Ziej is a woman and het is a girl

The role of referent characteristics in pronominal gender variation in Limburgian

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Abstract

In Limburgian dialects, women can be referred to with neuter *het* (lit. ‘it’) or feminine *ziej*, both meaning ‘she’ (e.g., Bakker 1992). This thesis addresses the question to what extent the variation in pronoun gender for female referents in Limburgian dialects is driven by characteristics of the referent. On the one hand, there might be an effect of semantic features of the real-world referent, such as a woman’s age. On the other, however, there might also be an effect of the grammatical gender of a noun indexing a woman (cf. German *Mädchen* ‘girl(N)’). Limburgian dialects generally maintain a conservative grammatical gender system, which is more similar to German than to standard Dutch, and the variation might therefore be governed by linguistic information about the referent. The research question is addressed in two studies.

The first study investigates the role of the referent’s age. 41 native speakers of a Limburgian dialect described images taken from well-known fairy tales featuring both younger and older female characters (e.g., Cinderella, and her stepmother, and fairy godmother). The use of visual stimuli allowed for the collection of relatively spontaneous spoken data, while ensuring that enough relevant pronouns would be uttered (cf. San Roque et al. 2012). The results showed that participants frequently used *het* and other non-feminine forms for younger characters, but almost never did so for older characters.

The second study assesses the role of syntactic mechanisms in gender variation. A rating task was used to test coreferentiality between pronouns and antecedent nouns. 72 native speakers judged audio recordings of Limburgian sentences about a female person, who was introduced by a noun, and subsequently referred to with a pronoun. The nouns, which either referred to a woman of the same generation as the speaker (‘sister’), or to a woman clearly older than the speaker (‘grandmother’), occurred in their standard grammatically feminine form, or in the corresponding diminutive, grammatically neuter form. The pronouns, too, occurred in feminine and neuter grammatical gender. The results showed a clear preference for sentences featuring both a feminine noun and a matching feminine pronoun for older referents. For younger referents, on the other hand, no differences were found in the ratings of all possible combinations of noun gender and pronoun gender.

I conclude that the variation in pronoun gender for female reference in Limburgian dialects is governed mainly by information about the referent, in particular a woman’s age.
Acknowledgements

A thesis about Limburgian, or as we say at home, *plat*… If someone had told me this when I started studying linguistics almost seven years ago, I think I actually might have laughed at them. Language has always been the most fun and fascinating thing in the world to me, but I could never have imagined that the most interesting phenomenon I would encounter during my studies would be a distinguishing feature of my own humble dialect. It’s become painfully clear that I had no idea what I was getting myself into. It’s also safe to say that I took my sweet time finishing this thesis (imagine a Hitchcockesque video montage featuring a bunch of spinning clocks, and suspenseful music playing in the background), and as the period of me working on this research project grew longer and longer, the list of people helping me in some way or the other did too. I am extremely grateful to all of them.

I first want to thank my supervisors, Helen and Ad. It really has been a privilege to have you two as my mentors. The amount of trust and confidence I received from the both of you was incredible, and getting to do my own thing while knowing that you were always there to provide guidance and support whenever I needed it, was truly liberating. Thank you for allowing me to do this in my own way, and at my own pace. I had fun—let’s do it again sometime.

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Nijmegen, January 2020
**List of abbreviations**

1. **first person**  
2. **second person**  
3. **third person**  

- **ACC** - accusative  
- **ART** - article  
- **AUX** - auxiliary  
- **DAT** - dative  
- **DEM** - demonstrative  
- **DIM** - diminutive  
- **F** - feminine  
- **M** - masculine  
- **N** - neuter  
- **NF** - non-feminine  
- **NOM** - nominative  
- **PL** - plural  
- **POSS** - possessive  
- **PST** - past  
- **PTCL** - particle  
- **REFL** - reflexive  
- **SG** - singular
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1. **General Introduction**

Speakers use language to refer to others around them, using either names, nouns, or pronouns (e.g., Stivers, Enfield, & Levinson 2007). Because the continuous repetition of names and noun phrases is inefficient, and usually redundant, pronouns especially are very frequent in everyday language (e.g., Arnold 2010). Although the majority of the world’s languages does not make gender distinctions—Finnish, for example, is a genderless language which uses the third person pronoun *hän* for men and women alike (Sulkala & Karjalainen 1992: 275)—many languages maintain a pronominal gender system in which the third person in particular is closely linked to the binary biological distinction between male and female (Corbett 2013a, 2013b).

Gender, as Chafe (2002: 100) puts it, “entails a categorization of human beings”. This categorization, the sorting by type according to shared properties, happens on the socio-cultural as well as the purely grammatical level. Grammatical gender is a means of grouping and labeling words that behave or look alike, and have similar effects on the words around them, such as articles and pronouns (Corbett 1991; Hockett 1958). Separating grammatical or linguistic gender from natural or social gender distinctions is not always easy. Most, if not all, cultures around the world distinguish between men and women in some way or the other (e.g., Antweiler 2016; Brown 2000), and in languages that distinguish between different noun genders, words for “man” and “father” often belong to a different noun category than “woman” and “mother”, almost automatically making one category ‘masculine’ and the other ‘feminine’ (Corbett 1991; Stahlberg, Braun, Irmen, & Sczesny 2007). Moreover, many languages employ different pronominal forms for male and female referents (Siewierska 2013). For example, English ‘she’ and ‘her’ refer to a woman, but ‘he’, ‘him’ and ‘his’ usually refer to a man.

Some languages additionally allow for the use of ‘gender-mismatching’ pronouns, i.e., pronouns that are a mismatch to their referent’s natural gender. Limburgian, a Low Franconian dialect variety spoken in the southeast of the Netherlands, is a case in point: whereas men are always referred to with masculine pronouns, women can be referred to with both feminine and non-feminine forms (e.g., Bakker 1992; Piepers & Redl 2018; Royen 1935; Weijnen 1971).
1.1 Socially motivated gender-mismatching pronouns

Cross-linguistically, gender-mismatching pronouns can be triggered in two main ways. First, extra-linguistic factors such as social information may prompt the use of mismatching pronouns. In these cases, the use of a pronoun of a certain gender does not merely reflect the biological sex of the referent, but instead indexes additional semantic or pragmatic features.

Socially or pragmatically conditioned variation in the use of third person gender-specific pronouns, or other ways of indexing gender, has been documented for various languages, especially for female referents (but cf. Kelkar 1964; Pankhurst 1992; Wolk 2009). It is usually a means of distinguishing sub-groups within the same biological sex, highlighting certain features of one sub-group (see Aikhenvald 2016: Ch. 7). In this sense, gender-mismatching forms are often used for the coding of social status or social relationships, which is referred to as social deixis or social indexicality (e.g., Fleming 2012; Levinson 1979, 2004). For example, certain Silesian (Southern Polish) dialects limit the use of the feminine gender to married women only. The switch is made immediately after the wedding reception. An unmarried woman or a young girl is referred to with masculine or neuter gender forms instead, both in third-person reference and in self-reference (see (1); Zaręba 1984, cited in Corbett 1991: 100).

(1) jo by-l-o na grziby
1SG be-PST-SG.N on mushrooms
‘I(N) was mushrooming.’ (unmarried woman speaking)

Much like the politeness distinction between a ‘formal’ and ‘informal’ second person pronoun that is present in various European languages—e.g., tu ‘2SG(informal)’ and vous ‘2SG(formal)/2PL’ in French (e.g., Liddicoat 2006; Moford 1997)—different gender forms can also be used to indicate nuances in interpersonal relationships. For example, in Russian, masculine agreement morphemes can be added onto young girls’ names to indicate endearment when talking about them (see (2); Doleschal & Schmid 2001; cf. also Ferguson 1964; Kelkar 1964). Similarly, masculine forms may be used to express affection towards a female addressee as well (see (3); Zemskaja 1983: 173, cited in Weiss 1993: 99).

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1 For the use of gender-mismatching forms in self-reference in Hebrew and Arabic varieties, see e.g., Rosenhouse and Dbayyat (2006), Sa’ar (2007), Tobin (2001), and Wilmsen (1999).
Russian (Slavic; Doleschal & Schmid 2001: 265)

(2) \textit{Lizok} \ u \ nas \ xoroš-ij
Lizok.(female) with us good-M

`Little Lizzy(M) is a good sport.’

Russian (Slavic; Weiss 1993: 99)

(3) \textit{Ty moj malen'kij! Ty moj xorošij! Čto plačes’?}

`My poor little(M) \textbf{(thing)!} My good(M) \textbf{one!} Why are you crying?’ (Uttered by a mother speaking to her daughter)

In Telugu (Dravidian), the use of neuter pronouns for a woman indicates that the speaker either has a highly intimate relationship with that woman, or an impolite and disrespectful attitude towards her (Subbarao & Lalitha Murthy 2011). Similarly, in Konkani (Indic), neuter forms are used among peers, signaling informality and intimacy. They can also signal juniority in age of the person addressed. Female prostitutes are also addressed in the neuter, but in this specific case, the use of the neuter is an indication of the referent’s low social status rather than personal closeness (Sardesai 2005: 36–7). In some Iroquian languages, the choice for one of two feminine grammatical genders depends on features of the woman being described, or the nature of the speaker’s relationship with her (e.g., Abbott 1984; Chafe 2002; Michelson 2015; Mithun 2014).

Particularly relevant for the current study, the use of neuter gender forms for women has also been studied and described in various German dialects, Swiss German, and Luxembourgish (e.g., Busley & Fritzinger 2018; Nübling 2015; Nübling, Busley, & Drenda 2013). Of these, Luxembourgish has the most grammaticalized system, in which all female first names take a neuter article, and the language has developed a dedicated neuter personal pronoun (\textit{hatt}) that refers exclusively to female referents. The pronoun is considered grammatically neuter, because it can be replaced by the unstressed form \textit{et}, which is also the unstressed variant of the ‘regular’ inanimate neuter pronoun \textit{dat} (Nübling 2015: 253–4).

Luxembourgish (Germanic; Nübling 2015: 253–4)

(4) \textit{D’Chantal} \ ass \ do; \ hatt/et \ ass \ do
ART.Chantal(female) is there; 3SG.N(female)/3SG.N is there

`Chantal is here; she(NF) is here.’
Speakers use either this neuter pronoun or the feminine pronoun depending on their relation towards the referent. Girls and familiar women are referred to with *hatt*, and feminine *si* is used when talking about less familiar, older women (Nübling 2015: 251–5).

Similarly, in Swiss German, the gender is decided by “social variables such as the age of the female referent, the age distance between speaker and referent, [and] the degree of respect and affectivity towards the named person” (Nübling 2015: 243–4). In both Ripuarian and Rhine-Franconian dialects of German, age appears to be important as well, at least when referring to female relatives. Ripuarian personal pronouns were almost always neuter, unless they referred to a relative who was older than the speaker, in which case around eight out of ten pronouns were feminine. In Rhine-Franconian, neuter pronouns were never used for relatives who were older than the speaker, but only relatives of the same age as the speaker, or younger (Nübling 2015; Nübling et al. 2013).

1.2 Syntactically motivated gender-mismatching pronouns

Another way in which gender-mismatching pronouns can be triggered is by the grammatical principles of a language. This occurs, for example, in standard German, which has a fairly strict and largely syntax-driven gender system. All German nouns, regardless of their referent’s animacy, fall in one of three gender classes: masculine (e.g., *der Mond* ‘the moon’), feminine (*die Sonne* ‘the sun’), or neuter (*das Buch* ‘the book’). The grammatical gender of a noun influences accompanying words like articles, adjectives, and anaphoric pronouns (e.g., Corbett 1991; Kraaikamp 2016).

Many German nouns with a human referent have a grammatical gender that is a match to their referent’s natural gender. For example, *die Frau* ‘the woman(r)’ is grammatically feminine, while *der Mann* ‘the man(M)’ is grammatically masculine. However, this is not always the case. Discrepancies between natural and grammatical gender give rise to so-called hybrid nouns. An example of this is *das Mädchen* ‘the girl(N)*, which is a grammatically neuter noun with a naturally feminine referent. Articles and adverbs accompanying a grammatically neuter hybrid usually agree with the noun’s grammatical gender (cf. Table 1), and the presence of such a noun can also trigger the use of neuter *es* ‘it’ for a female referent (e.g., Corbett 1979, 2015).
Standard German (Corbett 1991: 228)

(5) *Schau dir dieses Mädch en an, wie gut sie/es Tennis spielt*
    look you this.N girl.N at how well 3SG.F/3SG.N tennis plays
    ‘Look at *this girl(N)*, how well she(F/N) plays tennis.’

According to Schmitt, Lamers, and Münte (2002: 335), around six out of ten pronouns match their diminutive referent’s natural gender in written German; a little under four out of ten times, neuter *es* is used instead. An ERP study indicated that both semantically and syntactically agreeing pronouns ((6a) and (6b), respectively) were perceived as grammatical by native speakers; only violations of both natural and syntactic gender, as in (6c), led to perceived ungrammaticality as indicated by a P600 ERP effect (Schmitt et al. 2002; cf. Osterhout & Mobley 1995). Similar patterns, where pronouns of both genders can be used, have been described for Icelandic (Graf 2007; Þórhallsdóttir 2009), and Norwegian dialects (Enger & Corbett 2012).

Standard German (adapted from Schmitt et al. 2002: 335)

(6) *Das Bübchen(N) will schlf en und darum...*
    a. *...schaltet er(M) eine Lampe aus.*
    b. *...schaltet es(N) eine Lampe aus.*
    c. *...schaltet sie*(F) eine Lampe aus.
    ‘The *little boy(N)* wants to sleep and therefore he(it)/she switches a light off.’

Whether an agreement target tends to match its hybrid controller’s natural or grammatical gender depends on the target type, as this is controlled by the Agreement Hierarchy (Corbett 1979). An adapted version of this hierarchy is shown in Table 1 (Nübling 2015: 241). Articles and possessive pronouns within the noun phrase tend to take the noun’s grammatical gender, but anaphoric personal pronouns—like in (5) and (6)—allow for more variation (Corbett 1979; Nübling 2015; Schmitt et al. 2002; see also Oelkers 1996).

Pronoun variation may also be guided by a combination of both syntactic and social factors, as can be illustrated by the usage of *es* ‘it’ in reference to girls in standard German. Although the use of such semantically mismatching personal pronouns are facilitated by the language’s
grammatical principles, the variation between syntactically and semantically motivated pronouns still appears to be moderated by social factors. Braun and Haig (2010) conducted a small experiment to assess whether the referent’s age influences the choice for a syntactically or semantically motivated pronoun referring back to hybrid Mädchen(N) ‘girl’. The expectation was that the perceived degree of femininity of the girl would increase with her age, in turn leading to a larger amount of feminine pronouns. To test this hypothesis, Braun and Haig presented 302 speakers of standard German with two filler items and one version of the sentence in (7), which participants had to finish using provided expressions.

Standard German (Braun & Haig 2010: 7)

(7)  *Das Mädchen war erst {zwei/zwolf/achtzehn} Jahre alt, als...  
   ‘The girl(N) was only {two/twelve/eighteen} years old, when...’

Overall, Braun and Haig found a balanced use of pronoun gender. Across all three conditions, 53% of all pronouns were neuter (es), and 47% were feminine (sie). The highest proportion of feminine pronouns (around 60%) was found in the condition where the girl was eighteen years old. The other two conditions did not differ significantly with respect to the ratio of feminine/neuter pronouns, and were therefore merged into one condition labeled ‘Under 18’. In this condition, the amount of neuter pronouns was higher: only a little over 40% of the pronouns were feminine. These findings are in line with the fact that cross-linguistically, the group of people who can be referred to with gender-mismatching forms almost always includes young girls (e.g., Doleschal & Schmid 2001; Nübling 2015; Subbarao & Lalitha Murthy 2011).

Table 1: The Agreement Hierarchy (Corbett 1979), adapted to standard German (Nübling 2015: 241).

<table>
<thead>
<tr>
<th>Attributive (article, adjective)</th>
<th>Possessive pronoun</th>
<th>Relative pronoun</th>
<th>Possessive pronoun</th>
<th>Anaphoric pronoun</th>
<th>Exophoric; context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammatical agreement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semantic agreement</td>
</tr>
<tr>
<td><em>das</em>/die</td>
<td><em>mit</em></td>
<td><em>das</em>/die <em>ihn</em></td>
<td><em>sein</em>/ihr</td>
<td><em>es</em>/sie ist hier</td>
<td><em>das</em>/die Kleine</td>
</tr>
<tr>
<td>kleine Mädchen</td>
<td><em>seinem</em>/?ihrem</td>
<td><em>füttert</em></td>
<td><em>Hund</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘the little girl’</td>
<td>‘with her dog’</td>
<td>‘who feeds it’</td>
<td>‘Her dog...’</td>
<td>‘She is here’</td>
<td>‘the little one (female)’</td>
</tr>
</tbody>
</table>

Table 1: The Agreement Hierarchy (Corbett 1979), adapted to standard German (Nübling 2015: 241).
1.3 Research questions and thesis outline

This thesis deals with variation in pronoun gender when referring to women in Limburgian, which is a Low Franconian dialect variety spoken in Limburg, the southeasternmost province of the Netherlands. Limburgian is closely related to Ripuarian and Rhine-Franconian dialects of German, for which variation in pronoun gender for women has been investigated. For Limburgian, the phenomenon has not been studied as thoroughly. This thesis aims to fill this gap, by providing an answer to the following main, over-arching research question:

RQ: To what extent is the variation in pronoun gender for female reference in Limburgian driven by features of the referent?

Based on previous research on e.g., standard German, and German dialectal varieties, this question will be divided in the following two sub-questions:

Q1: To what extent is gender variation in pronouns for women in Limburgian guided by semantic information about the referent? More specifically, what is the role of a woman’s age? To what extent do speakers use pronouns of different genders—i.e., gender-matching (feminine) or gender-mismatching (non-feminine) pronouns—when they are referring to women of different ages?

Q2: To what extent is gender variation in pronouns for women in Limburgian a result of syntactic mechanisms of the language? That is, to what extent is the acceptability of a personal pronoun of a given grammatical gender dependent on an antecedent noun’s grammatical gender?

The thesis is organized as follows. First, Chapter 2 provides the background to the two empirical studies reported on in Chapters 3 and 4. It starts by giving a description of Limburgian language and its place in society, followed by a description of the grammatical gender system in Limburgian, and a discussion of how this differs from the grammatical gender system found in the standard language, Dutch. The chapter further provides an overview of various previous descriptions of gender-mismatching pronouns for women in Limburgian.

Chapter 3 reports on a corpus study that was conducted to provide insight in pronominal gender variation in contemporary, spoken Limburgian. To ensure that participants would produce a sufficient number of relevant pronouns, a corpus was compiled using visual stimuli featuring female referents. These referents varied in age, which allowed for an investigation of the role of a woman’s age in gender variation. The results of this study indicated that younger female
characters were more frequently referred to with non-feminine forms than older characters, which is in line with tendencies that have been identified for other Germanic varieties. Interestingly, non-feminine pronouns were frequently used for young referents both with and without a gender-matching linguistic antecedent present, suggesting that pronominal gender variation in Limburgian is regulated, at least partly, by semantic factors.

Next, Chapter 4 reports the results of an acceptability judgment task, which was used as an indirect way to measure coreferentiality between a pronoun and an antecedent noun (e.g., Osterhout & Mobley 1995). Native speakers of Limburgian judged the naturalness of spoken Limburgian sentences which featured both feminine and neuter nouns and feminine and neuter personal pronouns, to assess the respective roles of syntactic and semantic mechanisms in the acceptability of non-feminine pronouns in Limburgian. The results of this study showed a clear preference for sentences featuring both a feminine noun and a matching feminine pronoun for older referents, but no difference in ratings of all possible combinations of noun gender and pronoun gender for young referents.

Chapter 5 provides a summary of the conclusions and a discussion of the findings. It offers an answer to the over-arching research question, as well as a general conclusion, and suggests directions for future research.
2. Pronominal gender variation in Limburgian

“Although it is well-known that masculine pronouns are compatible with their [female] referent’s womanhood in many southern [Dutch] dialects, this curious language use has not ever, neither there nor elsewhere, been studied systematically.”

(Royen 1935: 75; my translation)

Limburgian, like some other West Germanic varieties, allows for gender variation in pronominal female reference. While men are categorically referred to with masculine pronouns, women can be referred to with feminine as well as non-feminine forms. Although the use of non-feminine pronouns for women has been noted before (e.g., Royen 1935; van der Sijs 2011; Weijnen 1966, 1971), it has generally been treated as a mere grammatical peculiarity (cf. van Oostendorp 2012), and the details of this variation have not been fully mapped out to this day (e.g., De Vogelaer 2007).

This chapter first provides a description of the Limburgian language and its place in society. Second, the chapter describes the Limburgian grammatical gender system. Finally, it also discusses previous descriptions of gender-mismatching pronouns for women in Limburgian.

2.1 Limburgian language and its place in society

Limburgian (also commonly referred to as ‘Limburgish’; Dutch: Limburgs) is a Low Franconian language variety spoken by around 1.3 million people in Belgium, the Netherlands, and Germany (see Figure 1; Ethnologue 2019). This thesis focuses on Limburgian as spoken in Dutch Limburg, within which six main dialect groups are distinguished (see Figure 2; Bakker & van Hout 2012).

______________________________

2 Original Dutch: “Dat ook passim in zuidelike dialekten mannelike voornaamwoorden verenigbaar zijn met het vrouw-zijn van de aangeduide, is voldoende bekend—alhoewel dit merkwaardig spraakgebruik aldaar evenmin als elders ooit systematies onderzocht is.”

3 Instead of using the term Limburgs ‘Limburgian’, native speakers usually say they speak plat ‘vernacular’ (lit. ‘vulgar’). This is the traditional common designation for the dialect, and despite the literal meaning suggesting otherwise, the term does not have negative connotations (Bakkes 2002: 26).
Limburgian has been recognized as a regional language of the Netherlands since 1997 (Council of Europe 2018). It is reportedly spoken by around 75% of the inhabitants of Dutch Limburg (Driessen 2006). Children typically acquire it from birth, and Dutch from school age at the latest. With the exception of some elderly people, all speakers of Limburgian are bilingual (Cornips 2013, 2014). Unlike some other dialects of Dutch, the use of Limburgian is not widely associated with lower social status.\(^4\) Although most formal communication takes place in standard Dutch, especially written communication, the dialect and the standard language are used complementarily in everyday life. In fact, the dialect is often seen as the more prestigious language variety in informal contexts (Kroon & Vallen 2004), expressing “regional or local loyalty” (Cornips 2014: 7).

Although native speakers may feel that the use of certain words or constructions—often Dutch—is “wrong”, there are no prescriptive rules. Limburgian is not taught in schools and not usually used in formal contexts (Kroon & Vallen 2004). Despite the development of a spelling guide (Bakkes, Crompvoets, Notten, & Walraven 2003), and an effort to develop a standardized written variety (see Prikken 1994), a generally accepted standard variety of Limburgian does not exist. Depending on e.g., the linguistic background of the parents, speakers are generally exposed to a variety of different Limburgian dialects and dialect combinations (Ramachers 2018:45). Older speakers tend to maintain a static view of dialect, criticizing younger speakers for speaking differently than they do, and often concluding that the younger generation has lost the ability to “correctly” speak Limburgian. By contrast, younger speakers tend to hold less conservative views, and are generally more accepting of their dialect as a changing and dynamic entity (Belemans 2002; Kroon & Vallen 2004; cf. also Hinskens, Auer, & Kerswill 2005).

To summarize, Limburgian is principally an oral language, which is widely used in everyday life, and shows a large amount of both regional and generational variation. The next section briefly discusses the position of Limburgian language as an intermediate transitional variety between Dutch and German, before describing the grammatical gender system in Limburgian.

\(^4\) This is true within the province of Limburg; however, speakers of standard Dutch often perceive a Limburgian accent as unprestigious (e.g., Grondelaers, van Hout, & Steegs 2010; Grondelaers, van Hout, & van Gent 2019).

Figure 2. Map of the main dialect areas in Dutch Limburg (based on Bakker & van Hout 2012: 162).
2.2 In-between Dutch and German: the Limburgian gender system

Limburgian has been described as “straddling the border” between Low and Central Franconian varieties, as it shares vocabulary and grammatical features with both Dutch and German (Ethnologue 2019). For example, in both German and Limburgian, the forming of diminutives is often accompanied by a vowel shift in the base noun: *der Bub* and *de jón*, ‘the boy’ in German and Limburgian, respectively, change to *das Bübchen* and *het jungske* ‘the little boy’ when diminutivized (Bakkes 2002: 34; Durrell 2017: 947). This feature is not present in standard Dutch. And although Limburgian is very similar to standard Dutch in many respects, their grammatical gender systems are quite different.

Modern standard Dutch has two grammatical genders. Middle Dutch (1200–1500AD) still distinguished three—masculine, feminine and neuter grammatical gender—but towards the end of this time period, masculine and feminine gender gradually started to conflate, and by the 17th century, they had merged into one category (e.g., Kraaikamp 2012: 205). Today, standard Dutch nouns either belong to this common gender (so-called *de*-words), or the preserved neuter gender (*het*-words). Only personal and possessive pronouns still retain a three-way distinction between masculine, feminine and neuter gender (Audring 2006). Gender agreement between pronouns and their antecedents is largely semantically motivated in Dutch. Personal pronouns with a human referent always match their referent’s natural gender (Audring 2006, 2009). That is, a man is referred to with *hij* ‘he’ and *zijn/z’n* ‘his’, and a woman with *ze* ‘she’ and *haar/d’r/r* ‘her’—even in cases where they are indexed by a grammatically neuter noun, as in (8) and (9):

Standard Dutch (adapted from Kraaikamp 2016: 2)

(8) *Kijk dat meisje, hoe goed ze tennis speelt*  
look DEM.N girl.N how well 3SG.F tennis plays  
‘Look at this girl(N), how well she(F) plays tennis.’

Standard Dutch (adapted from Audring 2006: 92)

(9) *M’n nichtje woont nu in Hilversum samen met*  
my niece.N lives now in Hilversum together with  
3SG.F.POSS boyfriend  
‘My niece(N) lives in Hilversum now, together with her(F) boyfriend.’
Limburgian has maintained a more conservative gender system, similar to German, preserving the three-gender system throughout the grammar. Masculine, feminine, and neuter gender are morphologically visible on pronouns, determiners and attributive adjectives (e.g., Cornips 2014; De Vos 2009; De Vos & De Vogelaer 2011; de Schutter & Hermans 2013). The following examples show the three-way distinction in demonstrative pronouns (Barbiers, Bennis, De Vogelaer, Devos, & van der Ham 2006). Table 2 contains an overview of the pronominal paradigm.

East Limburgian (test sentence 174; location L267p)\(^5\)

(10) \textit{dae} \textit{fiets} \textit{is} \textit{van} \textit{mich}
\begin{center}
DEM.M bike.M is from me
\end{center}
\textit{‘That(M) bike(M) is mine.’}

East Limburgian (449; L329p)

(11) \textit{det} \textit{hoes} \textit{det} \textit{sjeit} \textit{dao} \textit{al} \textit{fiefitg} \textit{jaor}
\begin{center}
DEM.N house.N DEM.N stands there already fifty years
\end{center}
\textit{‘That(N) house(N) has been there for fifty years.’}

East Limburgian (184; L295p)

(12) \textit{gank} \textit{die} \textit{besjelling} \textit{noow} \textit{mer} \textit{ophaole}
\begin{center}
go.IMP DEM.F order.F now PTCL pick.up
\end{center}
\textit{‘Just go pick up that(F) order(F) now.’}

---

\(^5\) Unless explicitly indicated otherwise, all Limburgian example sentences in this chapter are taken from the DynaSAND corpus (\textit{Dynamische Syntactische Atlas van de Nederlandse Dialecten} ‘Dynamic Syntactic Atlas of the Dutch Dialects’; Barbiers et al. 2006). These are translations from standard Dutch to Limburgian as given by informants. For these examples, both the test sentence number and a ‘kloek number’ (a location code) are provided. The first number indicates which standard Dutch sentence the informant was presented with. The second number is a location code indicating where the informant was from. The DynaSAND corpus, and its relevance for the current research, is discussed in further detail in Chapter 3.
Table 2. Schematic overview of the pronominal paradigm in Limburgian dialects, based on Bakker (1992).

<table>
<thead>
<tr>
<th>Pronoun</th>
<th>Personal (full; clitic form)</th>
<th>Possessive</th>
<th>Demonstrative/Relative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NOM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grammatically feminine nouns + any female human referent</td>
<td>Grammatically neuter nouns with inanimate (or non-human) referents</td>
<td>Selected female human referents; possibly indicated by a grammatically neuter noun</td>
</tr>
<tr>
<td></td>
<td>vrouw ‘woman’</td>
<td>hoes ‘house’</td>
<td>maedje ‘girl’</td>
</tr>
<tr>
<td></td>
<td>sjaap ‘sheep’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pronoun</td>
<td>zeej/ziej/zuuj*; ze det**; ‘t</td>
<td>(h)eur*</td>
<td>(h)eur(e)*</td>
</tr>
<tr>
<td></td>
<td>ACC/DAT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(h)eur(e)*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The exact forms vary geographically as well as between and within speakers, and there may be surface forms which are not included here.

** There is no specific stressed form of the personal pronoun for grammatically neuter inanimate referents. Stress can only be conveyed by using a demonstrative pronoun instead.
In terms of agreement, the preference for agreement between a pronoun and its human referent’s biological gender is not as strong in Limburgian as it is in Dutch. Personal, demonstrative and possessive pronouns tend to agree with their antecedent noun’s grammatical gender, especially if the referent is female. This is illustrated in the following example, which is a transcription of a spoken fragment taken from the *Database of Dutch Dialects* (van Oostendorp 2014; translation of the transcription by me). Here, one girl is referred to with five different nouns — the grammatically feminine *maagd* ‘maiden’ and *meid* ‘maid/girl’, and the neuter *dinsmaedje* ‘maid’, *maedje* ‘girl’, and *kindj* ‘child’, and all pronouns show gender agreement with the preceding noun:

(13) ...en den was d’r nag *ein maagd*(F) thöes, dus *n ‘n eh* *dinsmaedje*(N) *det*(N) mös dus sjmerges de keu melken en *det*(N) bleef dus ouch thöes. En dao um *n oor of half zes dao* ging *det maedje*(N) nao dae stal ... en dao zaat *die die meid*(F) ônger *die maagd*(F) ônger die kui en dao achter zich heij *ze*(F) dus zô’n lamp hangen ... zit *det maedje*(N)-n-ônger die koo en op-ens zuut *det*(N) ’ne groête zijwarten hònk ... en *det maedje*(N) *det*(N) vlüg met ’ne krijs op, en *det*(N) sjût de kouw óet nao de nao de keuken ...maar *(h)et*(N) ging dus nao boven .. en doen word *det kindj*(N) nag sjower. *Het*(N) geit de hut óet...

‘...and a maiden(F) was home, a maid(N), *who*(NF) had to milk the cows in the morning, so she(NF) stayed home as well. Around 5.30 the girl(N) went to the barn, and there that girl(F), the maiden(F), sat below the cows and behind her(F), there was a lamp. The girl(N) was sitting below the cow, when all of a sudden, she(NF) saw a big black dog. The girl(N), she(NF) got up, screaming, and ran to the kitchen ...she(NF) went upstairs... and then the child(N) got even more scared. She(NF) left the house...’

This example illustrates that neuter pronouns can refer to women if they are licensed by a grammatically neuter antecedent noun. This will be returned to in Chapters 3, and 4 in particular. However, in Limburgian, non-feminine forms can also be used for women in the absence of a linguistic antecedent. This is discussed in the following section.

### 2.3 Pragmatic gender variation in Limburgian

Men are categorically referred to with masculine pronouns, but women can be referred to with feminine as well as non-feminine forms. For example, the Limburgian sentence *ich hób häöm gezeen* ‘I saw him’ can describe either a man or a woman, as the masculine form *häöm/hem*
‘him’ is frequently used for female reference (Notten 1974: 27). In terms of personal pronouns, the use of masculine forms is limited to the direct object form: nominative *hae* ‘he’ for a female referent does not occur in Limburgian. Instead, as illustrated in (14) and Figure 3, *het* ‘it’ is used as the accompanying ‘mismatching’ subject form. As illustrated in (15), neuter demonstrative forms occur as well.

![Map of the geographical distribution of the use of non-feminine subject and object forms for female referents in the Netherlands. Adapted and translated from Weijnen (1971: 27).](image)

6 Various other Dutch dialects do allow for the use of *hij* ‘he’ in reference to women. See, for example, Figure 3, and Brouwer, Gerritsen, de Haan, van der Post, and de Jong (1978), Royen (1935), and Weijnen (1966, 1971).
East Limburgian (272; L329p)
(14) **ziej/het** haet **zich** pien **gedaon**
3SG.F/3SG.N has REFL pain done
‘*She* hurt herself.’

East Limburgian (445; L387p)
(15) **Marie, die/det** zoow zoget **noots doon**
Marie(female) DEM.F/DEM.N would something.like.that never do
‘*Mary, she* would never do something like that.’

The use of ‘mismatching’ pronominal forms for women occurs in other Dutch dialects, too, but the subject form *het* ‘it’ is limited to Limburg (cf. Figure 3). The use of *het* in reference to a woman usually evokes “a hearty or mocking feeling” (Weijnen 1966: 299, my translation). Similarly, *häöm/hem* ‘him’ seems to be used only for women who the speaker is close to; according to Notten, “*häöm* ‘him’ is used for one’s wife, girlfriend, daughter, or fiancée, while others are referred to with *häör* ‘her’” (1974:28, my translation). Which women are referred to with non-feminine forms varies between speakers (Bakker 1992; Hamans 1989).

Possessive *ziene* ‘his’ is also productively used for both men and women, as illustrated in (16) and (17) (see also van der Sijs 2011: 238–9 for a map). A recent experimental study confirmed that native speakers of Limburgian can indeed interpret *ziene* ‘his’ as referring to a woman (Piepers & Redl 2018: 105).

East Limburgian (163/164; L329p)
(16) **Piet/Marie** **ziene** **auto** **is kepot**
Piet(male)/Marie(female) 3SG.POSS.M/N car is broken
‘*Pete’s*/*Mary’s* car is broken.’

East Limburgian (adapted from Piepers & Redl 2018: 101)
(17) **Fleur** haet **zien** **yogaboks aangedaon**
Fleur(female) has 3SG.POSS.M/N yoga.pants put.on
‘*Fleur* put on *her* yoga pants.’

The most comprehensive overview of pronominal gender variation in a variety of Limburgian is provided by Bakker (1992), who discusses some sociolinguistic factors guiding the gender
variation with personal, possessive, and demonstrative pronouns in the dialect of Venlo (mich-quarter; see Figure 2).

Bakker (1992: 10) describes that there are very clear parallels with the second person singular. Women with whom the speaker is on a first-name basis, and who are usually addressed with informal address forms, can be referred to with "het" and "hem"; women whom the speaker usually addresses with formal address forms are referred to with feminine forms only. However, the formality of address is apparently not always the determining factor for third person reference, especially if the referent is an older family member. According to Bakker, speaking about one’s mother or grandmother using informal "het" “sounds incredibly rude” (1992: 12), even if she would not usually be addressed with formal forms. By using "dich" ‘you(informal)’ to address their mother, speakers express their familiarity with her, while referring to her with feminine third person pronoun at the same time expresses respect for her (Bakker 1992: 13).

Importantly, the use of "het" reportedly evokes connotations of contempt for some speakers, regardless of the referent. Even though pronominal reference usually seems to take place at a sub-conscious level (e.g., Christiansen & Chater 2016), some speakers report that they consciously refrain from using "het" for women altogether (Bakker 1992; Bakkes 2002). This indicates that the system is not stable, which may indicate that it is changing (e.g., Backus 2014; Croft 2000).
3. Pragmatically motivated gender variation: Exploring the role of referent age in pronoun choice in spoken Limburgian

3.1 Introduction

According to Ibbotson (2013: 1), “knowledge of a language is based in knowledge of actual usage”. With this in mind, the first step to understanding an understudied phenomenon like gender variation in Limburgian is simply to observe it in natural language use. Although descriptions like the one by Bakker (1992), which is largely based on the author’s intuitions, provide valuable starting points for the identification of possible factors governing within-speaker variation, usage data are able to provide a more objective representation of linguistic reality. Most of the Limburgian example sentences presented in the previous chapter were taken from the DynaSAND corpus (Barbiers et al. 2006), an on-line database which consists of translations to local dialects and grammaticality judgments of test sentences, given by informants from all over the Dutch language area. Although this corpus allows for a fine-grained analysis of geographical variation, and suffices to illustrate the variation at hand (cf. (14), repeated below as (18)), it is not suitable for a more systematic analysis of gender variation in Limburgian.

East Limburgian (272; L329p)

(18) zie/het haet zich pien gedaon

3SG.F/3SG.N has REFL pain done

‘She hurt herself.’

The DynaSAND data were collected using exclusively verbal stimuli. These run the risk of eliciting unnatural responses that do not necessarily reflect natural, everyday language (e.g., Barbiers & Bennis 2007; Foley 2003; de Leon 2009; San Roque et al. 2012). The SAND data also do not lend themselves well for sociolinguistic research, as interviews were held with only two informants per location, who had to meet a very strict set of requirements (Barbiers & Bennis 2007: 70). These limitations may give rise to a distorted image of gender variation in Limburgian.

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7 The specific requirements were as follows. All informants had to between 55 and 70 years old, and they as well as their parents had to be born and raised in the location of the interview. The informants
Limburgian varieties. That is, the fact that a Limburgian informant opts to translate a given test sentence using *ziej* ‘she(F)’ and not *het* ‘she(N)’ does not necessarily entail that that informant will not use *het* in their everyday speech. The informant might be primed by the feminine pronoun in the standard Dutch sentence when translating (cf. e.g., Majid 2012; Pickering & Ferreira 2008), or they might consciously avoid using neuter pronouns for people altogether, for example under the influence of Dutch (Bakker 1992; Bakkes 2002). Still, whether or not a given pronoun is produced in a translation task by a limited sample of speakers is easily interpreted as an indication of geographical variation (see, e.g., van der Sijs 2011:239, for possessive *zien* ‘his/its’).

This chapter reports on a corpus study for which the data were collected using visual stimuli instead. Visual stimuli have the important advantage that they are able to avoid potential interference from the linguistic context as described above (e.g., Textor 2019). Moreover, pronoun selection is a grammatical process that does not involve an active, conscious choice on the speaker’s part, and elicitation based on visual stimuli is a useful method to investigate concepts that are largely tacit, and generally hard to put into words (Barton 2015). In addition, the use of physical images can make an interview setting more comfortable for participants, which in turn can yield more naturalistic language data (e.g., Catterall & Ibbotson 2000; Barton 2015).

A potential pitfall of any elicitation study is that participants might, in principle, say anything, and the intended object of study might not occur in the data at all. It is therefore crucial that the stimuli will constrain the participant’s utterances in such a way that the relevant information is actually elicited (e.g., Jacob 2019). To this end, the current study makes use of images depicting scenes from the Disney renditions of three fairy tales: Snow White, Cinderella, and The Little Mermaid. These stories feature female characters that belong to different age groups, which

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further must not have received higher education, not have been away from the location of the interview for longer than seven years at a time. Finally, they had to be active users of the local dialect who belonged to the lower middle social class (Barbiers & Bennis 2007: 62; Barbiers, Cornips, & Kunst 2007: 60).
ensures that participants will produce pronouns with female referents. At the same time, it allows for testing if speakers refer differently to women of different ages.\textsuperscript{8}

The aim of the current study is to explore the role of the referent’s age in pronominal gender variation in spontaneous and contemporary Limburgian. It sets out to provide an answer to the following research question, introduced in Chapter 1:

**RQ:** To what extent do speakers use pronouns of different genders—i.e., gender-matching (feminine) or gender-mismatching (non-feminine) pronouns—when they are referring to women of different ages?

The expectation is that non-feminine pronouns are used in reference to younger women more often than to older women. The next section describes the set-up of the study.

### 3.2 Method

#### 3.2.1 Participants

Spoken data were collected from 41 participants (17 male; ages 19–93, $M = 49.65$, $SD = 19.79$), who participated in sixteen groups of two, two groups of three, and one group of four. The group of four consisted of three naive participants and one speaker who had already participated. This latter participant, who knew what was going to happen, was present mainly to provide support for an elderly participant.

Three participants indicated that they spoke Limburgian on a weekly basis; the remaining 38 indicated that they spoke it daily. One participant further indicated that he was not a native speaker. All participants indicated that they spoke Limburgian with their friends; 39 of them (95.1\%) indicated to speak it with their family. Additionally, well over half of participants also spoke dialect at their work place (26; 63.4\%).

Twenty participants were born and raised in the East Limburgian dialect area (see Figure 2), and they still lived there. Five participants lived here too, but were born in a part of Limburg that is considered a transitional zone between Low Franconian and Ripuarian dialects. Two of

\textsuperscript{8} Note, however, that the presence of multiple same-gender characters in the discourse may negatively affect pronoun production overall. This is beyond the scope of this thesis, but see e.g., Arnold and Griffin (2007), Fukumura, van Gompel, Harley, and Pickering (2011), and Fukumura, Hyönä, and Scholfield (2013).
them were raised there as well; two grew up speaking East Limburgian, and one was raised speaking Ripuarian. Four participants were born, raised, and currently living in the Central Limburgian dialect area. One participant was born here as well, but was raised in the East Limburgian dialect area, where she still lived. Another was born and raised speaking Central Limburgian, but currently lived in the East Limburgian dialect area. Conversely, one participant was born in the East Limburgian dialect area, but raised in the Central Limburgian dialect area, where he still lived. Two participants were born and raised speaking East Limburgian, but currently lived in the Central Limburgian dialect area. Moreover, one participant was also born and raised speaking East Limburgian, but he currently lived in the Ripuarian transitional zone.

Six participants did not live in Limburg at the moment of testing. Of these, three were born and raised in the East Limburgian dialect area; one was born and raised in the Central Limburgian dialect area; one was born in the Central Limburgian dialect area but raised in the East Limburgian dialect area; and one was born and raised outside of the province of Limburg, in an East Limburgian-speaking family.

### 3.2.2 Materials

Images from the Disney adaptations of three fairy tales, Cinderella, Snow White, and The Little Mermaid, were used as stimuli. The images were obtained from the Disney website (www.disney.com). The stories of Cinderella and The Little Mermaid were both used in six retellings; Snow White was used seven times. The stories consisted of 13 (Cinderella and Snow White) or 14 (The Little Mermaid) images. A few more images were discarded because they did not add to the story, because they were too similar to another picture, or because they were generally unclear or confusing. Images were printed in full color on regular 80 grams A4 paper, and laminated to increase durability. The size of the images was 25x15 cm. Some example images are included in Figure 4. The full three sets of images are included in Appendix A.

A clear advantage of using existing, well-known fairy tales was the fact that most participants were familiar with the stories and their characters, and most participants were able to recall the gist of the original stories fairly easily, especially after some discussion. A possible downside of using familiar stories, however, could be that participants would rely too heavily on expressions and language often used in fairytales (e.g., *once upon a time*), possibly reducing the naturalness of the language in the recordings. This turned out not to be the case. Since Limburgian is a regional, primarily oral language, most Limburgian children have only ever
been exposed to these fairy tales via books or movies in standard Dutch. This is illustrated in the following excerpt from the corpus, where two participants were discussing the fact that they had never actually heard the iconic phrase *mirror, mirror, on the wall* in Limburgian before:

(19)  A:  

*oh det is van dae speegel*

‘oh, that’s [the one] with the mirror’

B:  

*percies dat is het verhaol*

‘exactly, that’s the story’

A:  

*ooohh eh spiegeltje spiegeltje aan de wand wie is de mooiste van t hele land*

‘oh, *mirror, mirror, on the wall, who’s the fairest of them all*’
B: *dat doon ver dus in het hollends en dit in et plat*
   ‘see, that we do in Dutch, and this we do in [Limburgian]’

A: *ja ich hub det noeait in et plat gehuurd*
   ‘well I’ve never heard it in [Limburgian]’

B: *ich onneet*
   ‘me neither’

A: *ich bun best wal n bietje puristisch als ich plat kal mer ich zou echt neet in de kopen haole om te zegg speegelke speegelke aan de wendj’ det klinkt hieal gek*
   ‘well I’m fairly puristic when [it comes to] speaking [Limburgian], but I would never even think to say ‘mirror, mirror, on the wall’ [in Limburgian], that sounds really weird’

Many other participants, too, would occasionally use fixed Dutch expressions. This occurred both in an otherwise Limburgian conversation (cf. (20) and (21))—note, e.g., the use of Limburgian *speegel(ke)* ‘mirror(DIM)’ outside of the fixed expression in both (19) and (21)—and when retelling a story (cf. (22) and (23)). All in all, although some participants felt a little awkward at the beginning of the first task, the conversations were natural and unrestrained (cf. Barton 2015), forming a rich corpus of spoken Limburgian.

(20) A: *des neet spiegeltje spiegeltje aan de wand he nae*
   ‘that’s not [the story with] ‘mirror, mirror, on the wall’, is it’

B: *des weer n anger*
   ‘that’s a different one’

(21) A: *spiegeltje spiegeltje aan de wand*
   ‘mirror, mirror, on the wall’

B: *aoh jao*
   ‘oh, right’

A: *wie is de mooiste van het land*
   ‘who’s the fairest of them all’

A: *mer ich zeen nurges t speegelke*
‘but I don’t see the mirror anywhere’

(22) want in heure speegel, spiegeltje spiegeltje aan de wand, haet ze gezeen det sneeuwwitje nog steeds laeftj
   ‘because she saw in her mirror, mirror, mirror, on the wall, that Snow White is still alive’

(23) en dan neumt de prins eur met en ze leefden nog lang en gelukkig
   ‘and the prince takes her [Snow White] away with him and they lived happily ever after’

3.2.3 Procedure

Participants carried out the task in their own homes; one group was tested in an office space at Radboud University instead. Conversations were recorded using an Olympus VN-541 PC voice recorder. Participants sat at a table, usually next to each other, and opposite the interviewer, who only spoke Limburgian with the participants. Before starting the data collection procedure, participants read an information document and signed a consent form. All participants gave permission for their recordings to be saved in a database, and to remain available for future scientific research.

The task, which was based on the Family Problems Picture Task (San Roque et al. 2012), consisted of three parts. First, the interviewer provided the participants with the images, one at a time. Participants were asked to describe what was happening in each picture. Second, after all images had been described, the participants were asked to arrange the images so that they formed a story. Finally, the participants were asked to tell the full story on the basis of their arrangement of the images. It did not matter whether they stayed true to the original fairy tales, or made up their own story line instead. The entire task took between 11:03 and 33:46 minutes.

9 All participants were interviewed by the same interviewer, whose own dialect variety belongs to the East Limburgian dialect area. This means that some participants were interviewed by a speaker of a dialect variety more similar to their own than others. However, speakers from different dialect areas have no trouble understanding each other as they are exposed to a variety of different dialects in everyday life (cf. Section 2.1).
and the total duration of all recordings was 5:51:52. One group only performed the first sub-task of describing the pictures, due to the advanced age of one of the participants. After finishing the task, all participants were asked to fill out a short questionnaire which contained questions regarding age, gender, education, place of birth, childhood and current residence, and the extent to which they used dialect.

3.2.4  Transcription and annotation

The recordings were transcribed and annotated. For each pronoun that referred to a woman, the following was annotated: (i) the gender (F feminine, N neuter, M masculine, M/N formally ambiguous between masculine and neuter; later divided into two categories, ‘feminine’ or ‘non-feminine’); (ii) the referent (most likely one of the characters from the story, but possibly also other female referents, such as family members); (iii) the pronoun type (personal, demonstrative, or possessive). For personal pronouns, both (iv) case (nominative, or accusative/dative) and (v) stress (yes or no) were annotated as well.

Because a pronoun of a given gender could reasonably be licensed by a linguistic antecedent of a given grammatical gender (e.g., maedje ‘girl(N)’—het, meid ‘girl(F)’—ze), (vi) reference type was annotated for as well. Here, a distinction was made between anaphoric and deictic pronouns, which was operationalized as follows. First, each transcript was divided into ‘episodes’. An episode consisted of an interaction between two speakers, which started and ended with the same speaker.10

(24)  A:  volges mich begintj t hie
       ‘I think this is the beginning [of the story]’
       B:  nae de prins dae kumtj later
           ‘no, the prince shows up later’
       B:  volges mich begintj t hie
           ‘I think it starts here’

10 The interviewer mostly refrained from participating in the conversation, but occasionally answered questions or provided clarification when necessary. However, she was not counted as a speaker in any of the recordings, and all her utterances are disregarded in dividing the transcripts into episodes.
A pronoun was annotated as anaphoric if it referred back to an antecedent noun or proper name in the same episode; if it did not, as is the case for both feminine pronouns in (24), it was annotated as deictic. For anaphoric pronouns, it was further annotated whether they matched their antecedent in gender (gender match (yes or no)).12 Examples of the annotation are included in Table 3.

The breaking up of the narratives in episodes could potentially have been done in various ways. The motivation behind the chosen operationalization is that these episodes are short enough to assume that a just mentioned noun or name is still active in the speaker’s memory, while at the same time long enough to allow for the occurrence of common pairs of antecedent and maintained reference. One transcript, which contained 124 relevant pronouns, was annotated by a second annotator in order to determine inter-annotator agreement for a pronoun’s gender (Cohen’s $\kappa = 1.000$), referent ($\kappa = 0.879$), pronoun type ($\kappa = 1.000$), and reference type ($\kappa = 0.869$).

3.2.5 Data analysis

The full corpus contained a grand total of 1465 pronouns with female referents. However, as could be expected, not every speaker exhibited gender variation in their speech, with some speakers completely refraining from the use of non-feminine forms (cf. Bakker 1992). This

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11 Many of the example sentences taken from this corpus contain Standard Dutch words, like *huisje* ‘house’, ‘little house’. This is a frequent occurrence in spoken Limburgian: since all speakers of Limburgian also speak Standard Dutch, there is a continuous influence of Standard Dutch on Limburgian, and speakers often code-mix the two varieties (e.g., Giesbers 1986).

12 Since many characters were referred to by their name—i.e., all protagonists, like Snow White, but also Ursula—the antecedent could be a noun or a proper name. Proper names do not themselves carry an inherent grammatical gender (cf. e.g., Nübling 2015), and generally do not take an article in most varieties of Limburgian. To annotate for gender match, proper names were regarded feminine unless they were a diminutive like *Snéeuwwitje* ‘Snow White’, or *Joske* (the interviewer’s name).
Table 3. Annotation scheme.

<table>
<thead>
<tr>
<th>Utterance (relevant pronoun in boldface)</th>
<th>Gender</th>
<th>Referent</th>
<th>Pronoun type</th>
<th>Case</th>
<th>Stress</th>
<th>Reference type</th>
<th>Gender match</th>
</tr>
</thead>
</table>
| *kiek die staon ammaol achter t bed en het lik in bed*  
‘look, they’re all standing behind the bed, and *she*’s lying in the bed’ | N      | Snow White | personal     | NOM  | yes    | deictic        | -            |
| *en den kusj dr heur dus weer wakker*  
‘and that’s when he [the prince] kisses *her* awake again’ | F      | Snow White | personal     | ACC/DAT | no    | anaphoric    | no           |
| *en de prins wiltj allein mer met hem dansen*  
‘and the prince only wants to dance with *her*’ | N/M    | Cinderella | personal     | ACC/DAT | yes   | anaphoric    | no           |
| *den verluusj t zien sjuenke*  
‘then *she* loses her shoe’ | N      | Cinderella | personal     | NOM  | no    | anaphoric    | yes          |
| *den verluusj t zien sjuenke*  
‘then she loses *her* shoe’ | N/M    | Cinderella | possessive   | -    | -     | anaphoric    | yes          |
| *Ursula is dao heel blie met want die vangt de stum dan in n sjelp*  
‘Ursula is very happy with that because *she* catches the [Ariels] voice in a seashell’ | F      | Ursula     | demonstrative | -    | -     | anaphoric    | yes          |
| *die geit dao sneeuwwitje verleiden om dae appel te aete*  
‘*she*’s going to trick Snow White into eating that apple’ | F      | witch      | demonstrative | -    | -     | deictic      | -            |
between-speaker variation is discussed in Section 3.3.1. The analysis is limited to the 1069 pronouns uttered by the participants who used both feminine and non-feminine forms.

First, descriptive statistics will be given for all annotated variables. Second, to test the relationship between multiple categorical variables, a log-linear analysis was performed. Initial analysis showed that for one value of pronoun type, the possessive pronoun, there was an expected frequency of <1, which would radically reduce statistical power if included (Field 2017; Howell 2012). Therefore, for pronoun type only personal and demonstrative pronouns were included in the analysis. Similarly, the variables case and stress, which were only annotated for personal pronouns, and gender match, which was only annotated for anaphoric pronouns, were not included in the base model. The variables referent age, pronoun type, referent type, and pronoun gender (with two levels, personal and demonstrative) and all of their possible interactions were entered in a four-way log-linear analysis. Terms that did not add to the model fit were removed, resulting in the four-way interaction being removed from the model, as well as three of the four three-way interactions. The final model consisted of the main effects of referent age, pronoun type, referent type and pronoun gender, the two-way interaction effects of pronoun gender × referent age, pronoun gender × pronoun type, referent age × pronoun type, referent age × referent type, and pronoun type × referent type, and the three-way interaction effect of pronoun gender × referent age × pronoun type. To break down this three-way interaction effect, separate chi-square tests were further performed on the variables pronoun gender and pronoun type for younger and older referents (referent age).

3.3 Results

This section consists of three parts. The first part discusses the demographics of the participant group that show variation, and the participant group that did not. The second part provides descriptive statistics of all annotated variables. The third part, finally, provides the outcomes of the log-linear analysis.

3.3.1 Between-speaker variation

Twenty-eight of the 41 speakers (68%; 12 male) used feminine as well as non-feminine pronouns, while the other thirteen speakers (32%; 5 male) exclusively used feminine forms. On average, the participants who exclusively used feminine forms were slightly younger ($M = 45.00, SD = 19.37$) than participants who used feminine as well as non-feminine forms ($M = 51.45, SD = 19.79$), but this difference, -6.46, 95% CI [-7.02, 19.95], was not statistically
significant, \( t(23.793) = 0.989, p = .33 \). An overview of all descriptive statistics for both groups is given in Table 4.

Most participants (25 in total) were born in the East Limburgian dialect area. Some participants were born in the Central Limburgian or the Ripuarian transitional dialect areas (11 and 5, respectively). One participant was born outside of Limburg, but since she was raised in an East Limburgian speaking family, she is included in the East Limburgian dialect area here. Most participants born in the East Limburgian dialect area showed variation (80%). Most participants born in the East Limburgian dialect area showed variation (80%). Of the participants born in the Central Limburgian and Ripuarian transitional dialect areas, the distribution was more balanced: although the samples of these dialect areas were smaller, variation was found in the speech of a little over half (55%) and a little under half (40%) of the participants born in the Central Limburgian and Ripuarian transitional dialect area, respectively. A figure showing the distribution of participants with and without variation in their speech by the dialect area in which they were born is included in Appendix C (Figure C1).

Most participants (26) were raised in the East Limburgian dialect area, followed by the Central Limburgian dialect area (11), and the Ripuarian transitional dialect area (3). Finally, one participant was raised in the Ripuarian dialect area. Most of the participants raised in the East and Central Limburgian dialect areas showed variation (73% and 64%, respectively), as did one of the three participants raised in the Ripuarian transitional dialect area (33.33%). The single participant raised in the Ripuarian dialect area showed variation, too. Two participants who were raised outside of Limburg in a Limburgian-speaking family, are included in the Central and East Limburgian dialect areas here, as they had indicated that their families spoke these dialects. A figure showing the distribution of participants with and without variation in their speech by the dialect area in which they were raised, is included in Appendix C (Figure C2).

At the moment of testing, most participants (27) were also living in the East Limburgian dialect area, followed by the Central Limburgian dialect area (8). One participant lived in the Ripuarian transitional dialect area; none lived in the Ripuarian dialect area. Six participants did not live in Limburg at the moment of testing. 75% of the participants living in the Central Limburgian dialect area showed variation, as did 63% of the participants living in the East Limburgian dialect area. Five of the six participants (83.33%) who did not live in Limburg at the moment of testing showed variation, while only one (17.67%) did not. Finally, the one participant who was living in the Ripuarian transitional area also showed variation. A figure showing the
Table 4. Descriptive statistics of speaker groups exhibiting and lacking pronominal gender variation in their speech.

<table>
<thead>
<tr>
<th></th>
<th>Variation</th>
<th>No variation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of speakers</strong></td>
<td>28</td>
<td>13</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 female; 12 male</td>
<td>8 female; 5 male</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>19–93, $M = 51.82$, $SD = 19.79$</td>
<td>19–70, $M = 45.00$, $SD = 19.37$</td>
</tr>
<tr>
<td><strong>Dialect area (born)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Limburgian</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>East Limburgian</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Ripuarian transitional</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ripuarian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Dialect area (raised)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Limburgian</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>East Limburgian</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>Ripuarian transitional</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ripuarian</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Dialect area (current residence)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Limburgian</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>East Limburgian</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>Ripuarian transitional</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Ripuarian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>None (not currently living in Limburg)</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary education</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Pre-vocational secondary education (mavo/vmbo)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Senior general secondary education (havo)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Pre-university education (vwo)</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Vocational secondary education (mbo)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Higher professional secondary education (hbo)</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>University education (wo)</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td><strong>Currently studying</strong></td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td><strong>Dialect use (frequency)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>25</td>
<td>13</td>
</tr>
<tr>
<td>Weekly</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>Dialect use (social)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With family</td>
<td>26</td>
<td>13</td>
</tr>
<tr>
<td>With friends</td>
<td>28</td>
<td>13</td>
</tr>
<tr>
<td>At work</td>
<td>16</td>
<td>10</td>
</tr>
</tbody>
</table>
distribution of participants with and without variation in their speech by the dialect area in which they were living at the moment of testing is included in Appendix C (Figure C3).

The participants in the current study had varying education levels. The participants with only primary education all showed variation, as did the participants who had finished pre-university education (vwo in the Dutch school system). Participants who had finished pre-vocational secondary education (mavo or vmbo) showed a 50/50 distribution. Most of the participants with a senior general secondary education (havo), a vocational secondary education (mbo), a higher professional education (hbo), and a university education (wo), showed variation. Importantly, the variation was found across all education levels. Similarly, the participant group without variation was also divided along the education levels, with the exception of primary education and pre-university education. For both groups, around one in four participants was currently a student (7 or 25% with variation; 3 or 23.07% without). A figure illustrating the distribution of participants with and without variation in their speech by their education level is included in Appendix C (Figure C4).

3.3.2 Descriptive statistics

Referent age

As illustrated in Figure 5, non-feminine pronouns were used more frequently for young referents than for older referents. 790 of the pronouns which had a young referent, 307 (38.9%) were non-feminine. By contrast, only 18 (6.5%) of the 261 pronouns with an older referent were non-feminine. In total, 94.5% of all non-feminine pronouns that occurred in the corpus had a

![Figure 5. Number of feminine and non-feminine pronouns, for older and young referents.](image-url)
young referent. Because young referents were the main characters of all three stories used to elicit pronouns, most pronouns in the corpus had a young referent.

**Pronoun type**

Personal pronouns occurred most frequently (752 in total), followed by demonstratives (270); possessive pronouns were used only a handful of times (47 in total). Figure 6 shows the distribution of feminine and non-feminine pronouns for young referents. Of the 585 personal pronouns for young referents, 250 (42.7%) were non-feminine. Possessives, although used infrequently, were balanced for gender, as 20 of 41 for a young referent (48.8%) were non-feminine. The largest difference was found with demonstratives, where only 37 of 163 for a young referent (22.7%) were non-feminine.

Figure C5 in Appendix C shows the distribution of feminine and non-feminine pronouns for all pronouns, with both young and older referents.

![Figure 6. Total number of feminine and non-feminine personal, demonstrative, and possessive pronouns, for young referents only.](image)

**Case**

Case was annotated for the 752 personal pronouns. In total, 619 of these were subject pronouns (nominative case), and 133 were object pronouns (accusative/dative case). A total of 208 (33.6%) of the subject pronouns and 52 (39.1%) of the object pronouns were non-feminine. This is illustrated in Figure C6, included in Appendix C. Figure 7 shows the distribution of feminine and non-feminine subject and object pronouns for young referents: 199 of the 475 subject pronouns were non-feminine (41.9%), and 51 of the 110 object pronouns were non-feminine (46.4%).
Stress

Stress was also annotated for the 752 personal pronouns. In total, 642 of these were unstressed; only 110 were stressed. A total of 219 (34.1%) unstressed and 41 (37%) stressed pronouns were non-feminine. This is illustrated in Figure C7, included in Appendix C. Figure 8 shows the distribution for young referents only: of the 70 stressed pronouns, 37 (52.9%) were non-feminine, and 213 of the 515 unstressed pronouns (41.4%) were non-feminine.

Figure 7. Total number of feminine and non-feminine subject and object pronouns, for young referents only.

Figure 8. Total number of feminine and non-feminine unstressed and stressed pronouns, for young referents only.
Reference type

Reference type was annotated for all 1069 pronouns. Deictic pronouns were more frequent, occurring 739 times in total (569 times with a young referent, and 170 times with an older referent). Anaphoric pronouns occurred 330 times (221 times with a young referent, and 109 times with an older referent). Figure 9 shows the percentages of non-feminine anaphoric and deictic pronouns for young and older referents. For younger referents, 42.53% of anaphoric reference was non-feminine, and 37.43% of deictic reference was non-feminine. For older referents, this was 7.35% and 5.88% for anaphoric and deictic reference, respectively.

It was annotated whether the 330 anaphoric pronouns matched their antecedent in gender. As illustrated in Figure 10, older referents were almost always referred to with a feminine pronoun that matched a grammatically feminine antecedent, which occurred 98 times (89.9%). Occasionally, they were referred to with a non-feminine pronoun following a feminine antecedent (8 times; 7.3%) or the other way around, i.e., with a feminine pronoun following a non-feminine antecedent (3; 2.8%). A non-feminine antecedent with a matching pronoun never occurred for an older referent.

By contrast, the distribution for younger referents was a more even one. The matching combination of a feminine noun with a feminine pronoun was still the most frequent (67 times; 30.3%), but this was closely followed by the non-matching combination of a non-feminine noun with a feminine pronoun (60 times; 27.1%). Young referents were also frequently referred to with a non-feminine pronoun following a neuter noun (53; 24.0%) or a non-feminine pronoun following a feminine noun (41; 18.6%).

Figure 9. Percentage of non-feminine anaphoric and deictic pronouns, for young and older referents.
3.3.3 Outcomes of the log-linear analysis

The four-way log-linear analysis produced a final model which retained the three-way interaction effect referent age $\times$ pronoun gender $\times$ pronoun type as the highest order interaction effect. This effect suggests that the interaction effect between pronoun gender and type was different for young and older referents. Therefore, to break down this effect, separate chi-square tests were performed on the variables pronoun gender and pronoun type for younger and older referents (referent age).

First, a 2 by 2 chi-square test was performed to investigate whether the pronoun gender differed for personal and demonstrative pronouns with young female referents. As can be seen in Table 5, 22.6% (37 of 164) demonstrative pronouns were non-feminine, compared to 42.7% (250 of 585) of personal pronouns. These observed values differed significantly from the expected values ($\chi^2(1) = 22.057, p < .00001$). The odds of personal and demonstrative pronouns being non-feminine were 0.746 and 0.291, respectively. Based on the odds ratio, the odds of personal pronouns being non-feminine are 2.56 times higher than the odds of demonstratives being non-feminine, in referring to a young female referent.

Second, another 2 by 2 chi-square test was performed to investigate whether the pronoun gender differs for personal and demonstrative pronouns, this time for older female referents. As can be seen in Table 6, 7.5% (8 of 106) of demonstrative pronouns and 5.4% (9 of 167) of personal pronouns were non-feminine. The observed values did not differ significantly from the expected values ($\chi^2(1) = .517, p < .427$). The odds of personal and demonstrative pronouns being non-feminine were 0.057 and 0.082, respectively. Based on the odds ratio, the odds of demonstrative pronouns...
pronouns being non-feminine are 1.44 times higher than the odds of personal pronouns being non-feminine, in reference to an older female referent.

Overall, young referents were more likely to be referred to with non-feminine pronouns. For these referents, personal pronouns were more likely to be non-feminine than demonstrative pronouns. For older participants, on the other hand, this pattern was the other way around: although pronouns referring to older women were overall less likely to be non-feminine compared to younger referents, demonstratives were the more likely to be non-feminine. This is shown in Figure 11.

Table 5. Crosstab of observed frequencies of pronoun gender (feminine vs. non-feminine) by pronoun type (personal vs. demonstrative), for young referents. The expected counts are included within brackets.

<table>
<thead>
<tr>
<th>Pronoun gender</th>
<th>Pronoun type</th>
<th>Young referents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personal</td>
<td>335 (360.8)</td>
<td>127 (101.2)</td>
</tr>
<tr>
<td></td>
<td>Demonstrative</td>
<td>250 (224.2)</td>
<td>37 (62.8)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>585</td>
<td>164</td>
</tr>
</tbody>
</table>

Table 6. Crosstab of observed frequencies of pronoun gender (feminine vs. non-feminine) by pronoun type (personal vs. demonstrative), for older referents. The expected counts are included within brackets.

<table>
<thead>
<tr>
<th>Pronoun gender</th>
<th>Pronoun type</th>
<th>Older referents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personal</td>
<td>158 (156.6)</td>
<td>98 (99.4)</td>
</tr>
<tr>
<td></td>
<td>Demonstrative</td>
<td>9 (10.4)</td>
<td>8 (6.6)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>167</td>
<td>106</td>
</tr>
</tbody>
</table>

Figure 11. Number of feminine and non-feminine personal and demonstrative pronouns, for older and young referents.
3.4 Discussion

The results of this study show that non-feminine forms like *het* and *hem* are used rather frequently for women by speakers of Limburgian. Well over two-thirds of all participants used a non-feminine pronoun for a female referent at least once, and of all the pronouns used by these people, almost one third was non-feminine. Non-feminine pronouns were used by both men and women of all ages and all education levels.

Previous research on language varieties related to Limburgian suggested that a referent’s age plays an important role in the variation between different pronominal forms. Younger girls are more frequently referred to with non-feminine forms, whereas older women are usually referred to with feminine forms (cf. Braun & Haig 2010; Nübling et al. 2013; Nübling 2015). The Limburgian data collected in this study showed strikingly similar tendencies, as the vast majority of non-feminine pronouns had a young referent (see (25) and (26)). Older referents, on the other hand, were usually referred to with feminine forms (see (27) and (28)).

(25) **et huuartj de klok twelvel slaon en den rentj et hieal hel**

3SG.N hears the clock twelve strike and then runs 3SG.N very hard

**de trap aaf en dao verluusj t det**

the stairs off and there loses 3SG.N that

‘She(NF) [Cinderella] hears the clock striking midnight, and she(NF) runs down the stairs very quickly, and that’s when she(NF) loses that [glass slipper].’

(26) **de prins wiltj allein mer met hem dansen dae zuut die**

the prince wants only PTCL with 3SG.M dance DEM.M sees DEM.F

angere neet staon

others not stand

‘The prince only wants to dance with her(NF) [Cinderella], he’s not even looking at those other [girls].’

(27) **haet ze hie het recept van de vergiftigdje appel**

has 3SG.F here the recipe of the poisoned apple

‘Here, she(F) [the queen] has the recipe for the poisoned apple.’
Similarly, the degree of affectivity felt for the referent has been suggested to play a role. Women towards whom the speaker feels affection can sometimes be referred to with non-feminine forms, whereas respected women are referred to with feminine pronouns (e.g., Bakker 1992; Nübling 2015). The young girls in the stories used in this study (i.e., Snow White, Cinderella and Ariel) are all likeable and slightly naïve, which stimulates feelings of affection. The older women, on the other hand, mostly fulfilled the role of mean and cunning antagonist (i.e., witches, the evil queen, and the stepmother) in the stories, meaning that age and affectivity cannot not easily be disentangled in this dataset. However, the stories also featured one older woman who is very sweet, in the form of the fairy godmother. Although she is only a minor character in the tale of Cinderella, and as a consequence was referred to only twenty times in the whole corpus, she was referred to with exclusively feminine pronouns (see (29)).

There were also a few occurrences in the corpus of a pronoun with a young, but unlikable referent. Example (30) refers to one of Cinderella’s mean stepsisters, and (31) to Vanessa, an attractive young woman whose shape has been adopted by the sea witch in The Little Mermaid. Like the fairy godmother, these characters were only occasionally referred to (21 times in total). However, unlike the fairy godmother, non-feminine reference did occur for these younger, unsympathetic characters, as in (32).
‘Well, no, I’m just looking at the image, and I just think, judging by the color of her hair, this one(\text{F}) is not [Ariel], this one’s(\text{F}) [hair is] way darker.’

‘In any case, you can see an aura of fire around her(\text{F}) [Vanessa].’

Although age and affectivity are conflated for the main protagonists and antagonists of the stories, and therefore for most pronouns in the current corpus, these examples tentatively suggest that age may be more important than affectivity in governing the choice between feminine and non-feminine pronouns. That is, young but unlikeable referents were still occasionally referred to with non-feminine forms (32), but older, likeable referents were always referred to with feminine forms (29). When a speaker holds affectionate feelings towards a woman who is older, using non-feminine forms for her might come across as rude, whereas respect for her can be expressed using feminine forms (Bakker 1992: 12–13; cf. Nübling 2015). Young, likeable referents are more easily referred to with non-feminine forms than their less likeable peers, for whom feminine forms are the more prevalent. Thus, when age and degree of affection make conflicting predictions with respect to pronoun gender, age appears to be the most important factor (cf. Bakker 1992; Nübling 2015).

Personal pronouns and demonstrative pronouns patterned differently from one another for young and older referents. For older referents, demonstrative pronouns were more likely to be non-feminine than personal pronouns—even though the majority of demonstratives were still feminine (see (33)).
The dwarfs were worried, they knew she[F] [the witch] had gone after Snow White.’

Interestingly, all but one non-feminine demonstratives used for older referents were grammatically masculine, as in (34):

(34) oh en dae haet dan de sjtum van ariel
    oh and DEM.M has then the voice of ariel
    ‘Oh, and that’s when he(M) [Ursula] has Ariel’s voice.’

By contrast, for young referents, all but one non-feminine demonstratives were neuter, as in (35):

(35) kiek mer hie dit is det jurkje wat det aan mot
    look PTCL here this is that dress.DIM that DEM.N on must
do
    do
    ‘Look, here, this is the dress she(NF) [Cinderella] has to wear.’

In this age category, personal pronouns were more likely to be non-feminine than demonstratives. While over four out of ten personal pronouns—both subject and object forms—were non-feminine, non-feminine demonstratives occurred less frequently, with only two out of ten demonstrative pronouns being non-feminine. Example (36) shows that speakers sometimes even produced feminine demonstratives and neuter personal pronouns in the same sentence for the same referent:

(36) dus die kumtj dao aan en die dwergen ja det zeen
    so DEM.F comes there on and those dwarfs PTCL that are
    allemaol jonges die haoje det neet good bie dus den geit
    all boys they keep that not good at so then goes
    et poetse
    3SG.N clean
‘So she(F) [Snow White] arrives, and those dwarfs, well, they’re all guys, the don’t keep up [with chores], so she(NF) [Snow White] starts cleaning.’

Perhaps the apparent preference of feminine die over neuter det has to do with the emphasis that demonstratives naturally convey. Compared to feminine personal pronouns, non-feminine personal pronouns occurred in their full, stressed form more frequently. This could have resulted in a lower amount of neuter demonstratives. Alternatively, since the neuter demonstrative det is also the sole option available for stressed reference to neuter inanimate objects (cf. (37), where det refers to Snow White’s heart; see also Table 2) it could also be the case that this form is associated with inanimate objects more strongly, making it a less preferred form for human reference for many speakers. Stressed neuter het in subject position can only have a human female referent.

(37) geutfj ze opdracht om et hert van sneeuwwitje dr oet
gives 3SG.F order to the.N heart.N of snow.white there out
ten haole en heur det as bewies te gaeve
to get and 3SG.F that.N as proof to give

‘She [the queen] orders [the hunter] to remove Snow White’s heart and bring it to her as proof [that she’s dead].’

Older characters were usually referred to with grammatically feminine terms (e.g., stiefmooder ‘stepmother(F)’, heks ‘witch(F)’, fee ‘fairy(F)’), while younger ones were also often described with neuter terms like maedje ‘girl(N)’ or kindj ‘child(N)’. It could therefore be assumed that the higher number of neuter pronouns for protagonists is due to grammatical agreement with the neuter nouns (cf. (38)).

(38) t kindj haet hie nog ummer dat stuk appel klem zitte in
the child.N has here still always that piece apple stuck sit in
zien kael
POSS.M/N throat

‘The child(N) still has a piece of apple stuck in her(NF) throat here.’

However, the results suggest that this is not necessarily the case. Well over one-third of deictic pronouns with young referents was non-feminine. Moreover, the choice of anaphoric pronouns
for young referents did not seem to be constrained by the antecedents’ grammatical gender. While matching antecedent-referent pairs did occur (cf. (39)), there were also neuter pronouns with grammatically feminine antecedents and vice versa (e.g., (40)).

(39) *sneeuwwitje* is *n hieal mooi prinses* en *die laefij in en kastiel*

lives in a castle

‘Snow White is a gorgeous princess(F), and she(F) lives in a castle.’

(40) *ich zien n jonk maedje met n hieale sjieke jurk, de haor auch hieal defsig en diamanten inne oear en witte handjsjeunkes, en die kiektj hieal betoverdj*

gloves,DIM and DEM.F looks very enchanted

‘I see a young girl(N), wearing a very nice dress, [her] hair is very fancy, too, and [she’s wearing] diamond earrings and white gloves, and she(F) looks enchanted’

For older referents, most anaphoric pronouns matched their feminine antecedent’s gender, as in (41). Mismatching pairs of feminine pronouns with a neuter antecedent and non-feminine pronouns with a feminine antecedent occurred sporadically (see (42) and (43), respectively). Matching pairs of a neuter noun with a neuter pronoun did not occur.

(41) *de zuus aan de heks det ze get kwaods in zin haet*

sense has

‘You can tell by looking at the witch(F) that she(F) has something evil in mind.’

(42) *ich zien n aojer vruike met n staf en die zuut*

1SG see a older woman.DIM with a wand and DEM.F looks
'I see an older woman(N) with a wand, and she(F) looks very kind, very sweet.'

(43) even ein vraag ... dao haet ursula aug de drietand ...
just a question ... there has ursula also the trident ...

haet het neet met de drietand de stem van ariel
has 3SG.N not with the trident the voice of ariel

afgepakt
taken.away

‘Just a question. Ursula has the trident here, too, didn’t she(N) use the trident to take away Ariel’s voice?’

Non-feminine personal pronouns for older referents, as in (43), occurred only nine times in total. Upon closer inspection, all but two of these were produced by a single speaker, and the masculine demonstratives in reference to older women were uttered by this speaker, too. The speaker in question had indicated that he was not a native speaker, but that he had learned Limburgian at a later age. Apparently, he had picked up the phenomenon itself, and made the step of using non-feminine forms for women, which does not occur in his native Dutch. He used non-feminine forms very frequently, but did so in a more liberal manner than native speakers, without distinguishing between different types of referents. In a way, he appeared to have simplified the phenomenon, doing away with a pragmatic constraint generally felt by native speakers, and generalizing the use of non-feminine forms to all women regardless of their semantic features.

3.5 Summary and conclusion

Non-feminine forms were productively used by male and female speakers of all ages. In line with tendencies that have been identified for other Germanic varieties, younger female characters were more frequently referred to with non-feminine forms than older characters. However, young female characters who were rather unsympathetic did not trigger the use of non-feminine as easily. Although non-feminine pronouns may be licensed by a grammatically neuter antecedent (e.g., kindj ‘child(N)’, the fact that they were frequently used both with and
without a linguistic antecedent present suggests that syntactic agreement is only one
contributing factor. The results of this study suggest that pronominal gender variation in
Limburgian is also strongly influenced by social information about the referent. The next
chapter will investigate the interaction between these factors.
4. Gender variation on the syntax-pragmatics interface: Assessing the effects of noun gender and referent age on the acceptability of *het* and *ze*

4.1 Introduction

The results of the story-telling task discussed in the previous chapter showed that non-feminine pronouns were more often used for younger women than for older ones. Older women were almost always referred to with feminine pronouns, matching their natural gender. The question arises whether this apparent age-effect is truly due to semantic features of the referent, or whether it might still be a result of syntactic mechanisms instead. That is, the apparent effect of a referent’s age may have been mediated by a possible effect of noun gender, which could not be distinguished in the first study. Speakers of Limburgian might refer to a given female person with non-feminine forms because they perceive that woman in a certain way—i.e., because someone is young, she can be referred to with *het* —, but also because they simply match the grammatical gender of the neuter nouns used to describe that female person—e.g., *maedje ‘girl(N)*’. Similarly, a speaker might refer to a referent with feminine forms like *ziej* because of a grammatically feminine linguistic antecedent—e.g., *vrouw ‘woman(F)*’ —, or simply because the referent is a woman. The aim of the current study is to disentangle the different options—i.e., grammatical, semantic, or pragmatic gender—to assess their individual and joint roles in Limburgian.

Consider the following sentence, where the pronoun *she* does not match the biological gender of the available antecedent *the uncle*:

\[(44)\] The uncle, hoped that she[1/j] had picked out a good wine.

Interpreting the pronoun *she* as coreferential with the previously mentioned *the uncle* in (44) will yield a nonsensical sentence, as lexical information signals that the referent of *uncle* must be male (e.g., Gordon & Hendrick 1998). However, previous research suggests that readers often try to map a pronoun onto a referent that is readily available even in the case of a gender-mismatch (e.g., Nieuwland & van Berkum 2006; Osterhout & Mobley 1995), which can evoke brain responses that are usually associated with difficulties with syntactic processing (e.g., Hagoort, Brown, & Groothusen 1993; Hagoort, Brown, & Osterhout 1999). Importantly, sentences with such gender-mismatching pronouns have been found to be generally rated as
less acceptable, suggesting that acceptability judgments can be used as an indirect way of measuring coreferentiality between a pronoun and an antecedent (Osterhout & Mobley 1995).

In a previous study on gender-mismatching pronouns in Limburgian, Piepers and Redl (2018) used an acceptability judgment task to confirm that the possessive pronoun zien ‘his/its’ can refer to a female referent. While occurrences of zien in reference to a woman had been previously documented (cf. Chapter 2; e.g., Bakker 1992), it remained unclear exactly how native speakers interpret such ‘mismatching’ possessive pronouns. Piepers and Redl compared acceptability judgments from Dutch and Limburgian speakers, who rated Dutch and Limburgian sentences, respectively. The sentences featured a male or female proper name, and possessive zijn (Dutch) or zien (Limburgian). Speakers of Limburgian showed a different pattern than speakers of Dutch: while the possibility of coreferentiality between the subject and the pronoun was limited to sentences with male subjects for Dutch zijn, this extended to sentences with female subjects for Limburgian zien, confirming that Limburgian zien but not Dutch zijn can be coreferential with a female referent.13 A Limburgian example is included in (45); a Dutch example is included in (46).

East Limburgian (adapted from Piepers & Redl 2018: 106-107)

(45) *Fleur*/Lucas _haet_ zien _yogaboks_ aangedaon  
Fleur(female) / Lucas(male) AUX 3SG.POSS.M/N yoga.pants put.on  
‘*Fleur*/Lucas put on _her_/his _yoga pants.’

Standard Dutch (adapted from Piepers & Redl 2018: 106-107)

(46) *Fleur*/Lucas _heeft_ zijn _yogabroek_ aangedaan  
Fleur(female) / Lucas(male) AUX 3SG.POSS.M/N yoga.pants put.on  
‘*Fleur*/Lucas put on _his_ _yoga pants.’

Following Piepers and Redl (2018), the current study also employs acceptability judgments as a proxy for testing coreferentiality. This chapter reports on an experiment that assesses the influence of syntactic and semantic-pragmatic information on the ratings of Limburgian

13 However, this possibility was limited to contexts facilitating this reading. For a discussion, see Piepers and Redl (2018: 106–107).
sentences, which feature a personal pronoun of either feminine or neuter gender. The main research question this study aims to answer is the following:

**RQ:** Do Limburgian listeners prefer different pronoun genders for female referents of different ages, and to what extent is this preference moderated by the grammatical gender of the antecedent noun?

This can be divided in the following sub-questions:

**A:** To what extent does a referent’s age influence listeners’ ratings of sentences featuring different pronoun genders?

**B:** To what extent does an antecedent’s noun gender influence listeners’ ratings of sentences featuring different pronoun genders?

The hypotheses with respect to these sub-questions are the following. First, regarding question **A**, feminine pronouns (ze) are expected to be preferred over neuter pronouns (het) for older referents. This should be reflected in higher ratings for sentences featuring older referents indexed by feminine pronouns, compared to older referents indexed by neuter pronouns. For younger referents, on the other hand, it is expected that there is either a preference for a neuter pronoun (het)—again, as reflected in higher ratings for sentences featuring these pronouns—or no clear preference at all.

With regard to question **B**, if the preference for a certain pronoun gender is moderated by the grammatical gender of the antecedent noun, it is also expected that pronouns that match their antecedent noun’s grammatical gender are preferred over pronouns that are a mismatch to their antecedent noun’s grammatical gender. That is to say, sentences in which the pronoun matches the antecedent’s gender are expected to receive higher ratings than sentences in which there is a mismatch between the two.

### 4.2 Method

#### 4.2.1 Participants

72 speakers of Limburgian participated in the experiment. Participants were recruited through personal communication and social media. Seven participants correctly guessed the purpose of the experiment, i.e., the variation in feminine and non-feminine personal pronouns in reference to women. The statistical analysis was performed on the data of the participants who did not correctly guess the purpose of the experiment (65 participants, 24 male; ages 17–80, $M_{age} =$
The demographics discussed here are those of the participants included in the analysis. The descriptive statistics of the full sample of all 72 participants are given in Table 7.

Ten of the 65 participants (15.38%) were born in the Central Limburgian dialect area; 47 (72.31%) were born in the East Limburgian dialect area, and 2 (3.08%) and 6 (9.23%) were born in the mich-quarter and the Ripuarian transitional dialect area, respectively. Ten participants (15.38%) grew up in the Central Limburgian dialect area. Fifty (76.92%) were raised in the East Limburgian dialect area. Two participants (3.08%) were raised in the mich-quarter and another two were raised in the Ripuarian transitional dialect area. Finally, one participant (1.54%) grew up in the Ripuarian dialect area. Nine participants (13.85%) were currently living in the Central Limburgian dialect area; forty (61.54%) were living in the East Limburgian dialect area. Two participants were living in the mich-quarter area (3.08%), the Ripuarian transitional area (3.08%), and the Ripuarian dialect area (3.08%). Finally, ten participants (15.38%) did not live in Limburg at the moment of testing.

58 participants (89.23%) indicated that they spoke Limburgian daily; four (6.15%) spoke it weekly, and three (4.62%) monthly. 58 participants (89.23%) used Limburgian with their family and friends. 51 participants (78.46%) further indicated that they spoke Limburgian at work.

4.2.2 Materials and design

Each participant was presented with the audio recordings of 64 stimuli and 64 fillers. The stimuli all consisted of a complex sentence about a female person, who was introduced by a noun, and subsequently referred to by a pronoun. 32 stimuli featured a noun describing a woman older than the speaker (e.g., oma ‘grandma’); the other 32 featured a noun describing a woman of a similar age as the speaker (e.g., zus ‘sister’). All nouns occurred in both their standard, non-diminutive, grammatically feminine form, and their diminutive, grammatically neuter form. The pronouns also occurred in feminine or neuter gender form. Three factors were varied: referent age (‘young’ and ‘old’) as indicated by generation, noun gender (feminine and neuter) and pronoun gender (feminine and neuter), resulting in a 2×2×2 design. Every noun was embedded in four different sentences, which occurred in four different versions distributed over four lists. Participants saw all four sentences for every noun, but they never saw a noun in
Table 7. Descriptive statistics of the participants.

<table>
<thead>
<tr>
<th></th>
<th>Naïve participants only</th>
<th>All participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total number of participants</strong></td>
<td>65</td>
<td>72</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td>41 female; 24 male</td>
<td>47 female; 25 male</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>17–80, ( M = 44.60, SD = 17.22 )</td>
<td>17–80, ( M = 44.86, SD = 16.78 )</td>
</tr>
<tr>
<td><strong>Dialect area (born)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Limburgian</td>
<td>10 15%</td>
<td>13 18%</td>
</tr>
<tr>
<td>East Limburgian</td>
<td>47 72%</td>
<td>51 71%</td>
</tr>
<tr>
<td>Mich-quarter</td>
<td>2 3%</td>
<td>2 3%</td>
</tr>
<tr>
<td>Ripuarian transitional</td>
<td>6 9%</td>
<td>6 8%</td>
</tr>
<tr>
<td>Ripuarian</td>
<td>0 0%</td>
<td>0 0%</td>
</tr>
<tr>
<td><strong>Dialect area (raised)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Limburgian</td>
<td>10 15%</td>
<td>13 18%</td>
</tr>
<tr>
<td>East Limburgian</td>
<td>50 77%</td>
<td>54 75%</td>
</tr>
<tr>
<td>Mich-quarter</td>
<td>2 3%</td>
<td>2 3%</td>
</tr>
<tr>
<td>Ripuarian transitional</td>
<td>2 3%</td>
<td>2 3%</td>
</tr>
<tr>
<td>Ripuarian</td>
<td>1 2%</td>
<td>1 1%</td>
</tr>
<tr>
<td><strong>Dialect area (current residence)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Limburgian</td>
<td>9 14%</td>
<td>11 15%</td>
</tr>
<tr>
<td>East Limburgian</td>
<td>40 62%</td>
<td>44 61%</td>
</tr>
<tr>
<td>Mich-quarter</td>
<td>2 3%</td>
<td>2 3%</td>
</tr>
<tr>
<td>Ripuarian transitional</td>
<td>2 3%</td>
<td>2 3%</td>
</tr>
<tr>
<td>Ripuarian</td>
<td>2 3%</td>
<td>2 3%</td>
</tr>
<tr>
<td>None (not living in Limburg)</td>
<td>10 15%</td>
<td>11 15%</td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary ed.</td>
<td>1 2%</td>
<td>1 1%</td>
</tr>
<tr>
<td>Pre-vocational sec. ed. (mavo/vmbo)</td>
<td>6 9%</td>
<td>6 8%</td>
</tr>
<tr>
<td>Senior general sec. ed. (havo)</td>
<td>5 8%</td>
<td>6 8%</td>
</tr>
<tr>
<td>Pre-university ed. (vwo)</td>
<td>2 3%</td>
<td>2 3%</td>
</tr>
<tr>
<td>Vocational sec. ed. (mbo)</td>
<td>11 17%</td>
<td>11 15%</td>
</tr>
<tr>
<td>Higher professional sec. ed. (hbo)</td>
<td>30 46%</td>
<td>35 49%</td>
</tr>
<tr>
<td>University ed. (wo)</td>
<td>10 15%</td>
<td>11 15%</td>
</tr>
<tr>
<td><strong>Currently studying</strong></td>
<td>14 22%</td>
<td>17 24%</td>
</tr>
<tr>
<td><strong>Dialect use (frequency)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily</td>
<td>58 89%</td>
<td>65 90%</td>
</tr>
<tr>
<td>Weekly</td>
<td>4 6%</td>
<td>4 6%</td>
</tr>
<tr>
<td>Monthly</td>
<td>3 5%</td>
<td>3 4%</td>
</tr>
<tr>
<td><strong>Dialect use (social)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With family</td>
<td>58 89%</td>
<td>65 90%</td>
</tr>
<tr>
<td>With friends</td>
<td>58 89%</td>
<td>65 90%</td>
</tr>
<tr>
<td>At work</td>
<td>51 78%</td>
<td>54 75%</td>
</tr>
</tbody>
</table>
the same condition more than once. Examples of the items are given in (47) and (48). The fillers consisted of sentences similar to the test items except that the referents were male (e.g., *broor* ‘brother’ or *breurke* ‘brother.DIM’ and *opa* ‘grandpa’). An overview of all items and conditions is given in Table 8. A full list of all items and fillers (in standard Dutch) is included in Appendix D.

(47)  *Mien zus/zusje helt hieel erg van katten, en lets haet ze/het unne aoje kater oet het asiel gehaoldj*

‘My *sister*(F)/*sister.DIM*(N) loves cats, and *she*(F)/*she*(N) recently picked up an old tomcat from the shelter.’

(48)  *Mien oma/omaatje haaj altied een hieel net handsjriftj, mer tegeweurdig haet ze/het veul last van trillendje henj*

‘My *grandma*(F)/*grandma.DIM*(N) used to have very nice handwriting, but nowadays *she*(F)/*she*(N) suffers from trembling hands.’

Since there is no standardized form or spelling of Limburgian, all stimuli were presented to the participants auditorily. A female speaker of Central Limburgian recorded all 64 fillers and 128

Table 8. Overview of design and items used in the rating task.

<table>
<thead>
<tr>
<th>Type</th>
<th>Referent</th>
<th>Noun gender</th>
<th>Example noun</th>
<th>Pronoun gender</th>
<th>Example pronoun</th>
<th>Items (n)</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stimulus</td>
<td>Young woman</td>
<td>F</td>
<td>zus ‘sister’</td>
<td>F</td>
<td>ze ‘she’</td>
<td>8</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>zus ‘sister’</td>
<td>N</td>
<td><em>het</em> ‘it’</td>
<td>8</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>zusje ‘sister.DIM’</td>
<td>F</td>
<td>ze ‘she’</td>
<td>8</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>zusje ‘sister.DIM’</td>
<td>N</td>
<td><em>het</em> ‘it’</td>
<td>8</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>Older woman</td>
<td>F</td>
<td>oma ‘grandma’</td>
<td>F</td>
<td>ze ‘she’</td>
<td>8</td>
<td>E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>oma ‘grandma’</td>
<td>N</td>
<td><em>het</em> ‘it’</td>
<td>8</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>omaatje ‘grandma.DIM’</td>
<td>F</td>
<td>ze ‘she’</td>
<td>8</td>
<td>G</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>omaatje ‘grandma.DIM’</td>
<td>N</td>
<td><em>het</em> ‘it’</td>
<td>8</td>
<td>H</td>
</tr>
<tr>
<td>Filler</td>
<td>Older man</td>
<td>M</td>
<td>opa ‘grandpa’</td>
<td>M</td>
<td>hae ‘he’</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Young man</td>
<td>M</td>
<td>vrundj ‘boyfriend’</td>
<td>M</td>
<td>hae ‘he’</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>breurke ‘brother.DIM’</td>
<td>M</td>
<td>hae ‘he’</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>128</td>
<td></td>
</tr>
</tbody>
</table>
experimental items (64 items in two conditions) in a sound-attenuated booth at the Centre for Language Studies lab at Radboud University using Audacity (Audacity Team 2018). To ensure that the sentences would be as natural as possible for the speaker, she was provided with the Dutch sentences beforehand, and she had translated the sentences into Limburgian herself. Moreover, to ensure that items differed minimally between conditions, all experimental items were recorded in only two of four conditions (e.g., for a young referent, conditions A and D). The items in the remaining conditions were constructed using Praat (Boersma & Weenink 2019). The complex sentences were split in two parts—the first featuring the noun, and the second featuring the pronoun—and new items were constructed by merging these individual phrases for all conditions.

4.2.3 Pre-test

The stimuli were pretested with a Dutch audience before the experiment to ensure validity. 42 speakers of Dutch (21 male; ages 17–61, $M = 27.98$, $SD = 11.46$) were presented with audio recordings of Standard Dutch equivalents of all 64 stimuli in the feminine noun-feminine pronoun conditions (e.g., (49) for young generation and (50) for older generation). These were recorded by a female speaker of Standard Dutch, in a sound-attenuated booth at the Centre for Language Studies lab at Radboud University using Audacity (Audacity Team 2018).

(49) Mijn zus/zusje houdt heel erg van katten, en laatst heeft ze/het een oude kater uit het asiel gehaald
‘My sister(F)/sister.DIM(N) loves cats, and she(F)/she(NF) recently picked up an old tomcat from the shelter.’

(50) Mijn oma/omaatje had altijd een heel mooi handschrift, maar tegenwoordig heeft ze/het veel last van trillende handen
‘My grandma(F)/grandma.DIM(N) used to have very nice handwriting, but nowadays she(F)/she(NF) suffers from trembling hands.’

Participants were asked to rate the naturalness of the sentences, using a 7-point Likert scale ranging from Heel onnatuurlijk ‘Very unnatural’ (1) to Heel natuurlijk ‘Very natural’ (7). The mean ratings of the individual items are visible in Figure 12. The mean ratings of all items ranged from 5.05 to 6.2, corresponding to Redelijk natuurlijk ‘Fairly natural’ (5) and Natuurlijk...
‘Natural’ (6). However, on average, the items with younger subjects were rated slightly higher ($M = 5.82, SD = 0.79$) than the items with older subjects ($M = 5.64, SD = 0.86$). This difference, $0.18$, BCa 95% CI $[.10, .25]$, was statistically significant $t(41) = 4.416, p < .0001$. Therefore, although all items were judged as natural sentences by native speakers, the items with younger and older subjects cannot be assumed to be equal in terms of inherent naturalness, and are therefore not compared directly in the final analysis.

4.2.4 Procedure

The experiment was administered online through Qualtrics (2019). Participants first received information about the experiment, and were asked to confirm that they spoke Limburgian. In the main part of the experiment, participants were instructed to listen to each audio recording once, and to indicate on a 7-point Likert scale how natural the sentence sounded. As in the pre-test, the scale ranged from *Heel onnatuurlijk* ‘Very unnatural’ (1) to *Heel natuurlijk* ‘Very natural’ (7). Participants were encouraged not to base their rating on the speaker’s pronunciation, but rather on the content of the sentence.

The second part of the experiment consisted of a questionnaire in which participants provided information about their age, gender, education, place of birth, childhood and current residence, and the extent to which they used dialect, and the situations in which they used dialect. They were also probed for the main purpose of the experiment. Finally, participants were asked to estimate the probability of them using non-feminine forms themselves, by indicating on a 7-point Likert scale (ranging from *Heel onwaarschijnlijk* ‘Very improbable’ (1) to *Heel waarschijnlijk* ‘Very probable’ (7)) how likely they thought it was they would use each of the three sentences in (51). These featured a non-feminine possessive pronoun, a non-feminine personal subject pronoun, and a non-feminine personal object pronoun, respectively.
(51)  a. *Mien zus is zien tas vergaete.*
    ‘My sister forgot her(NF) handbag’
  b. *Het woectj toch neet wied weg.*
    ‘She(NF) doesn’t live far away,’
  c. *dus die tas bring ich ‘m wal efkes*  
    ‘so I’ll just bring it to her(NF).’

4.2.5 Analysis

All obtained scores were first transformed to z-scores, to eliminate scale bias and render the data more normal (Schütze & Sprouse 2014: 43). Three statistical analyses were performed on the standardized data.

First, to assess whether the perceived naturalness of sentences describing a female referent differed per noun and pronoun gender for referents of different ages, a three-way repeated measures ANOVA was conducted on the standardized ratings, with referent generation, noun gender and pronoun gender as predictor variables.

Second, to assess the relationship between rating of sentences and estimate of own use, two Pearson correlation analyses were conducted between participants’ ratings of sentences featuring a young referent denoted by a neuter pronoun, and their estimation of their own use of a personal subject pronoun, which also referred to a young referent, introduced to the participant with the feminine form *zus* ‘sister’ (cf. (51b)). One analysis tested the relation between participant’s estimation of their own use, and their ratings of sentences featuring a grammatically feminine noun (*zus*); the other analysis tested the relation between estimated own use and ratings of sentences featuring a grammatically neuter noun (*zusje*). For these analyses, four significant outliers were removed, leaving $n = 68$.

Finally, to assess whether there was a difference between men and women in participants’ estimation of their own use of different non-feminine forms, a two-way mixed ANOVA was conducted on the standardized ratings, with participant gender and pronoun type as predictor variables. For this analysis, five significant outliers were removed, leaving $n = 65$. 
4.3 Results

4.3.1 Naturalness of sentences

Figures 13 and 14 show the mean raw scores and the mean standardized scores per condition. There was a significant main effect of stimulus generation, $F(1, 64) = 14.224, p < .001$, partial $\eta^2 = .182$, indicating that sentences with a young referent generally received higher ratings ($M = .077, SE = .024, 95\% CI [.029, .124]$) than sentences with an older referent ($M = -.111, SE = .024, 95\% CI [-.179, -.043]$). There was also a significant main effect of noun gender, $F(1, 64) = 12.921, p < .001$, partial $\eta^2 = .168$, indicating that sentences with a feminine noun generally received higher ratings ($M = .083, SE = .025, 95\% CI [.032, .133]$) than sentences featuring a neuter diminutive noun ($M = -.117, SE = .037, 95\% CI [-.191, -.043]$). There was no significant main effect of pronoun gender, $F(1, 64) = .507, p = .479$, partial $\eta^2 = .008$.

The main effects of stimulus generation and noun gender were invalidated by the significant interaction effect between them, $F(1, 64) = 17.646, p < .0001$, partial $\eta^2 = .216$. This effect indicates that the advantage for sentences with a feminine noun was smaller for young referents than for older referents. Sentences featuring an older referent indicated by a feminine noun received higher ratings ($M = .068, SE = .032, 95\% CI [.004, .132]$) than sentences featuring an older referent indicated by a neuter noun ($M = -.290, SE = .071, 95\% CI [-.431, -.149]$). For younger referents, sentences featuring a feminine noun also received higher ratings ($M = .097, SE = .031, 95\% CI [.035, .160]$) than sentences featuring a neuter noun ($M = .056, SE = .030, 95\% CI [-.004, .115]$), but this difference was not as large as for the older referents.

There was also a significant interaction effect between stimulus generation and pronoun gender, $F(1, 64) = 4.441, p < .05$, partial $\eta^2 = .065$, suggesting that the difference in ratings of sentences with a feminine or a neuter pronoun was different for young and older referents; i.e., sentences with neuter pronouns received higher ratings for younger referents than for older referents. For young referents, sentences with neuter pronouns received slightly higher ratings ($M = .092, SE = .025, 95\% CI [.042, .142]$) than sentences with feminine pronouns ($M = .061, SE = .030, 95\% CI [.002, .120]$). For older referents, on the other hand, sentences with neuter pronouns were rated lower ($M = -.152, SE = .051, 95\% CI [-.254, -.050]$) than sentences with feminine pronouns ($M = -.070, SE = .036, 95\% CI [-.142, .002]$). There was no significant interaction effect between noun gender and pronoun gender, $F(1, 64) = .232, p = .631$, partial $\eta^2 = .004$. 

55
Finally, and most importantly, there was a significant three-way interaction effect between stimulus generation, noun gender, and pronoun gender, $F(1, 64) = 8.748, p < .005$, partial $\eta^2 = .120$. This suggests that the two-way interaction between noun gender and pronoun gender differs across the levels of stimulus generation, i.e., the interaction effect between noun and pronoun gender is different for younger and older referents. Sentences with young referents received comparable ratings across all four noun gender with pronoun gender conditions, but sentences with older referents showed more variability.

Figure 13. Mean raw ratings of sentences describing older (left) or younger (right) female referents.

Figure 14. Mean standardized ratings of sentences describing older (left) or younger (right) female referents.
4.3.2 Rating, and estimation of own use

No significant correlation was found between participant’s ratings of sentences featuring a feminine noun and a neuter pronoun denoting a young referent (i.e., *mien zus* ‘my sister(F)’ — *het* ‘she(N)’), and their estimation of their own use of a neuter personal subject pronoun for a young referent who had been introduced by a feminine noun (*zus* ‘sister(F)'), $r(68) = -.093, p = .452, BCa 95% CI [-.293, .125]. This relation is displayed in Figure 15.

Similarly, no significant correlation was found between participants’ ratings of sentences featuring a neuter noun and a neuter pronoun denoting a young referent (i.e. *mien zusje* ‘my sister.DIM(N)’—*het* ‘she(N)’), and their estimation of their own use of a neuter personal subject pronoun for a young referent who had been introduced by a feminine noun (*zus* ‘sister(F)’), $r(68) = -.165, p = .179, BCa 95% CI [-.345,.027]. This relation is displayed in Figure 16.

---

**Figure 15.** Correlation plot of the relation between participants’ ratings of sentences featuring a feminine noun and a neuter pronoun denoting a young referent.

**Figure 16.** Correlation plot of the relation between participants’ ratings of sentences featuring a neuter noun and a neuter pronoun denoting a young referent.
4.3.3 Participant gender and estimation of own use

Figures 17 and 18 show the mean raw estimates and the mean standardized estimates of male and female participants’ own use of non-feminine pronoun types. Because Mauchly’s test indicated that the assumption of sphericity had been violated for pronoun type, χ²(2) = 17.254, p < .001, the degrees of freedom reported here were adjusted using the Huynh-Feldt correction. There was no significant main effect of participant gender, F(1, 65) = 1.562, p = .216, partial 𝜂² = .023, nor was there a significant main effect of pronoun type, F(2, 1.678) = 2.040, p = .143, partial 𝜂² = .030. Finally, there was also no significant interaction effect of participant gender and pronoun type, F(2, 1.678) = .711, p = .470, partial 𝜂² = .011.

Figure 17. Mean raw ratings of participants’ estimation of their own use of non-feminine pronouns, per pronoun type.

Figure 18. Mean standardized ratings of participants’ estimation of their own use of non-feminine pronouns, per pronoun type.
4.4 Discussion

4.4.1 Results of the experimental manipulation

Previous research has shown that sentences with pronouns that do not match their potential antecedents’ gender generally receive lower ratings than similar sentences with gender-matching pronouns (e.g., Osterhout & Mobley 1995; Piepers & Redl 2018). A pronoun can ‘match’ an intended (female) referent in different ways in Limburgian, meaning that a pronoun’s gender can be motivated in various ways. The feminine pronoun ze ‘she’ matches its referent’s biological sex, i.e., is semantically motivated. For young woman in particular, non-feminine pronouns like het ‘it’ are used as well. These are pragmatically motivated (cf. Nübling 2015). Finally, both het and ze can match a linguistic antecedent’s grammatical gender. In these cases, they are syntactically motivated. An overview of these options is given in Table 9.

The current experiment aimed to disentangle these different possibilities in order to explore their respective roles. Using acceptability ratings as a proxy for coreferentiality, the current experiment aimed to assess which factor would prohibit coreferentiality between a pronoun and an intended antecedent noun if violated. This could provide an answer to the question what drives pronominal gender variation in Limburgian.

The results of the experiment showed that the ratings of sentences with younger referents were similar across conditions, while the ratings of sentences with older referents showed more variability. This indicates that gender variation for women in Limburgian is a socio-pragmatic, semantics/pragmatics-driven phenomenon, which appears unaffected by grammatical mechanisms. Consider the eight experimental conditions included in Table 10, starting with the young referents in the bottom half of this table (Conditions E-H).

<table>
<thead>
<tr>
<th>Example referent (real-world)</th>
<th>Semantically motivated pronoun</th>
<th>Pragmatically motivated pronoun</th>
<th>Syntactically motivated pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Young referent</td>
<td>Older referent</td>
<td>Feminine noun</td>
</tr>
<tr>
<td>Sister</td>
<td>ze</td>
<td>het</td>
<td>ze</td>
</tr>
<tr>
<td>Grandmother</td>
<td>ze</td>
<td>-</td>
<td>ze</td>
</tr>
</tbody>
</table>

Table 9. Schematic overview of semantically, syntactically, and pragmatically motivated pronouns for young and older referents.

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14 For the sake of readability, the translations for ze and het are omitted in the remainder of the thesis.
The presence of feminine ze or neuter het was predicted to lead to higher ratings in different conditions. If the pronouns in Limburgian would be syntactically motivated, a difference in ratings for sentences featuring feminine or neuter pronouns would be based on the accompanying noun’s gender. This would predict that het following zusje should receive higher ratings than het following zus, and vice versa for feminine ze; that is, that ‘matching’ Conditions E and H receive higher ratings than their counterparts F and G, where there is a mismatch between noun gender and pronoun gender. However, this is not what we find in the data. Instead, the ratings do not differ for any of the four conditions, meaning that there is not one combination of noun and pronoun gender that is rated higher or lower than the others. From a semantic and pragmatic point of view, either a feminine or a neuter pronoun is facilitated in all four conditions. Feminine ze is always an acceptable option because the referent is female, whereas neuter het is always acceptable because the referent is of a similar age as the speaker—i.e., she is “young”, an age group for which an extra pronoun gender is “unlocked” (cf. the results of the first study, discussed in the previous chapter, as well as e.g., Nübling 2015; Nübling et al. 2013). The fact that the ratings are similar across conditions E-H speaks for a semantics or pragmatics-based explanation as opposed to a grammar-based motivation of gender variation in Limburgian.

Now consider the upper half of Table 10. Conditions A-D, which featured sentences with older referents, showed a different distribution of ratings. Here, too, the syntax-based hypothesis would be that gender-matching conditions (A and D) receive higher ratings than gender-mismatching conditions (B and C), but again, this is not what is found in the data. While sentences in Condition A generally did receive higher ratings than sentences in Condition B, the gender-matching advantage predicted by a syntax-based hypothesis is not found for Condition D. Alternatively, the pragmatics-based hypothesis would be that het is simply not
suited for older referents, even if it matches its antecedent in grammatical gender: i.e., conditions B and D would receive lower scores, because they feature a pronoun that is ‘inappropriate’ for its referent (Bakker 1992; Busley & Fritsinger 2018: cf. Nübling 2015). This prediction is not fully borne out either, as the advantage predicted by pragmatics is again found for Condition A, but not for Condition C. To explain the results found for older referents, another socio-pragmatic factor should be taken into account. Apparently, it is not only inappropriate to use *het* when referring to an older woman, but talking about her using a diminutive noun appears to be undesirable, too. Taken together, this suggests that the single ‘proper’ way of referencing women who belong to an older generation than the speaker is by using a non-diminutive, feminine noun, accompanied by a feminine pronoun.

### 4.4.2 Results of the post hoc analyses

After the main experiment, participants were asked to indicate whether they would use non-feminine *het*, *hem* or *zien* themselves. These estimation data were used for two post hoc analyses. The first post hoc analysis showed no significant relationship between participants’ estimation of their own use, and their ratings of sentences of similar conditions, which tentatively suggests that using, and accepting other’s use, of non-feminine forms for women does not appear to be a conscious process. That is to say, language users are known to be notoriously bad at recognizing their own language habits, especially if it comes to the use of non-standard pronominal forms.\(^{15}\)

The second post hoc analysis revealed no difference in estimation scores for men and women, for none of the tested pronouns. This test was conducted because it has been mentioned in the literature that some people tend to avoid the use of non-feminine pronouns for human referents, or that some women dislike being referred to with non-feminine forms, as it might make them feel objectified (Bakker 1992; Bakkes 2002; Hamans 1989). Because of this, it might be expected that women would report to be less inclined to use non-feminine forms than men, perhaps as a feminist counter-reaction to apparent sexism in the language—either protesting using objectifying forms (*het*), or forms which are ‘meant to’ refer to men (*hem, zijn*). The current study showed no evidence for this idea.

\(^{15}\) Cf. e.g., the incorrect use of the standard Dutch object pronoun *hun* ‘them’ in subject position, which speakers deny producing (van Bergen, Stoop, Vogels, & de Hoop 2011), and even avoid in places where it is actually correct (Hubers, Trompenaars, Collin, de Schepper, & de Hoop 2019).
4.4.3 Limitations and suggestions for future research

The results of the current study indicated that discrepancies between noun gender and pronoun gender do not appear to affect the ratings of sentences, which is somewhat surprising given that Limburgian has been described as having maintained a fairly strict gender system. A possible explanation for this limited role of noun gender could be that its effect, while in fact present in the language, simply gets overruled by socio-pragmatic factors in the case of female referents. Running a similar experiment that does include male referents—for example, *jong* ‘boy’ vs. *jungske* ‘boy.DIM’—will provide insight into the role of syntactic factors in pronominal reference in cases where pragmatic gender selection is not a viable option (Schmitt et al. 2002), which will in turn provide further insight into the Limburgian gender system in general.

4.5 Summary and conclusion

Various factors might play a role in pronoun selection for a female referent in Limburgian: a pronoun could be syntactically motivated, semantically motivated, or pragmatically motivated. This chapter reported on an experimental study disentangling the various factors, to assess their individual and joint effects on the naturalness of sentences. Native speaker’s acceptability judgment scores were used as a proxy for coreferentiality. The results of this experiment indicate that socio-pragmatic factors appear to be more important than syntactic factors: for younger referents, either reference option is acceptable, whereas older referents are preferably referred to with feminine forms.
5. General discussion

5.1 The role of referent characteristics in gender variation in Limburgian

This thesis reported on two studies investigating variation in pronoun gender for women in Limburgian, which were conducted to answer the research question to what extent this variation is driven by semantic or grammatical features of the referent.

Focusing on semantic information, the first study set out to explore which pronominal forms are used for women of different ages in spoken language. To ensure that participants would speak spontaneously about women, scenes from well-known fairy tales featuring female characters were used as stimuli to compile a corpus of spontaneous spoken language. The results indicated that younger women, or ‘girls’, were more frequently referred to with neuter forms than older and/or less likeable women. Neuter and masculine pronouns for a young female referent occurred both with and without a matching linguistic antecedent. This suggests that while non-feminine pronouns for younger women might be licensed by a gender-matching antecedent noun, they are likely to be semantically or pragmatically motivated instead.

However, while both non-feminine nouns and pronouns frequently occurred for younger referents in the first study, almost all nouns and pronouns referring to older women were feminine. Of all anaphoric pronouns with an older referent, 90% were feminine with a matching feminine antecedent. Only a handful pronouns were non-feminine with a feminine antecedent, or feminine with a non-feminine antecedent. Importantly, a non-feminine antecedent noun with a matching non-feminine pronoun did not occur for an older referent in the data set. Employing an acceptability judgment task as a follow-up experiment allowed for the current study to be exhaustive; i.e., to include all possible gender-matching and mismatching noun and pronoun pairs that were not produced frequently enough in the first study to warrant statistical testing.

The second study investigated the effect of both referent age and noun gender in an acceptability judgment task. Participants were asked to listen to sentences featuring gender-matching or gender-mismatching noun and pronoun pairs referring to a younger or an older woman. The results of the judgment task showed that while listeners preferred a matching feminine noun-feminine pronoun pair for an older referent, ratings for sentences with young referents were similar across conditions. That is, older referents were preferably referred to with the feminine pronoun ze and with feminine, non-diminutive nouns, but more variation is
allowed for younger referents, who could be referred to with any noun pronoun combination. This again suggests that the gender variation in pronouns for women in Limburgian is governed by semantic or pragmatic information about the referent, rather than syntactic information.

5.2 Limitations of the current study

5.2.1 Methodological considerations

The current study employed both a production task and a judgment task, but since the two studies were conducted using different participant groups, no informed statements about symmetries or asymmetries in production versus perception can be made. The participants in the second study were asked to estimate whether they would use *het, hem* and *zien* for their own (hypothetical) sister. There was no significant correlation between participants’ estimates, and their ratings of target sentences in the corresponding experimental conditions. There are different possible explanations for this. First, participants might indeed be able to correctly estimate whether they use non-feminine forms, and an asymmetry exists between what participants say themselves, and what they find acceptable for others to say. The second option is that participants are not able to make accurate estimates about their own language use, and that the variation between feminine and non-feminine pronouns is not something that participants are aware of when they speak, or judge others’ language. Importantly, the absence of a correlation is not to be interpreted as the absence of a relationship between the two variables, and it could also be the case that there is, in fact, a relationship between judgment and (estimation of) production, but the current study did not detect it. More extensive research is needed to determine which option can best account for the Limburgian data.

5.2.2 Within-speaker variation: pragmatic factors

With regard to the social information about the referent, an important limitation of the current studies was that they did not disentangle the effects of a referent’s age, and their perceived degree of affectivity. It has been suggested that affectivity may play a role in gender variation, much like it does in related varieties (e.g., Bakker 1992; Notten 1974; cf. Nübling 2015). The results of the production study reported in Chapter 3 suggested that this might indeed be a factor in Limburgian, too. For example, young referents who were not as likeable did not appear to trigger non-feminine pronouns as easily as their more likeable peers; that is, while Cinderella would trigger the use of non-feminine forms, her mean stepsisters would not (cf. (30), repeated below as (52)). Conversely, older but likeable referents, like Cinderella’s fairy godmother,
would not trigger non-feminine forms either, probably as a result of a higher degree of respect (cf. (29), repeated below as (53)).

(52) jao jao kiek mer die trektj em de ketting aaf
yes yes look PTCL DEM.F pulls 3SG.N the necklace off
‘Yeah, look, she(F) [the stepsister] pulls the necklace off of her(NF) [Cinderella’s] neck.’

(53) die dee em natuurlik weer n hieal fijn kleid aan
DEM.F did 3SG.M of.course again a very nice dress on
‘Of course, she(F) [the fairy godmother] dressed her(NF) [Cinderella] in a nice gown again.’

Participants talked about women other than characters in the story, too. More specifically, participants referred to their own daughters ((54) and (55)) and granddaughters (56), as well as to the interviewer (57), who were all much younger than the speakers, and towards all of whom the speakers held affectionate feelings.

(54) en het had alle sprookjesboeken ech zon dieke
and 3SG.N had all fairy.tale.books really such thick
sprookjesboek met prachtige tekeninge
fairy.tale.books with beautiful drawings
‘And she(NF) [their daughter] had every fairy tale book, those thick books with beautiful drawings.’

(55) maar het keek auch naoderhand gein films wat
but 3SG.N watched also later.on no movies when
3klein woor en noe wie t ouwer woor wool t
3SG.N little was and now when 3SG.N older was wanted 3SG.N
echt hiele mooie sprookjes die vroog t zich ech
really very beautiful fairy.tales those asked 3SG.N REFL really
cadeau toen
present then
'But she(NF) [their daughter] didn’t watch any movies, as little as she(NF) was, and when she(NF) got older she(NF) wanted really beautiful fairy tales, so she(NF) asked those [for her birthday].'

A:  
```
as det op bezeuk kwoom
when DEM.N on visit came
```

‘When she(NF) [speaker B’s granddaughter] comes to visit.’

B:  
```
jao jao as det det zoog
yes yes when DEM.N DEM.N saw
```

‘Oh yeah, if she(NF) saw that…’

The results of the acceptability judgment task, reported in Chapter 4, indicated that listeners had a strong preference for older women to be referred to with a feminine pronoun, whereas younger women could be referred to with either feminine or non-feminine pronouns.

However, this age effect is entangled with affectivity and respect, too, as the nouns referring to both age groups were preceded by the possessive pronoun mien ‘my’ instead of an article. This was done to add to the naturalness of sentences featuring nouns expressing a certain relationship between the speaker and the referent (e.g., ‘neighbor’, ‘best friend’). This design might have caused listeners to assume that the speaker is close to all women she talked about, which could have boosted the age effect. That is, the nouns referring to older women included family members who are generally well-respected (e.g., mother, and grandmother), and previous descriptions (e.g., Bakker 1992) already indicated that these women, specifically, are generally not easily referred to with het. For future research, it would be interesting to disentangle a referents’ age and affectivity, to further explore the effect of the latter, and see how exactly it interacts with a referent’s age.

5.2.3  Between-speaker variation: a change in progress?

The results of the production study, reported in Chapter 3, showed that not all speakers used non-feminine pronouns for women. Of the 41 participants, 28 used a neuter pronoun at least
once; the other 13 only used feminine forms. There were no participants who only used non-feminine forms.

The between-speaker variation found in the production study could not be accounted for by classic speaker demographics. Both the group that used non-feminine forms and the group that did not use these forms showed a similar distribution across participant gender (57% female and 61% female, respectively). Both groups consisted of people of all educational backgrounds, and they were from different parts of Limburg. Moreover, the thirteen participants who used only feminine forms all reported that they spoke Limburgian on a daily basis. They all spoke Limburgian with their family and friends, and ten of them (77%) further indicated that they spoke it at their work place, too. In sum, it remains unclear what decides whether a person varies in pronouns for women, or only uses feminine forms.

Substantial variation among speakers, and especially variation that is difficult to account for, indicates an instability in the language system, which in turn can be indicative of a change in progress (Backus 2014; Croft 2000). As discussed in Chapter 2, it had already been reported that some speakers of Limburgian dislike the use of het for human reference (Bakker 1992), and that some women dislike being referred to with it (e.g., Bakkes 2002; Notten 1974). It has been suggested that these people might experience interference from standard Dutch, in which the use of ‘mismatching’ gender pronouns has negative connotations (cf. Pickering & Ferreira 2008). In the case of gender variation in Limburgian, there are signs that the system is changing, and it is highly plausible that this change is induced under the influence of the standard language (e.g., Hinskens, Auer & Kerswill 2005), which remains for future research to investigate.

5.3 Summary and general conclusion

This thesis investigated the role of referent features in the variation in pronoun gender for female reference in Limburgian. Specifically, the thesis sought to answer to what extent the preference for a pronoun of a given gender was informed by the grammatical gender of an antecedent noun, or by the age of a real-world female referent. To this end, two studies were conducted. The results of these studies indicate that gender variation in pronominal reference to women is a pragmatic phenomenon, which is based on social information about the referent: ziej can refer to either an older or a younger woman, whereas het can only refer to a young woman or a girl.
References


Qualtrics. (2019). Qualtrics [Software]. Provo, Utah, USA.


Appendix A: Visual stimuli Study 1

A1. Snow White
A2. Cinderella
A3. The Little Mermaid
Appendix B: Questionnaire participants Study 1 (in Dutch)

1. Participantnummer: ________________________________

2. Leeftijd: ________________________________

3. Wat is uw geslacht?
   ○ Man
   ○ Vrouw
   ○ Anders

4. Wat is uw hoogst genoten (d.w.z. afgeronde) opleiding?
   ○ Basisonderwijs/lagere school
   ○ MAVO/VMBO
   ○ HAVO
   ○ VWO
   ○ MBO
   ○ HBO
   ○ WO

5. Studeert u op dit moment?
   ○ Ja
      Wat studeert u?
      ________________________________________________________________

   ○ Nee

6. Hoe vaak spreekt u dialect?
   ○ Dagelijks
   ○ Wekelijks
   ○ Maandelijks
   ○ Jaarlijks
   ○ Minder dan jaarlijks
   ○ Nooit (meer)

7. In welke situaties spreekt u dialect? (Meerdere antwoorden mogelijk)
   ○ Met familieleden
   ○ Met vrienden
   ○ Op het werk
   ○ Anders, namelijk:
      ________________________________________________________________
      ________________________________________________________________
      ________________________________________________________________

8. Wat is uw geboorteplaats?
   ________________________________________________________________

9. Waar bent u opgegroeid?
   ________________________________________________________________
10. Waar woont u nu?
_____________________________________________________________________

11. Wilt u graag op de hoogte gehouden worden van de resultaten van dit onderzoek?
○ Ja, mail mij! Gebruik dit e-mailadres:
_____________________________________________________________________

○ Ja, maar ik heb geen e-mail. Stuur mij een brief op dit adres:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

○ Nee, bedankt.
Appendix C: Additional figures Results section Study 1

Figure C1. Number of speakers with and without gender variation in their speech, per dialect area in which they were born.

Figure C2. Number of speakers with and without gender variation in their speech, per dialect area in which they were raised.

Figure C3. Number of speakers with and without gender variation in their speech, per dialect area in which they were living at the moment of testing.
Figure C4. Number of speakers with and without gender variation in their speech, per education level.

Figure C5. Total number of feminine and non-feminine personal, demonstrative, and possessive pronouns, for all referents (younger and older).

Figure C6. Total number of feminine and non-feminine subject and object pronouns, for all referents.
Figure C7. Total number of feminine and non-feminine unstressed and stressed pronouns, for all referents.
Appendix D: Test items Study 2 (in Dutch)

D1. Stimuli

1. Mijn zus doet vrijwilligerswerk in een bejaardentehuis, en daar is ze twee zaterdagen per maand aan kwijt.
2. Mijn zus is net op zichzelf gaan wonen, dus de laatste tijd is ze regelmatig bij de Ikea geweest.
3. Mijn zus wilde vroeger altijd filmster worden, maar nu werkt ze als verpleegster in een ziekenhuis.
4. Mijn zus houdt heel erg van katten, en laatst heeft ze een oude kater uit het asiel gehaald.
5. Mijn stiefzus heeft sinds kort een nieuwe baan, en tegenwoordig gaat ze weer met plezier naar het werk.
6. Mijn stiefzus heeft een zware notenallergie, dus met boodschappen doen moet ze goed naar de labels kijken.
7. Mijn stiefzus heeft tien jaar in een oude Opel Corsa rondgereden, maar vorige maand heeft ze dan toch een nieuwe auto gekocht.
8. Mijn stiefzus wil graag een betere conditie krijgen, dus nu heeft ze zich ingeschreven bij de sportschool.
9. Mijn nicht heeft de afgelopen jaren in verschillende huurflats gewoond, maar dit jaar wil ze een eigen huis gaan kopen.
10. Mijn nicht weet een heleboel over geschiedenis, en vroeger wilde ze ook heel graag archeoloog worden.
11. Mijn nicht werkt in een restaurant, dus in het weekend en op feestdagen moet ze meestal werken.
12. Mijn nicht houdt heel erg van bordspelletjes, en binnenkort gaat ze een spelletjesavond organiseren voor de hele familie.
13. Mijn achternicht kan heel mooi pianospelen, maar helaas heeft ze daar tegenwoordig bijna geen tijd meer voor.
15. Mijn achternicht houdt echt helemaal niet van koken, en daarom eet ze bijna iedere dag buiten de deur.
16. Mijn achternicht gaat over een paar maanden trouwen, en vorige week heeft ze bij een boetiek een mooie trouwjurk uitgezocht.
17. Mijn beste vriendin is vier maanden zwanger, en om een beetje fit te blijven gaat ze nu twee keer per week zwemmen.
18. Mijn beste vriendin houdt heel erg van lezen, en laatst heeft ze na lang twijfelen een e-reader aangeschaft.
19. Mijn beste vriendin doet vrijwilligerswerk bij een theater, en daarom mag ze altijd gratis naar voorstellingen toe.
20. Mijn beste vriendin is gek op witte chocolade, dus uit een zak paaseitjes eet ze altijd eerst alle witte eitjes op.
21. Mijn huisgenote is een beetje bang in het donker, dus meestal laat ze een lampje branden op de gang.
22. Mijn huisgenote vindt het heel leuk om te bakken, dus in het weekend staat ze regelmatig een hele dag in de keuken.
23. Mijn huisgenote gaat over een paar maanden afstuderen, dus nu is ze alvast begonnen met het zoeken naar een baan.
24. Mijn huisgenote vindt het leuk om nieuwe talen te leren, dus laatst heeft ze zich ingeschreven voor een cursus Japans.
25. Mijn studiegenote komt nogal vaak te laat, maar gelukkig heeft ze nog nooit een belangrijk tentamen gemist.
26. Mijn studiegenote is niet zo gemotiveerd, en inmiddels heeft ze nogal wat studievertraging opgelopen.
27. Mijn studiegenote vindt het heel leuk om te tekenen, dus tijdens hoorcolleges zit ze vaak een beetje te schetsen.
28. Mijn studiegenote heeft een semester in Australië gestudeerd, en daar heeft ze een heleboel nieuwe vrienden gemaakt.
29. Mijn teamgenote heeft vorige zomer een zware blessure opgelopen, en daardoor heeft ze dit seizoen nog geen wedstrijd kunnen spelen.
30. Mijn teamgenote heeft een eigen yogastudio, dus een groot deel van de week is ze bezig met yogalessen geven.
31. Mijn teamgenote is verschrikkelijk fanatiek, dus na een verloren wedstrijd is ze altijd heel erg chagrijnig.
32. Mijn teamgenote kan heel goed coachen, dus sinds dit seizoen is ze de nieuwe aanvoerder van het team.
33. Mijn moeder werkt heel graag in de tuin, en vorige zomer heeft ze voor het eerst een kruidentuin aangelegd.
34. Mijn moeder vindt het leuk om nieuwe dingen te leren, dus daarom doet ze vaak mee aan creatieve workshops.
35. Mijn moeder gaat twee keer in de week hardlopen, en deze zomer wil ze graag een halve marathon gaan lopen.
36. Mijn moeder heeft tegenwoordig een kort kapsel, en daarom gaat ze nu iedere vier weken naar de kapper.
37. Mijn oma gaat eens per maand naar de Albert Heijn, en de rest van de boodschappen haalt ze bij de Aldi in het dorp.
38. Mijn oma had altijd een heel mooi handschrift, maar tegenwoordig heeft ze veel last van trillende handen.
40. Mijn oma houdt heel erg van dieren, dus in de winter hangt ze altijd vetbollen op voor de vogels.
41. Mijn grootmoeder hoort de laatste tijd niet zo goed meer, dus daarom krijgt ze binnenkort een gehoorapparaat.
42. Mijn grootmoeder heeft zeven kleinkinderen, en af en toe haalt ze onze namen een beetje door elkaar.
43. Mijn grootmoeder woont twee straten verderop, en daarom komt ze regelmatig bij mijn ouders thuis eten.
44. Mijn grootmoeder houdt heel erg van puzzelen, dus iedere week vult ze in de Libelle en de Margriet de puzzels in.
45. Mijn overgrootmoeder wordt binnenkort honderd jaar, en daarom heeft ze de hele familie uitgenodigd voor een feest.
46. Mijn overgrootmoeder vindt het heel leuk om te breien, dus iedere winter breit ze een nieuwe plaid voor op de bank.
47. Mijn overgrootmoeder gaat iedere week naar het buurthuis om te kaarten, want zo komt ze nog een beetje onder de mensen.
48. Mijn overgrootmoeder bakt de allerbeste appeltaart van iedereen, en vroeger maakte ze er altijd een op elke verjaardag.
49. Mijn schoonmoeder vindt het heel leuk om te tennissen, en in het weekend is ze meestal op de tennisclub te vinden.
50. Mijn schoonmoeder houdt heel erg van winkelen, en elke paar maanden gaat ze naar Utrecht om een dagje te shoppen.
51. Mijn schoonmoeder heeft een hele grote moestuin, en iedere zomer brengt ze verse aardbeien naar iedereen in de familie.
52. Mijn schoonmoeder drinkt heel graag thee, dus met Kerst heeft ze een pakket gekregen met allemaal kleine potjes verse thee.
53. Mijn buurvrouw heeft twee energieke labradors, dus iedere dag is ze zeker anderhalf uur kwijt aan wandelen.
54. Mijn buurvrouw is nogal een spiritueel type, en vorig jaar is ze een maand op retraite geweest naar India.
55. Mijn buurvrouw heeft een hele grote verzameling antiek servies, en af en toe verkoopt ze daar wat van via Marktplaats.
56. Mijn buurvrouw is heel erg begaan met het milieu, en daarom doneert ze iedere maand geld aan Greenpeace.
57. Mijn overbuurvrouw vindt het leuk om dingen te regelen, dus ieder jaar organiseert ze een barbecue voor de hele buurt.
58. Mijn overbuurvrouw is overdag meestal thuis, dus daarom neemt ze vaak pakketjes aan voor verschillende buren.
59. Mijn overbuurvrouw is een paar weken terug geopereerd aan haar enkel, dus voorlopig loopt ze nog even met krukken.
60. Mijn overbuurvrouw houdt van vrolijke kleuren, en een tijdje terug heeft ze alle raamkozijnen paars geverfd.
61. Mijn stiefmoeder kijkt graag naar huizenprogramma's, want binnenkort wil ze de woonkamer gaan opknappen.
62. Mijn stiefmoeder vindt het leuk om te schilderen, en af en toe wordt ze door bekenden gevraagd om een schilderij te maken.
63. Mijn stiefmoeder volgt een avondcursus pottenbakken, en ondertussen heeft ze de hele kast vol staan met zelfgemaakte mokken.
64. Mijn stiefmoeder is familiefoto's aan het uitzoeken, want binnenkort wil ze er een fotoboek van gaan maken.
D2. **Fillers**

1. Mijn broertje studeert fysiotherapie in Nijmegen, en volgend jaar wil hij daar graag op kamers gaan wonen.
2. Mijn broertje werkt op zaterdagavond in een café, dus op zondag slaapt hij meestal tot zeker twaalf uur 's middags.
3. Mijn broertje is heel handig met computers, en daarom wordt hij door familie vaak gevraagd om dingen te maken.
4. Mijn broertje heeft tien jaar een abonnement op de Donald Duck gehad, maar laatst heeft hij dat toch maar opgezegd.
5. Mijn stiefbroer is jeugdleider bij de voetbalclub, en dit seizoen is hij voor het eerst kampioen geworden met zijn team.
6. Mijn stiefbroer wordt binnenkort voor de eerste keer vader, en na de geboorte neemt hij zich een paar weken vrij.
7. Mijn stiefbroer werkt als chauffeur bij een groot bedrijf, dus een groot deel van de week zit hij op de vrachtwagen.
8. Mijn stiefbroer stemt meestal op een socialistische partij, want daar is hij het op de meeste vlakken mee eens.
9. Mijn neefje wilde vroeger altijd profvoetballer worden, maar daar was hij helaas toch niet goed genoeg voor.
10. Mijn neefje loopt tegenwoordig stage bij de Rabobank, en daar moet hij iedere dag een pak aan.
11. Mijn neefje houdt heel erg van pittig eten, dus bijna overal gooit hij een grote lepel sambal overheen.
13. Mijn achterneefje heeft laatst zijn rijbewijs gehaald, dus nu is hij niet meer afhankelijk van het openbaar vervoer.
14. Mijn achterneefje heeft een bijbaantje bij de Gamma, en daar staat hij meestal achter de servicebalie.
15. Mijn achterneefje doet dit jaar eindexamen, en volgend jaar wil hij de lerarenopleiding biologie gaan doen.
16. Mijn achterneefje vindt het leuk om te volleyballen, maar helaas heeft hij geen tijd om elke week twee keer te trainen.
17. Mijn beste vriend speelt basgitaar in een coverband, en vooral in de zomer moet hij regelmatig optreden.

18. Mijn beste vriend probeert te stoppen met roken, en daarom heeft hij nicotinepleisters en kauwgum gekocht.

19. Mijn beste vriend heeft een hele lichte huid, dus in de zomer moet hij zich insmeren met een hoge factor.


21. Mijn buurjongetje heeft sinds kort een skateboard, en laatst is hij daar heel hard mee gevallen.

22. Mijn buurjongetje spaart voetbalplaatjes van de Jumbo, en af en toe komt hij bij ons langs om een stapeltje op te halen.

23. Mijn buurjongetje is afgelopen week twaalf geworden, dus na de zomer gaat hij naar de middelbare school.

24. Mijn vader heeft een hele grote collectie LP’s, maar door ruimtegebrek kan hij die niet allemaal in de woonkamer bewaren.
34. Mijn vader weet heel veel van moderne kunst, en in de studeerkamer heeft hij een kast met allemaal kunstboeken.
35. Mijn vader is katholiek opgevoed, maar een aantal jaar geleden heeft hij zich officieel uitgeschreven bij de kerk.
36. Mijn vader eet heel graag mosselen, maar alleen voor zichzelf vindt hij het te veel werk om een hele pan klaar te maken.
37. Mijn stiefvader is geboren in Duitsland, maar inmiddels woont hij al ruim vijfendertig jaar in Nederland.
38. Mijn stiefvader heeft altijd een volle bos haar gehad, maar de laatste tijd begint hij toch een beetje kaal te worden.
40. Mijn stiefvader kijkt iedere zondag naar Studio Sport, maar over het algemeen is hij niet heel erg geïnteresseerd in voetbal.
41. Mijn schoonvader is al jaren lid van de schutterij in het dorp, en dit jaar heeft hij zich eindelijk koning geschoten.
42. Mijn schoonvader gaat over twee jaar met pensioen, en dan wil hij heel graag een rondreis door Amerika gaan maken.
43. Mijn schoonvader heeft een flinke baard en snor, en om die te verzorgen haalt hij altijd speciale olie bij de kapper.
44. Mijn schoonvader houdt heel erg van goede koffie, en laatst heeft hij een nieuwe espressomachine gekocht.
45. Mijn oom is een echte wijnliefhebber, en op vakantie in Frankrijk gaat hij altijd wijnproeven bij de plaatselijke wijngaard.
46. Mijn oom is laatst op het werk in het zonnetje gezet, want dit jaar is hij daar al vijfentwintig jaar in dienst.
47. Mijn oom werkt heel dicht bij huis, dus als het mooi weer is gaat hij altijd met de fiets of te voet naar het werk.
48. Mijn oom is vorig jaar gescheiden, en na de scheiding is hij verhuisd naar een appartement midden in de stad.
49. Mijn opa vindt het heel leuk om te vertellen over vroeger, en soms pakt hij zelfs een oud fotoboek erbij.
50. Mijn opa is opgegroeid op een boerderij op het platteland, dus vroeger moest hij altijd stallen uitmesten en op het land helpen.
51. Mijn opa heeft een hele grote kippenren in de tuin, en naast kippen houdt hij daar ook eenden, fazanten, en een kalkoen.
52. Mijn opa vindt het leuk om een beetje te klussen, dus overdag is hij vaak een beetje in het schuurtje aan het rommelen.
53. Mijn overgrootvader zat in de oorlog bij het verzet, en toen heeft hij vooral eten gebracht naar adressen met onderduikers.
54. Mijn overgrootvader had negen jongere broers en vier jongere zusse, en daarom is hij al heel jong begonnen met werken.
55. Mijn overgrootvader zit al een aantal jaar in een rolstoel, maar mentaal is hij gelukkig nog altijd helemaal goed bij.
56. Mijn overgrootvader kijkt overdag veel televisie, en het allerliefste kijkt hij naar natuurdocumentaires op de BBC.
57. Mijn oudoom heeft in de oorlog een tijdje gevangen gezeten in Duitsland, maar na de oorlog is hij gelukkig vrijgekomen.
58. Mijn oudoom heeft zelf nooit kinderen gekregen, maar voor de neefjes en nichtjes is hij altijd een soort extra opa geweest.
59. Mijn oudoom loopt tegenwoordig met een wandelstok, want door de ouderdom heeft hij veel last van de knieën.
60. Mijn oudoom woont sinds een paar jaar in een bejaardentehuis, want op een gegeven moment kon hij niet meer goed traplopen.
61. Mijn buurman wast bijna elke zaterdag de auto, maar als het slecht weer is slaat hij toch af en toe een week over.
62. Mijn buurman heeft vorig jaar een serre aan het huis laten bouwen, en nu heeft hij achterom nog maar een klein stukje tuin over.
63. Mijn buurman moet ruim twee uur rijden naar het werk, dus doordeweeks stapt hij altijd om zes uur ‘s morgens in de auto.
64. Mijn buurman heeft een klein vijvertje in de voortuin, en laatst heeft hij daar een aantal kleine visjes in losgelaten.