emotionally-loaded comments. A second similarity between Figure 2 and Figure 3 is that not all factors selected by the random forest and inference tree are equally typical or carry the same weight (or *salience*). Some of them are less typical, namely ethnicity and gender, as they have low scores. A third crucial similarity is that the factors that can be used to describe the social meaning of /s/ palatalization are not manifested in each and every speaker or in each and every context. Some speakers are adults, and therefore not located in the centre of the prototype structure, but are still palatalizing more than other adults, because they interact in emotionally-loaded story climaxes, as for example Marie. These speakers are not prototypical users of /s/ palatalization, but are situated between the centre and the extreme periphery. And finally, as in the case of the category BIRD, the social meaning of /s/ palatalization cannot be defined by a set of sufficient and necessary criteria. The variable importance plot is not the only and unique set of parameters. Other parameters

Figure 3: The prototypical structure of the category BIRD (see Geeraerts, Grondelaers and Bakema 1994).

can still be added and investigated, can evolve and change. What is provided here is a set of features that explain a considerable amount of variation in this corpus, but surely other features can still be integrated. If we transform our logistic regression output into a prototype structure, we obtain the following figure (see Figure 4).

Although this prototype structure is based on social feature comparison, and not on semantic feature comparison as in the bird example, essentially, we see the same prototypical cores (with maximal overlap) and peripheries (with less overlap). At the core of the structure, where there is a maximal overlap of the features, we find the typical, or most representative, users of CUVs (as, for example, Francesco) in the typical, most representative contexts of CUVs, (when, for example, commenting on others). As we move away from the core towards the periphery, we find less representative users, as, for example, female adolescents from migrant descent (as Chiara), or at the very periphery, native Flemish female adults in non-emotional contexts.

Now, it is time to deal with the two main concerns of this paper, which are (1) the question whether a third-wave sociolinguistic definition of social meaning can offer empirical input for a Cognitive Linguistic analysis of the social meaning of variation and (2) the question which implications follow for the definition of social meaning. As for the first question, by measuring the interaction of social, linguistic and discursive parameters on the alternation between standard and palatalized /s/, we have shown how a third-wave sociolinguistic analysis of the social meaning of /s/ palatalization — can offer a thorough empirical basis for a prototype structure. The combination of these two perspectives and the representation of the social meaning as a prototype structure has several advantages. Firstly, the prototype structure visually illustrates more clearly how the linguistic, social and interactional triggers for palatalization are intertwined, and as such, how blurred the boundaries between them are. Related to this first advantage is the fact that it exemplifies how variationist and discursive perspectives cannot be separated if we want to fully understand why speakers shift to /s/ palatalization. Reformulated in terms of one of the most prototypical example cited for prototype theory in lexical semantics, it would be like explaining the constitutive features of all the possible birds, by separating features as “having wings” or “being born from eggs”. Finally, the advantage of using a prototype is that it illustrates more clearly how the explanatory power of a model does not imply any claims of causality. Indeed, what matters is not whether it is the interactional context that elicits palatalizations and male youngsters just happen to use more emotionally loaded interactions in their interpeer interactions (which would make the context the decisive factor), or whether it is the other way around. The model just stipulates that the combination of these factors results in a prototypical context for palatalization.

Regarding the implications for a prototype representation of social meaning, we need to reflect on the bridge that needs to be built between the social and the empirical definition of social meaning, on the one hand, and the cognitive or mental representation of meaning, on the other. Although the representation of the results in Figure 2 in the prototype fashion of Figure 4 is appealing, we must not forget that our third-wave perspective on social meaning is based solely on the study of linguistic production: our results present an analysis of the alternation between two variants. The initial scope of prototype structures was however meant for representing the *mental* categorization of categories, which is not some we can make claims on. Therefore, integrating our empirically tested parameters that define the social meaning of variation in language production into a prototype structure will need to be corroborated by research exploring the cognitive dimension of this empirical basis. Further research is needed to test to what extent the prototype structure based on social parameters is effectively represented in the mind of speakers, who *perceive* production of the alternating variables against their own social background. To this end, this study, which mainly serves as a proof of concept, needs to be complemented by experimental

Figure 4: Prototypical structure for /s/ palatalization based on social, linguistic and discursive factors (the QR-code links to a color version of the plot).

research that tries to uncover the mental representation of what we refer to here as the ‘empirical reality’ or, at least, the reality that is represented through our third-wave analyses of variation.

8 Conclusion and perspectives

This paper promotes a bridge from a sociolinguistic analysis of social meaning to a prototype-theoretical representation of meaning. In particular, we have shown that the social meaning of variation – materializing through a combination of social and interactional categories – adopts a prototype structure, characterized by salient and less salient categories, by a family resemblance structure and fuzzy boundaries between these categories. Our analysis has demonstrated that the prototype representation of social meaning adds to our knowledge and understanding of the social meaning of variation, as it highlights the overlap between different parameters, as well as the fuzziness between the categories. In turn, we believe that this paper reveals new avenues, showing how a third-wave perspective on social meaning of variation, thoroughly analysed through an integration of quantitative variationist and qualitative discursive methods, can offer a strong empirical basis for a usage-based version of a prototype analysis of meaning.

As such, this paper has carefully attempted to take the social turn in prototype-theoretical Cognitive Linguistic research one step further. Although similar initiatives have been already taken by other scholars (e.g. Grondelaers and Geeraerts 2003, Polzenhagen and Xia 2015), our goal was to truly promote the social aspect to the centre of the cognitive linguistics analysis: instead of charting socio-lectal variation in the prototype structure of linguistic categories (see e.g. Altendorf 2016), we have described the prototypical structure of the social meaning indexed by linguistic variants.

Still, what is presented here is no more than a proof of concept and we are aware that quite a bit of work remains to be done. Firstly, the model will most likely benefit from the addition of other features, and, in particular, by features related to the linguistic context in which palatalization occurs, such as the phonological context (e.g. palatalization occurs more frequently in the consonant combination [sX] as in *school*, than in other consonant combinations, as in *staan*). Also, our first analyses indicate that there might be an effect of shibboleth words (palatalization appears more frequently in specific words as *school* or *stijl*). Secondly, as for this proof of concept, since we have focused on the family resemblance between the features, follow-up research will need to clarify other

features characterizing prototype structures (e.g. salience, fuzzy boundaries). For example, we will need to measure the effective weight of each feature so that the cells can be designed according to their weight.

Finally, a third fundamental step will need to be taken when we want to arrive at a better understanding of the social meaning of CUVs: a prototype will have to be built for linguistic variants other than s-palatalization, by applying the same cyclical process of variationist and discursive analyses. A comparison of these prototypes will serve to shed light on the theoretical debate regarding the status of CUVs in the speakers' repertoire (e.g. Van Meel, Hinskens and, Van Hout 2016). Variationists often consider CUVs as dialects *sui generis*, as a more or less coherent collection of co-occurring features, whereas interactionists conceive CUVs as a fluid style or collection of feature pools from which speakers freely select. Comparing prototypes for different features and integrating them in one prototype for *Citëtaal* provides a novel contribution to this complex question. Moreover, the comparison of the prototypes for different variants will offer new empirical ground for the definition of CUVs as styles of speaking (Keim 2006), for which scholars have already carefully suggested that they have a prototype organization, with fluid and fuzzy boundaries (Hinskens 2011: 124). For now, it suffices to stress the promising opportunities that we see in imbuing third-wave sociolinguistics with a prototype-oriented analysis.

References

- Altendorf, Ulrike. 2016. Caught between Aristotle and Miss Marple.... A proposal for a perceptual prototype approach to 'Estuary English'. *Complutense Journal of English Linguistics* 24, 129–152.
- Cheshire, Jenny, Paul Kerswill, Sue Fox & Eivind Torgersen. 2011. Contact, the feature pool and the speech community: The emergence of Multicultural London English. *Journal of Sociolinguistics* 15(2), 151–196.
- Eckert, Penny. 2008. Variation and the indexical field. *Journal of Sociolinguistics* 12, 453–476.
- Eckert, Penny. 2012. Three waves of variation study: The emergence of meaning in the study of sociolinguistic variation. *Annual Review of Anthropology* 41, 87–100.
- Geeraerts, Dirk, Stefan Grondelaers & Peter Bakema. 1994. *The Structure of Lexical Variation. Meaning, Naming, and Context*. Berlin & New York: Mouton de Gruyter.
- Geeraerts, Dirk, Gitte Kristiansen & Yves Peirsman (eds). 2010. *Advances in Cognitive Sociolinguistics*. Berlin & New York: Mouton de Gruyter.
- Grondelaers, Stefan & Dirk Geeraerts. 2003. Towards a pragmatic model of cognitive onomasiology. In Hubert Cuyckens, René Dirven & John Taylor (eds.), *Cognitive Approaches to Lexical Semantics*, 67–92. Berlin & New York: Mouton de Gruyter.

- Hinskens, Frans. 2011. Emerging Moroccan and Turkish varieties of Dutch. Ethnolects or ethnic styles? Friederike Kern & Margret Selting (eds.), *Ethnic Styles of Speaking in European Metropolitan Areas*, 101–129. Amsterdam: John Benjamins.
- Johnstone, Barbara, Jennifer Andrus & Andrew Danielson. 2006. Mobility, indexicality, and the enregisterment of 'Pittsburghese'. *Journal of English Linguistics* 32 (4), 77–104.
- Keim, Inken. 2006. Interaktionale Soziolinguistik und kommunikative, soziale stylistik. *Sociotlinguistica* 20: 70–91.
- Kristiansen, Gitte & René Dirven (eds.). 2008. *Cognitive Sociolinguistics. Language Variation, Cultural Models, Social Systems*. New York & Berlin: Mouton de Gruyter
- Kristiansen, Gitte. 2008. Style-shifting and shifting styles: A socio-cognitive approach to lectal variation. In Gitte Kristiansen & René Dirven (eds.), *Cognitive Sociolinguistics: Language Variation, Cultural Models, Social Systems*, 45–88. Berlin & New York: Mouton de Gruyter.
- Jefferson, Gail. 1983. On exposed and embedded correction in conversation. *Studium Linguistik* 14, 58–68.
- Labov, William. 2006. Narrative pre-construction. *Narrative Inquiry* 16(1), 37–45.
- Labov, William & Joshua Waletzky. 1966. Narrative analysis: oral versions of personal experience. In June Helm, *Essays on the Verbal and Visual Arts*, 12–44. Seattle: University of Washington Press.
- Labov, William. 1972. *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
- Lerner, Gene H. 1991. On the syntax of sentences-in-progress. *Language in Society* 20, 441–58.
- Marzo, Stefania & Ey Ceuleers. 2011. The use of Citétaal among adolescents in Limburg: the role of space appropriation in language variation and change. *Journal of Multilingual and Multicultural Development* 32(5), 451–464.
- Marzo, Stefania. 2016. Exploring the social meaning of contemporary urban vernaculars: perceptions and attitudes about Citélanguage in Flanders. *International Journal of Bilingualism* 20(5), 501–521.
- Mervis, Carolyn B. & Eleanor Rosch. 1981. Categorization of natural objects. *Annual Review of Psychology* 32, 89–115.
- Mompéan, José A. 2004. Category overlap and neutralization: The importance of speakers' classifications in phonology. *Cognitive Linguistics* 15(4), 429–469.
- Mourigh, Khalid. 2017. Stance-taking through sibilant palatalisation in Gouda Moroccan Dutch. *Nederlandse Taalkunde* 22(3), 421–446.
- Norrick, Neal R. 2005. The dark side of tellability. *Narrative Inquiry* 15(2), 323–343.
- Nortier, Jacomine & Bente A. Svendsen (eds). 2015. *Language, Youth and Identity in the 21st Century*. Cambridge: Cambridge University Press.
- Polzenhagen, Frans & Xiaoyan Xia. 2015. Language, culture and prototypicality. In Farzad Sharifian (ed.), *Routledge Handbook of Language and Culture*, 253–269. New York: Routledge.
- Pustka, Elissa. 2009. A prototype-theoretical model of Southern French. In Kate Beeching, Nigel Armstrong & Françoise Gadet (eds.), *Sociolinguistic Variation in Contemporary French*, 77–94. Amsterdam & Philadelphia: John Benjamins.
- Quist, Pia. 2008. Sociolinguistic approaches to multiethnolect: Language variety and stylistic practice. *International Journal of Bilingualism* 12(1-2), 43–61.
- Ramoulin-Brunberg, Helena. 1994. Prototype categories and variation studies. In Francisco Fernández, Miguel Fuster Márquez & Juan Jose Calvo (eds.), *English Historical Linguistics 1992*, 297–304. New York: John Benjamins.

- Rampton, Ben. 2011. From 'Multi-ethnic adolescent heteroglossia' to 'Contemporary urban vernaculars'. *Language & Communication* 31, 76–294.
- Speelman, Dirk, Kris Heylen & Dirk Geeraerts (eds.). 2018. *Mixed-Effects Regression Models in Linguistics* (Quantitative Methods in the Humanities and Social Sciences). New York: Springer.
- Svendsen, Bente A. & Uun Røyneland. 2008. Multiethnolectal facts and functions in Oslo, Norway. *International Journal of Bilingualism* 12(1-2), 62–83.
- Svendsen, Bente A. 2015. Language, youth and identity in the 21st century: content and continuation. In Jacomine Nortier & B.A. Svendsen (eds.), *Language, Youth and Identity in the 21st Century*, 3–23. Cambridge: CUP.
- Svendsen, Bente A. & Stefania Marzo. 2015. A 'new' speech style is born. The omnipresence of structure and agency in the life of semiotic registers in heterogeneous urban spaces. *European Journal of Applied Linguistics* 3(1), 47–85.
- Tagliamonte, Sali A. & Harald R. Baayen. 2012. Models, forests and trees of York English: Was/were variation as a case study for statistical practice. *Language Variation and Change* 24(2), 135–178.
- Van Meel, Linda, Frans Hinskens & Roeland van Hout. 2016. Co-variation and varieties in modern Dutch ethnolects. *Lingua* 172–173. 72–86.