Empirical investigations of grammatical gender in American Heritage Norwegian

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MA thesis in linguistics
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http://www.duo.uio.no/

Trykk: Reprosentralen, Universitetet i Oslo

Synopsis

This thesis investigates the gender system in American Norwegian by looking at the indefinite article and the personal pronoun, in addition to the definite suffix. The overarching goal is to determine to what degree the original three-gender system is retained on the level of the individual. The data was collected during fieldwork in the American Midwest, using methods developed by the present author, especially devised for illiterate speakers. In total, the analysis includes data from 25 speakers.

In order to determine the number of genders expressed in the indefinite article, the personal pronoun, and the definite suffix, a baseline was developed specifically for this speaker group, based on earlier descriptions of Heritage Norwegian (Haugen 1969; Hjelde 1992), as well as descriptions of especially relevant dialects in Norway.

My conclusion is that all speakers show at least relicts of the original three-gender system, and there is no sign of a complete restructuring of the gender system, nor a breakdown of gender altogether. Still, there are great inter-individual differences, and the system is unstable. Nearly half (11/25) of the participants clearly have retained the original three-gender system and show little or no difficulty with grammatical gender. 4 more speakers have retained all the original gender-distinctions, but these speakers are less target-consistent. The remaining 10 speakers have lost some of the original gender-distinctions. For 8 speakers, there is no longer a separate pronoun referring to feminine inanimates. For 3 of these 8 speakers, the gender system is further weakened since their indefinite article shows *no* gender distinctions. 2 speakers have developed a new pronoun system, which is based on referential gender instead of grammatical gender. In general, there is massive overgeneralization of the masculine form.

The three-way distinction in the definite suffix is however retained for all speakers, and the use of definite suffix is to a great extent target-like. It is argued that the retention of these declension classes could explain the overall retention of the gender system. However, the correspondence between definite suffix and gender agreeing targets must be established for each individual speaker, and for one speaker, there seems to be no such correspondence.

Additionally, it is demonstrated how a usage-based approach to language could explain important findings like the discrepancy between retention of the definite suffix and other agreeing forms, and the overgeneralization of masculine forms.

Acknowledgements

First of all, thanks to my supervisor Janne Bondi Johannessen, both for introducing me to American Norwegian, and for guiding me throughout the whole project. Thank you for believing in me from the start! I have really enjoyed doing fieldwork and traveling to workshops with you. Thank you so much for giving me the chance to do so!

I am grateful to all the American Norwegian speakers and the Gausdal speakers who were willing to share of their time and their language with me. It was a pleasure getting to know you all!

I wish to thank all the linguists at and outside of ILN who have helped me, either by commenting on parts of the text, answering my questions or helping me find relevant literature. I am so impressed with the kindness and helpfulness everyone has been showing me. A special thanks to Arne Torp for lending me his valuable Hovedfagsoppgave from 1969. It has really been of great importance!

Thanks to MultiLing for supporting my fieldwork financially, in addition to granting me a scholarship.

A big thank you to all fellow students and friends at the study hall, for making it the place to be. Especially thanks to Nina for all nerdy lunch breaks and for being at Blindern even more than me.

Thanks to Eirik for helping me fix the tables and the figures!

Thank you, Kai, for proofreading the whole thesis. You have officially read more than my husband will ever do!

I would also like to thank my parents and my siblings, for your unconditional love and support, and for all your prayers.

Finally, Torkil: Thank you for always cheering me up! Thank you for making dinner and taking care of the household while I have been lost in this project. Thank you for coming to Blindern just to keep me company. And the list goes on. I could never have done this without you!

This thesis exceeds 100 pages due to inclusion of many tables and figures. Altogether, the text consists of 225.366 characters (not including spaces), which amounts to 98 pages à 2300 characters.

Oslo, May 8

Linn Iren Sjånes Rødvand

Abbreviations and symbols

Abbreviations and symbols used in glossing:

DAT	dative
DEF	definite
F	feminine
M	masculine
N	neuter
PRON	pronoun
3SG	third person singular
=	clitic
< >	extralinguistic information

Abbreviations and symbols used throughout the text:

AmN	American Norwegian
CANS	Corpus of American Norwegian Speech
EN	European Norwegian
L1	first language
L2	second language
PPI	personal pronoun referring to inanimate
RQ	research question
/ /	indicates broad transcription with the International Phonetic Alphabet
⟨ ⟩	indicates transcription à la Hagen et al. (2017), cf. section 5.3.1

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1 Introduction

1.1 Object of study

Over the span of approximately 100 years, more than 800.000 Norwegians immigrated to the United States of America in search of a better life. To the new country, they brought the Norwegian language, which has been maintained in Norwegian American areas until the present day. This variety of Norwegian is called *American Norwegian* or *Heritage Norwegian* and is considered a *heritage language*, that is, a language confined to the home since it is a minority language in the society where it is found (Benmamoun, Montrul, and Polinsky 2013: 6–7). Research on heritage languages has proven to be of great importance for the general understanding of language acquisition, attrition and preservation of the L1 (Scontras, Fuchs, and Polinsky 2015). Since it is still a quite new research field, all research on specific grammatical phenomena in individual heritage varieties is important (Benmamoun, Montrul, and Polinsky 2010: 43). This master's thesis investigates grammatical gender in American Norwegian, and is thus part of the bigger field of grammatical description of heritage languages, which again could feed into linguistic theories of grammar and acquisition. American Norwegian is a *dying* language, since its speakers are mostly over 70 years old (Johannessen 2015b: 297). This has been an important factor when choosing methodology, as the data collected for this thesis are an important part of the documentation of this variety.

The American Norwegian language has been of interest to researchers since the beginning of the 20th century (see e.g. Flom 1900, 1903; Flaten 1900). However, until the 2010s, the object of study was mainly the American Norwegian vocabulary, and especially English loanwords (Hjelde 2012: 183). Only recently has grammatical aspects like e.g. gender, word order and modality been investigated (see e.g. Johannessen 2015a; Johannessen and Larsson 2015; Larsson and Johannessen 2015; Westergaard and Anderssen 2015; Åfarli 2015; Lohndal and Westergaard 2016), and the need for further investigation of the grammatical structure is obvious. The object of study in this thesis is the gender system of American Norwegian. I have investigated gender in the indefinite article and the personal pronoun, in addition to properties of the singular, definite suffix. The overarching goal is to answer the question "to what degree is the original three-gender system retained in American Norwegian?" as this

issue has not been answered definitely although it has been discussed recently by both Johannessen and Larsson (2015) and Lohndal and Westergaard (2016).

The empirical data on which this thesis is based have been collected through fieldwork carried out in the spring of 2015, together with Professor Janne Bondi Johannessen. In the course of a week, we visited three towns in Minnesota and Wisconsin, and 25 speakers of American Norwegian were presented with elicitation tasks developed for this specific project. The present work has benefitted from the NorAmDiaSyn project (2010–2013) in finding informants. The NorAmDiaSyn project has since 2010 recruited American Norwegian speakers who are descendants of Norwegian immigrants who arrived in America before 1920, and who have learned Norwegian at home (see Johannessen and Salmons 2012: 139–40).[1]

1.2 Research questions and main results

The overarching goal is to answer the following question:

To what degree is the three-gender system found in traditional Norwegian dialects retained in American Norwegian?

This can only be answered by looking at agreeing elements. Therefore, the empirical question guiding the present work are the following:

1. How many genders can be identified on the agreeing elements indefinite article and personal pronoun for 3SG for each individual speaker?

2. To what extent are the different genders identified on the pronouns exponents of lexical gender?

3. To what extent is there a correspondence between the definite suffix and the other gender agreeing elements?

4. Is the feminine gender particularly vulnerable?

In order to answer these research questions, abundant empirical data were required. These data will be presented throughout this thesis. The detailed analysis turns out to be crucial for uncovering patterns that would otherwise have been invisible: The individual gender systems

[1] For information about the NorAmDiaSyn project, see http://www.tekstlab.uio.no/norskiamerika/prosjekt.html.

are captured, and theoretical questions such as the status of the definite suffix in relation to gender can be answered. The detailed description of the data is also warranted since it pertains to a dying linguistic variety. The main findings resulting from this project are presented below:

- A great amount of inter-individual variation was found, in line with both Johannessen and Larsson (2015) and Lohndal and Westergaard (2016). The speakers turned out to fall into four different groups when it comes to degree of retention of the original gender system.
- Nearly half (11/25) of the participants clearly have retained the original three-gender system and show little or no difficulty with grammatical gender. The remaining participants show clear deviations with respect to the baseline. Similar to the findings of Lohndal and Westergaard (2016), the deviations are mainly overgeneralization of the masculine form. There is no evidence of a general breakdown of gender or a radical reorganization of the gender system as a whole.
- For 10 speakers there is a change within the pronominal system. 8 speakers have lost a distinct pronoun form referring to grammatically feminine inanimates, whereas 2 speakers have developed a new, referential pronoun system.
- There is an overall correspondence between the retention of the original pronoun system and retention of the three-way distinction within the indefinite article (cf. figure 16, section 7.7.1). This indicates that the gender system forms an integrated system rather than a series of unrelated elements incidentally agreeing with the noun.
- The use of the definite suffix is to a great extent target-like for all speakers, contrary to the other agreeing elements. It is argued that the retention of these declension classes could explain the overall retention of the gender system, even for speakers with 60 years of disuse of the system. Moreover, the deviation pattern of the definite suffix consists in overgeneralization of the masculine form, co-occurring with other masculine agreeing forms. There thus seems to be a correspondence between the definite suffix and other agreeing elements. However, this link must be established for each individual speaker.
- The feminine gender is not found to be more vulnerable than the neuter gender. However, since the feminine gender has lost a distinct form for pronouns referring to inanimates, it could become vulnerable if it were passed on to the next generation.

On the one side, the gender system in this heritage group is vulnerable, since substantial deviations from the baseline are found for over half of the speakers. This would be in line with Lohndal and Westergaard (2016) and contra Johannessen and Larsson (2015). On the other side, all participants have relicts of the original three-gender system, and there are no signs of a *new* gender system with e.g. two genders. This is taken as an indication that the traditional Norwegian gender system is not as non-transparent as often suggested, e.g. by Rodina and Westergaard (2013) and Lohndal and Westergaard (2016).

1.3 On the term American Norwegian

The variety of Norwegian investigated in this project is often referred to as American Norwegian (Flom 1903, 1926; Haugen 1969; Hjelde 1996; Johannessen 2015b), a term which also will be used throughout this thesis. However, it should be pointed out that this term is problematic, in the same way that the term Norwegian could be problematic. Such terms give the impression of representing one indiscrete whole and undermines the fact that there are varieties within the language called (American) Norwegian. The Norwegian emigrants came from all parts of Norway, and thus spoke widely different dialects (Haugen 1969: 27). The basis for American Norwegian then, is quite diverse. Hjelde (1992) finds it appropriate to describe just one American Norwegian variety, which corresponds to a certain area of Norway, namely the region of Trøndelag. He speaks of the *trøndsk* dialect of America instead of the Norwegian language as a whole.[2]

In addition to the various geographical origins, the immigration to America lasted for a good one hundred years, which gives rise to generational differences as well. People from the same dialectal area in Norway could be speaking quite differently if they emigrated during the early or the late period respectively. In the U.S. today we thus find descendants of Norwegian immigrants with different dialectal backgrounds, and belonging to different generations according to when their ancestors left Norway.

Another term sometimes used to label the same varieties, is Heritage Norwegian (see e.g. Johannessen 2015a; Larsson and Johannessen 2015), a term which will be used interchangeably with American Norwegian (abbreviated AmN) throughout this thesis. This

[2] The term *trøndsk* could in turn be problematized since there are also several varieties of *trøndsk*.

term highlights the fact that it is a *heritage language*. Speakers of a heritage language are called *heritage speakers*, a speaker group that is known to display great heterogeneity when it comes to proficiency in the heritage variety (cf. section 2.2.1). This further complicates describing American Norwegian as one indiscrete variety.

The informants who were consulted for the present project came from three different areas in the Midwest, where it is argued to be one common variety of American Norwegian (Hjelde 2015; Johannessen and Laake 2017). Whereas this makes it easier to speak of American Norwegian as one variety, the issue of individual differences is still highly relevant. The speakers will therefore be categorized into subgroups based on their proficiency in the relevant grammatical aspects in chapter 7.

1.4 Outline of the thesis

In chapter 2 the necessary background and theory for understanding the object of study is given. This includes the sociolinguistic history and present-day situation of American Norwegian, as well as important aspects of and challenges with research on heritage languages. The notion of grammatical gender is discussed, mainly building on the work of Corbett (1991), before the relevant aspects of the gender system of Norwegian are presented. Chapter 3 summarizes the most relevant research on gender in heritage languages, including in Heritage Norwegian. In chapter 4, the research questions are presented, as well as the methodology applied in this project: elicitation tasks. These elicitation tasks are evaluated in the first part of chapter 5, followed by a description of challenges faced during fieldwork. How the data processing has been carried out is then presented, before we get a short overview of the results on group-level. Chapter 6 lays the foundation for the analysis, as this chapter establishes the baseline according to which the occurring gender forms could be analyzed. In chapter 7, the result of this analysis is presented. Since there are variations found in the use of gender marking forms, the speakers are categorized according to which agreeing forms they apply. In chapter 8, the theoretical implications and interpretation of some of the findings are discussed, namely how the singular, definite suffix should be analyzed, and whether the feminine gender is particularly vulnerable. Chapter 9 offers a summary and some concluding remarks.

2 Background and theory

In order to understand the goal of this project, some background and basic concepts need to be introduced. First, the background of the American Norwegian language will be outlined in section 2.1, before we turn to the more general notion of heritage speakers and some important findings from the research thereof in section 2.2. In section 2.3, the notion of gender and agreement will be explained, followed by a discussion of the status of the definite suffix in relation to gender within different grammatical frameworks. Finally, the Norwegian gender system is presented in section 2.3.2.

2.1 American Norwegian and its origin

American Norwegian is the language spoken by the American descendants of Norwegian emigrants. The first Norwegians arrived in New York in 1825. From then and until 1930, at least 810 000 Norwegians entered the United States, and less than ten percent of these returned to Norway (Haugen 1969: 28). In the 1850s, most emigrating Norwegians were farmers from the southwest and central mountain regions of Norway who could not see a future on the countryside because of the industrial revolution. After 1879, however, Norwegians emigrated from all parts of Norway – north and south, city and country. The majority of Norwegians settled in Illinois, Wisconsin, Minnesota, North Dakota and South Dakota in the Midwest. Here they established Norwegian communities with Norwegian churches and newspapers (Haugen 1969: 24–27).

The stable, bilingual situation found in the larger Norwegian settlements consisted in Norwegian being used at home, in the neighborhood and in church, whereas English was spoken at school and in larger social groups. During World War 1, however, a period of great Americanization started, introducing English services in the churches, and leading to a weakening of newspapers in foreign languages, among other things. Still, in 1940, 658 220 Americans declared that Norwegian was the language of their childhood home (Haugen 1969: 28–30).

Today, the Norwegian language spoken in the U.S. is a dying language (Johannessen 2015b: 297). Most speakers of this variety are born before 1940, and they have not passed the language on to the next generation. Haugen (1969: 52) explains:

The learning of English took place precisely in those fields where American culture had the most to offer that was new and unfamiliar. Norwegian became the vehicle of all that was old and familiar, traditional and precious; but it lacked the power of renewal which a living language must have.

2.2 Heritage speakers

Speakers of American Norwegian are called *heritage speakers* since they have a *heritage language* as their first language (L1). The heritage language is a minority language in the country/region where the heritage speakers live. This means that their L1 can only be used in a limited number of domains in society, such as the home and/or the immediate community. Ultimately, the majority language becomes the dominant language for heritage speakers, leading to further loss of their L1 (Benmamoun, Montrul, and Polinsky 2010, 2013). Therefore, these speakers lie somewhere between L1 native speakers[3] and L2 learners. In some ways, heritage speakers resemble L2 learners, but in some areas of L1 grammar, they perform target-like and prove stable development (Benmamoun, Montrul, and Polinsky 2013). Research on heritage grammars can therefore shed light on important questions concerning language acquisition, how grammatical structures are stored and accessed in the human brain, and which factors contribute to keeping a grammar stable, among other things (Montrul 2008; Benmamoun, Montrul, and Polinsky 2013; Johannessen and Salmons 2015).

2.2.1 Findings from research on heritage speakers

One of the most important findings of research on heritage speakers is that an L1 is not necessarily stable in adults (Benmamoun, Montrul, and Polinsky 2010). When an individual is immersed in a society where the dominant language is not this individual's L1, the increase in proficiency of the community's dominant language in this individual leads to a weakening of the L1. Usually the heritage speakers become dominant in their L2 (that is, the majority language of the society) (Montrul 2008: 163), even when the heritage language is still spoken within the family and groups in the local community (Huls and Van de Mond 1992; El Aissati and Schaufeli 1999). Eventually, this leads to loss of language-specific morphosyntactic

[3] The term *native* will be used throughout this thesis to designate "a prototypical (educated) native speaker living in a monolingual environment (if living in a bilingual one, [s/he] has not undergone attrition)" with ""native" pronunciation and a sizable and comprehensive vocabulary" (Benmamoun, Montrul, and Polinsky 2013: 2). They are thus contrasted with heritage speakers.

structures, as well as the lexicon, which Bar-Shalom and Zaretsky (2008: 281) characterizes as "a hallmark of a 'heritage language.'"

A hallmark of the heritage speakers as a group is the great degree of heterogeneity when it comes to proficiency in the heritage language (Polinsky 2006: 195; Montrul 2008: 162; Benmamoun, Montrul, and Polinsky 2010: 11; 2013: 7). Speakers who are (predominantly) exposed to their L1 until puberty, and thus get sufficient input, will establish the heritage language fully (Montrul 2008). These speakers show a high level of retention of their L1 (Schmid 2016). For speakers who become bilingual in childhood, we see a great decrease in L1 proficiency (Montrul 2008; Schmid 2016). There is generally a trade-off between the acquisition of L2 and loss of L1 in children attending school in their L2 (Montrul 2008), which is the situation for all of the present-day American Norwegian speakers.

2.2.2 A baseline for the heritage speakers

Several studies have shown that heritage speakers diverge from native speakers in areas such as phonology, lexical knowledge, morphology, syntax, and case marking (Benmamoun, Montrul, and Polinsky 2010). One major issue, however, is whether it is fruitful to compare heritage speakers to native speakers at all. A comparison group is indeed necessary in order to make any claims about heritage grammars, but a great challenge is deciding what the baseline for such a group should be. According to Polinsky (2008: 41), the baseline should not be the corresponding standard language:

> *The baseline language for a heritage speaker is the language that s/he was exposed to as a child. Since heritage speakers are typically not exposed to the language norm through formal schooling, the baseline should not be identified with the standard language available to fully competent speakers of A.*

For American Norwegian, then, this means that the baseline should not be the present-day written standards *Bokmål* or *Nynorsk*[4] or the contemporary Oslo dialect. Lohndal and Westergaard (2016: 4) point out that finding a baseline for American Norwegian could be a challenging task. How could we get access to the primary linguistic data these speakers have been exposed to? After all, we are dealing with 3rd or 4th generation immigrants, which means that the Norwegian dialects brought to the U.S. are between 100 and 150 years old. Due to the

[4] Norwegian has two written standards, *Bokmål* and *Nynorsk.* Put briefly, Bokmål is based on Danish, whereas Nynorsk is based on Norwegian dialects. Due to influence from Danish, the Bokmål standard of Norwegian allows for both a traditional three-gender system, and a two-gender system, cf. section 2.3.2.

lack of data across generations,[5] studies such as the one carried out by Lohndal and Westergaard (2016: 4) (cf. section 3.2.3) make a comparison "between the heritage language grammar and the non-heritage variety—with the caveat that the latter does not necessarily represent the input to the generation of heritage speakers studied." Whereas such a comparison gives us insight into the different ways one language can change, it cannot inform us on the way the grammar of the individual has changed. A description of what serves as baseline in the present thesis is given in section 6.2.

2.2.3 On the vulnerability of heritage grammars

One question researchers are trying to answer is why heritage grammars are so vulnerable. Many different answers have been suggested (Schmid 2016), but in addition to influence from the dominant language (*dominant language transfer*, see Montrul 2010), processes like *incomplete acquisition* and *attrition* have been used to explain the special traits of heritage grammar (Seliger and Vago 1991; Polinsky 1995, 2006, 2008; Tsimpli et al. 2004; Montrul 2008; Benmamoun, Montrul, and Polinsky 2010). *Attrition* refers to "the loss of any language or any portion of a language by an individual or a speech community" (Freed 1982: 1), and is defined with respect to the language that is lost. As Gürel (2002: 114) points out, "The term 'loss' itself implies the absence of something that previously existed," and in the context of heritage speakers we speak of properties that have been acquired by the individual in question, but that subsequently have been lost due to disuse of L1. *Incomplete acquisition*, on the other hand, refers to traits that are never acquired due to insufficient language input during childhood since the L1 is not used in a full range of domains (Benmamoun, Montrul, and Polinsky 2010). The two processes could be hard to distinguish since it requires knowledge of when acquisition stops. Schmid (2016) argues that incomplete acquisition and attrition should not be viewed as qualitatively distinctive phenomena, but rather as a continuum. Other scholars, *inter alia* Larsson and Johannessen (2015), maintain that the distinction between the two is theoretically important, as the two processes could give different results; they argue that violations of V2 in main clauses in Heritage Norwegian is caused by attrition, whereas incomplete acquisition has led to change in embedded word order.

[5] In fact, recordings of AmN speech from 1931 (Seip and Selmer), 1935–1948 (Haugen and Oftedal) and 1987 (Hjelde) are available at http://tekstlab.uio.no/norskiamerika/opptak.html. However, most of these recordings are not transcribed.

The questions of why heritage grammars are vulnerable, and which mechanisms could be identified, are interesting. Ultimately, how we answer these questions depend on the general theory of acquisition and of how grammar is organized in the mind. More importantly, however, the findings of investigations on heritage grammar should influence the modelling of acquisition and mental grammar. The issue of attrition vs. incomplete acquisition in the present informants would be a research project of its own, and it will therefore not be further discussed in this thesis. Rather, the present project intends to describe the part of grammar in question in such detail that the questions raised in this section could be answered in the future.

2.3 Grammatical gender

Grammatical gender has been a popular area of research the last 20 years (Enger and Corbett 2012: 287). Hockett's (1958: 231) classic definition of gender is widely used, and it will also be taken as a point of departure in this thesis: "Genders are classes of nouns reflected in the behavior of associated words." This means that the determining criterion for gender is *agreement*, observed in elements other than the noun itself (Corbett 1991: 4; 105). Steele (1978: 610) explains *agreement* in the following way: "The term agreement commonly refers to some **systematic covariance** between a **semantic or formal property** of one element and a formal property of another" (my emphasis). According to (Corbett 1991), the *semantic property* of the noun is central in all gender systems, as all gender systems that have been investigated have a *semantic core*. Enger (2004c: 132) explains that the semantic core refers to nouns that designate human beings, as these nouns always are assigned to gender based on central semantic categories like animate/inanimate and male/female. Examples from Nynorsk are *gut*$_{(M)}$ 'boy', kvinne$_{(F)}$ 'woman', and *barn*$_{(N)}$ 'child', as "it seems to be a rather common phenomenon for there to be a semantic rule which assigns an 'inanimate' gender such as neuter to young or small animates" (Dahl 2000a: 103). However, a great number of nouns in many gender languages are to a large degree idiosyncratic from the semantic point of view, and this is especially true of inanimate nouns (Dahl 2000a: 101). These nouns could be assigned to gender based on *formal properties* of the noun, either phonological (i.e. based on a single form of the noun) or morphological (i.e. based on several forms in the paradigm) properties (Corbett 1991: 33). Languages with a clear correlation between form and gender are said to have *overt* gender, whereas the lack of such a correlation is the hallmark of *covert* gender (Corbett 1991: 62). In many languages, we find nouns whose gender seems arbitrary

both from the semantic and the formal point of view. This has been claimed for Norwegian inanimate nouns, cf. section 2.3.2.

2.3.1 Gender and agreement

In the terminology of Corbett (1991, 2006) on agreement, the element that determines the form of another element is called *controller*. The element that is formally affected by agreement, according to the controller, is called *target*. However, the term *target* is commonly used in research on bilingual and heritage speakers to mean "the correct form/construction" as seen from the perspective of a native speaker. Thus, a heritage speaker could perform more or less *target-like*, i.e. more or less like a native speaker. The term *target-like* in this sense will be used in this thesis, and the notion which is captured by *target* for Corbett, will in this project be referred to as *agreeing element*[6] or *formal category*. In Nynorsk, the adjective *liten* 'small' will have different form depending on the gender of the noun it is modifying. We thus get *lit**en***$_{M}$ *gut*$_{(M)}$ 'small boy,' *lit**a***$_{F}$ *jente*$_{(F)}$ 'small girl' and *lit**e***$_{N}$ *hus*$_{(N)}$ 'small house.'[7] Here the adjective is the agreeing element, and *gut, jente* and *hus* are the respective controllers. However, not all agreeing elements distinguish among all possible genders in a given language. For instance, the Norwegian distal demonstrative has only two different gender forms, namely *den*$_{M/F}$ vs. *det*$_{N}$ 'that,' even if Norwegian has three genders. The syntactic surroundings where the agreement is taking place, that is, where the target and the controller are positioned in relation to each other, is called the *domain* (Corbett 2006: 4). In the Nynorsk examples above, the domain of the agreement is the noun phrase. Within this domain it is uncontroversial to talk of agreement, but there is no consensus among linguists what the full domain for agreement should be (Corbett 1991: 105). Relevant issues are whether there should be different terms for noun phrase-internal and noun phrase-external agreement, and whether the sentence boundary is of importance in the context of agreement.

Personal pronouns and the Agreement Hierarchy

Linguists who draw a principled line between different domains of agreement could be excluding personal pronouns as exponents of grammatical gender because they occur in a

[6] Note that *agreeing element* refers to whole *classes* of words or morphemes. The indefinite article is thus considered to be one agreeing element, even though it has three different forms in Nynorsk (*ein, ei eit*).
[7] Subscripts will be used to identify gender agreeing forms, M(asculine), F(eminine) and N(euter). Subscripts in parenthesis are used to indicate the gender of *indefinite* nouns, as gender cannot be induced from this form.

noun phrase-external – and sometimes even in a cross-sentential – domain.8 In gender languages such as Norwegian, personal pronouns referring to animates could sometimes be in conflict with the gender of the aforementioned noun. For instance, if the Norwegian noun barn(N) 'child' is mentioned, the personal pronoun referring to the same child might correspond to the biological sex of the child, instead of to the neuter gender of the noun barn. In this thesis the terminology of Dahl (2000a: 106) will be adopted: when the gender is based on the referent of a noun phrase, we speak of *referential gender*, whereas the property of the noun is called *lexical gender*. When the choice of pronoun is based on referential gender we talk of referential agreement. Referential agreement would be referring to $barn_{(N)}$ 'child' with han_{M} 'he' or ho_{F} 'she,' depending on biological sex. This is opposed to lexical agreement, which is based on lexical gender (Corbett 1991: 226).[9] We would talk of lexical agreement if $barn_{(N)}$ 'child' is referred to with det_{N}. In languages without lexical gender, such as English, the personal pronouns are clearly chosen on the basis of referential gender.[10] However, according to Corbett (1991: 5), "Most scholars working on agreement include the control of anaphoric pronouns by their antecedent as part of agreement."[11] The reason for including pronouns as agreeing elements is that the same categories are found here as with e.g. attributive adjectives, which no one will dispute as "real" gender agreement. Moreover, the agreeing elements seem to form a continuum, which Corbett (Corbett 1991: 226; 2006: 207) calls the agreement hierarchy: attributive > predicate > relative pronoun > personal pronoun. This hierarchy says something about the likelihood for an agreeing element to agree with the gender of the noun (lexical gender), rather than with some (semantic) property of the referent (referential gender): "For any controller that permits alternative agreements, as we move rightwards along the AH, the likelihood of agreement with greater semantic justification will increase monotonically (that is, with no intervening decrease)" (Corbett 2006: 207).

[8] Some linguists, such as Josefsson (2006: 1366), will only count personal pronouns as gender agreeing elements if they have an overt antecedent. According to Josefsson, a pronoun without antecedent is semantic in nature, and is therefore substantially different from pronouns agreeing with *grammatical* gender.
[9] Corbett uses the terms *semantic* (i.e. referential) and *syntactic* (i.e. lexical) agreement. For the sake of consistency, Dahl's (2000a) terms are used for both gender and agreement.
[10] There are exceptions, however. For instance, *she* is frequently used for referring to ships. For a discussion of gender and the use of pronouns in English, see Curzan (2003).
[11] An anaphoric pronoun refer back to a noun already mentioned in the discourse (Faarlund, Lie, and Vannebo 1997: 210).

The status of the definite suffix

Corbett does not want to draw a line between different domains, and highlights the similarities across domains as an argument that all *systematic covariance* should be called agreement. However, he would follow Hockett's definition of gender and reserve the term for cases where "the evidence comes from agreement markers attached to **other sentence elements**" (Corbett 1991: 147, my emphasis). This means that "evidence taken **only** from the nouns themselves, such as the presence of markers on the nouns as prefixes or suffixes, does not **itself** indicate that a language has genders" (Corbett 1991: 146, my emphasis). This restriction makes sure that we do not have to talk about separate genders for e.g. nouns derived with the same derivational suffixes; it seems undesirable to have a distinct gender in English for nouns ending in, e.g. *–tion.*

Hockett's definition both assumes and reinforces a distinction between *declension classes* and gender. A declension class is according to Aronoff (1994: 64) "a set of lexemes whose members each select the same set of inflectional realizations."[12] The reason for distinguishing between declension class and gender could be due to either facilitation of description or theoretical conviction. In describing and comparing grammatical systems it could be fruitful to distinguish between properties that are just relevant for the noun (i.e. declension classes) and properties within the noun that are relevant for elements outside the noun itself (i.e. gender). This way the existence of several declension patterns within one gender does not necessarily lead to the conclusion that we are dealing with different genders. In some dialects there is a distinction between strong and weak nouns, where the latter designate nouns that end in an unstressed vowel in the indefinite, singular form (Sandøy et al. 2016: 650). In such dialects we count both myr$_{(F)}$ 'bog' and *vise*$_{(F)}$ 'song' as feminine nouns, even though they have different singular definite suffixes: *myr**e*** 'the bog' and *vis**a*** 'the song' in the Halling dialect (Venås 1977: 87). We say that they belong to the same gender based on the fact that both nouns take the indefinite article *ei*$_{F}$, the possessive *mi*$_{F}$, and both could be modified by the adjectival form *lita*$_{F}$ 'small.'

The difficulties arise when there is a general correspondence between the declension class marker and other agreeing elements, so that a given gender is associated with one declensional suffix. The theoretical question then becomes whether evidence from the nouns

[12] A slightly modified definition is found in Enger (1998: 140), which takes into consideration the fact that there would be a very high number of declension classes if we require the suffix to be totally similar for all members of one class: "a group of words that inflect in the same or similar fashion."

themselves could indicate gender, in addition to evidence from surrounding words. The answer to this question will largely be determined by the more general view of grammar taken by individual linguists. More specifically, it depends on whether a principled distinction is assumed between the system of words vs. the system of phrases (cf. Williams 2007: 353). Within linguistic theory, there are two major dividing lines that are relevant when it comes to the treatment of information expressed word-internally vs. word-externally. First, it is the distinction between the generative paradigm on the one hand and the approaches within cognitive linguistics on the other hand. Then, within generative theories, there is the division between *lexicalist* and *non-lexicalist* theories. The position taken by these theories will be laid out below.

Cognitive Linguistics is a family of broadly compatible theoretical approaches that according to Croft and Cruse (2004: 1) are guided by the following three major hypotheses: Language is not an autonomous cognitive faculty, grammar is conceptualization and knowledge of language emerges from language use. In accordance with the latter hypothesis, many linguists working within Cognitive Linguistics propose a usage-based model for language use, language acquisition and language change (Croft and Cruse 2004: 291). We will return to the usage-based model in section 8.1.4. According to these approaches, grammar is *non-modular*, i.e. not organized into independent components such as syntax, morphology, and lexicon (cf. Langacker 1991: 516). Rather, "There is a uniform representation of all grammatical knowledge in the speaker's mind" (Croft and Cruse 2004: 255), which in essence is conceptual. That is, all linguistic expressions (i.e. morphemes, words, whole phrases, syntactic constructions) are pairings of grammatical form and meaning (Croft and Cruse 2004: 2; 260), only differentiated by complexity and degree of specificity. Within this paradigm, then, there is no principled distinction between word-internally and word-externally expressed information, and the definite suffix could express gender on a par with other agreeing elements.

In contrast to cognitive linguistics, an assumption within the generative paradigm is that grammar is modular (Anderson 1999: 111).[13] However, the number of modules, their content and the way they interact differ among different generative theories. On non-lexicalist accounts like Distributed Morphology (DM), there is no separate morphological module

[13] A module is "informationally encapsulated" so that information from other modules could not be implemented directly (Fodor 1983: 37).

responsible for word formation and inflection (Halle and Marantz 1993: 111–12). Rather, what Halle and Marantz (1993: 114) call "Morphological Structure" is a syntactic representation serving as an interface between syntax and phonology, "where 'phonology' is broadly conceived as the interpretive component that realizes syntactic representations phonologically." In DM, it is not words that are merged in syntax, but rather morphosyntactic feature bundles. These are post-syntactically spelled out as either inflectional morphemes or separate words (Barbiers 2013: 916), without a clear theoretical distinction between the two options. On such accounts, then, the definite suffix could express gender.

Lexicalist approaches,[14] on the other hand, assume that inflected words are inserted as a whole into the syntactic structure (Newmeyer 2013: 86). Thus, operations on the word level must apply elsewhere than in the syntax (Williams 2007), either in the lexicon or in a separate morphological component. Either way, the internal structure of words – like e.g. affixes – is on lexicalist approaches invisible to the syntax (cf. Anderson 1992: 84). In the framework of Lexical Functional Grammar (LFG), a separate morphological module for word formation and declension is assumed (Asudeh and Toivonen 2015). This follows from the *Lexical Integrity* principle, a central tenet of LFG:

> *Subsequent work within LFG has adopted Lexical Integrity as a fundamental principle differentiating word-internal structure from phrasal syntax […] and establishing words as indivisible, undecomposable units at c-structure (Asudeh, Dalrymple, and Toivonen 2013: 6).*

Principles like this could help explain Lødrup's (2011: 123) analysis of gender in the Oslo West dialect. When discussing the number of genders in this variety, he clearly states that declension (i.e. word-internal marking) should not be considered when debating gender, because morphology should be kept separate from syntax.[15]

However, LFG operates with two different syntactic modules, *constituent structure* (c-structure) and *functional structure* (f-structure). Importantly, the Lexical Integrity principle applies at the c-structure, but not necessarily at f-structure: "Syntactically relevant information can be contributed to the f-structure by **bound morphology**, even though the internal complexity of words is invisible at c-structure"(Asudeh, Dalrymple, and Toivonen 2013: 9, my emphasis). As an example they cite the definite forms of Swedish nouns (e.g.

[14] Note that the term *lexical/lexicalist* is sometimes used with a different content, see e.g. Corbett (2006: 71–72) and Wechsler (2009).
[15] The exact wording is: "Selv mener jeg at det er uheldig å trekke inn bøying som kriterium for genus, fordi det ville bidra til å undergrave skillet mellom morfologi og syntaks."

väg-en ‘the road’), where definiteness – which is “information that is syntactically relevant” – is expressed through a suffix (Asudeh, Dalrymple, and Toivonen 2013: 8). In principle, then, the framework of LFG does not necessarily reject that gender could be expressed in e.g. the definite suffix.

Other lexicalist work like e.g. Selkirk (1982), Di Sciullo and Williams (1987), and Anderson (1992) similarly allow for syntactically relevant features to be present in bound morphology. An example is the plural form of nouns in languages like English, where the verb must agree in number. This could be realized through a “shared vocabulary” between morphology and syntax (i.e. the same features) (Di Sciullo and Williams 1987), or by dividing morphological operations into two groups, inflection and derivation, and attributing the syntactically relevant morphology (inflection) to the syntactic component.

In conclusion, theorists working with a separate morphological module might be more reluctant to count the definite suffix as an exponent of gender since they maintain a strict division between morphology and syntax. However, as we have seen, all theories must be able to encompass bound morphology that is relevant to syntax. Importantly, though, that the bound morphology is relevant for the surrounding words has to be stated on individual grounds first. Therefore, the issue of the definite suffix as a gender marker has to be discussed on the level of the individual variety, or as we will see in section 8.1, perhaps even on the level of the individual.

2.3.2 Gender in Norwegian

In Norwegian, the gender of a noun determines (and is thus visible through) the form of articles, adjectives, and demonstratives (including possessives) accompanying this noun. Additionally, the gender of the noun determines which personal pronoun can be used to refer to it (Beito 1986: 235; Sandøy 1996: 62; Faarlund, Lie, and Vannebo 1997: 149; 52). In traditional Norwegian dialects, the pronoun system is grammatical (i.e. subject to lexical agreement) when referring to inanimate objects, thus: *ein*$_{\text{M}}$ *bil*$_{\text{(M)}}$ ‘a car’ – ***han***$_{\mathbf{M}}$, *ei*$_{\text{F}}$ *flaske*$_{\text{(F)}}$ ‘a bottle’ – ***ho***$_{\mathbf{F}}$, *eit*$_{\text{N}}$ hus$_{\text{(N)}}$ ‘a house’ – ***det***$_{\mathbf{N}}$ (Braunmuller 2000: 25–31). The same pronouns are used for reference to animates as well, but in line with the Agreement Hierarchy

introduced in the previous section, the choice of pronoun is more likely to be based on referential gender rather than lexical gender for animates.[16]

Table 1 below illustrates the gender agreeing forms in Nynorsk. Almost all Norwegian dialects distinguish between the three genders *masculine, feminine* and *neuter*. However, not all agreeing elements distinguish between all three genders. Most adjectives (e.g. *fin*$_{M/F}$ vs *fint*$_{N}$ 'beautiful'), and demonstratives (e.g. *den*$_{M/F}$ vs. *det*$_{N}$) only distinguish between neuter and non-neuter, as can be seen in the table below.

Gender agreement in Nynorsk						
		determiner			**adjective**	**personal pronoun**
		indefinite article	demonstrative	possessive		
attributive agreement	M	*ein* bil	*den* bilen	*min* bil	ein *fin* bil	
	F	*ei* lampe	*den* lampa	*mi* lampe	ei *fin* lampe	
	N	*eit* bord	*det* bordet	*mitt* bord	eit *fint* bord	
predicative agreement	M		bilen er *sånn*	bilen er *min*	bilen er *fin*	
	F		lampa er *sånn*	lampa er *mi*	lampa er *fin*	
	N		bordet er *sånt*	bordet er *sånt*	bordet er *fint*	
anaphoric agreement	M					bilen - *han*
	F					lampa - *ho*
	N					bordet – *det*

Table 1: Overview of gender agreement in Nynorsk, based on Conzett, Johansen, and Sollid (2011: 14). The agreeing elements are given in italics. All nouns cited here refer to inanimate objects.

Normally any given noun in any one dialect will belong to (just) one of the three genders (Faarlund, Lie, and Vannebo 1997: 149–50). According to Trosterud (2001), of all the 31,500 nouns in the Nynorsk dictionary (Hovdenak et al. 1998), 52% are masculine, 32% are feminine, and only 16% are neuter. To get an idea of how this distribution might be in speech, Lohndal and Westergaard (2016: 7) investigated the occurrences of the three indefinite articles by the speakers over 60 years old in the Nordic Dialect Corpus (Johannessen et al. 2009). These numbers are somewhat different from the results based on the Nynorsk

[16] Cross-linguistically, there is a higher chance for a pronoun referring to a biologically gendered being of agreeing with the lexical gender of the noun if the antecedent is found within the same clause as the pronoun (Meyer and Bock 1999: 289–90).

dictionary: of all occurrences of the indefinite article, 64,8% are masculine, 18,2% are feminine and 17% are neuter. These numbers are similar to the distribution between the genders found by Rodina and Westergaard (2015: 150) in a corpus of child language recorded in Tromsø (Anderssen 2005).

Changes in some Norwegian gender systems

There is seemingly an ongoing change from a three-gender system to a two-gender system in the Oslo dialect (Fretheim 1985 [1976]; Lødrup 2011), and some varieties in the Northern part of Norway (Sollid, Conzett, and Johansen 2014), including the Tromsø dialect as it is spoken by younger speakers (Rodina and Westergaard 2015). The reduction in these varieties consists in a merge of masculine and feminine gender to a common gender. However, the declension which was previously associated with feminine, *-a*, is for the most part retained. A reduction from a three-gender to a two-gender system was seen much earlier in written Danish and Swedish (Braunmuller 2000). In Norway this change took place in the dialect of Bergen in the 15th century, when the masculine and feminine forms of the indefinite article, possessives, adjectives as well as the definite forms became indistinguishable, leading to a total loss of the feminine gender (Beito 1954: 1; Nesse 2002: 214). In Bergen, as well as in København (Denmark) and Stockholm (Sweden), there was considerable contact with a related variety, namely Middle Low German, which Trudgill (2013) argues is a prerequisite for gender reduction to take place in Scandinavian (see also Nesse 2002: 229). Note that the pronominal system in Bergen contrasts with the one found in the other varieties mentioned. In Bergen, there was no introduction of the new inanimate personal pronoun *den*. The previously feminine nouns were thus referred to with the masculine pronon *han* in the dialect of Bergen, whereas *den* is used in other varieties for inanimates of previously masculine or feminine gender (see Nesse 2002: 224–25 for the contemporary situation). In such varieties, *han* is used for reference to male animates only. *Ho* is in all these varieties, including in the Bergen dialect, only used for reference to female animates (Trudgill 2013: 80–81).

Gender assignment in Norwegian

It has often been claimed that gender assignment in Norwegian is completely arbitrary outside of the semantic core (e.g. Næs 1952: 181; Venås 1997: 98). However, some scholars highlight the correlation between some semantic field and specific genders (Faarlund, Lie, and

Vannebo 1997; Bobrova 2013; Nesset 2006), and Trosterud (2001) suggests 43 rules, both formal and semantic, to show that gender assignment is indeed rule-driven in Norwegian. Another general view has been that Norwegian has *covert* gender, which means that the gender of a noun cannot be predicted from its form (Faarlund, Lie, and Vannebo 1997: 150).[17] Enger (2004c: 137), on the other hand, highlights that according to Corbett (1991: 117), the distinction between overt/covert gender is not sharp, but gradual. Furthermore, Enger argues that many variants of Scandinavian have overt gender to some extent. This is most obvious in masculine agreement, since the same formal element is found on all agreeing elements, including on the noun itself. This is illustrated in example (1), written in Bokmål:

(1)	*en*	*slit-en*	*mann*	*– d-en*	*mann-en*
	a.M	tired.M/F	man.M	– that.M/F	man.M-DEF.M[18]

This phenomenon is called *alliterative concord* (Corbett 1991: 117), which is a special case of overt gender. We will come back to this property of Norwegian in section 8.2.2. However, due to limitations of the current project, the basis of gender assignment in Norwegian will not be further discussed.

Definite suffixes as exponents of gender

A crucial issue when discussing gender in Scandinavian varieties is the status of the definite suffix. According to the definition of gender formulated by Hockett (1958: 231), gender is only seen on other words than the noun itself, cf. section 2.3.1. This means that the definite marker in Norwegian, which is realized as a suffix on the noun, should *not* be taken as an exponent of gender. However, in many varieties of Scandinavian, "the shape of the definiteness suffix is closely connected to gender" (Enger and Corbett 2012: 316), in the sense that there is one distinct definite suffix corresponding to each of the three genders. It is therefore not unusual to treat the definite suffix as a gender exponent (see e.g. Faarlund, Lie, and Vannebo 1997; Dahl 2000a). However, we saw in section 2.3.1 that Lødrup (2011) was reluctant to accept the definite suffix as a gender marker. In spite of the previous citation, Enger and Corbett (2012: 292) also want to keep a principled distinction between the definite

[17] In derived forms, however, there is frequently overlap between suffix and gender; nomina agentis in *–er* are masculine, verbal nouns in *-ing* are feminine, *-eri* are neuter and so forth (Faarlund, Lie, and Vannebo 1997: 153).

[18] This suffix is also indicative of singular number. However, all definite examples in this thesis will be singular, and SG is therefore not included in the glosses for the definite forms.

suffix and other gender agreeing elements since agreement is a matter of syntax, whereas declension is a matter of morphology without implications outside of the noun itself. In section 8.1 the status of the definite suffix in American Norwegian will be discussed.

3 Previous research

3.1 Gender in heritage varieties

According to Corbett (2006: 2–3), gender is related to both syntax, morphology, semantics and pragmatics. In other words, this is a rather complex category. As was pointed out in section 2.3, gender assignment could be quite arbitrary. Therefore it is not surprising that second language learners struggle with the acquisition of gender (Cook 2016: 1; Alarcón 2010). The question then becomes how heritage speakers are dealing with this complex, grammatical category. The only way to get information about a gender system is through gender agreement (cf. section 2.3). Heritage speakers of Russian (Polinsky 2008) and Spanish (Montrul, Foote, and Perpiñán 2008) exhibit errors with gender agreement, which could be a sign that the gender system is not stable or has undergone change. In Russian heritage language in the United States, Polinsky (2008: 55) found that while the category of gender still existed in the grammar of the heritage speakers, it had undergone reanalysis so that it now was significantly different from the system of the baseline. Russian gender assignment rules are based on declensional classes, but these classes are lost in American Russian. Therefore, the gender assignment in American Russian has come to be based on other criteria, namely the ending of the citation form. The heritage speakers form two different groups based on gender assignment: the more proficient speakers have retained a three-gender system, whereas the less proficient speakers have lost the neuter gender, and only distinguish between nouns ending in a consonant (masculine) and nouns ending in a vowel (feminine) (Polinsky 2008: 55).

3.2 Gender in Heritage Norwegian

There is an ongoing debate on the status of gender in American Norwegian. Two recent papers (Johannessen and Larsson 2015; Lohndal and Westergaard 2016) have discussed this subject, using quite similar methodology. Both papers take Hockett's (1958: 231) definition of gender as point of departure. Still, they have reached different conclusions. These studies will be considered in turn. First, we will see whether earlier research on gender in Heritage Norwegian expressed any concern on the status of the gender system.

3.2.1 Haugen (1969) and Hjelde (1992, 1996)

Haugen (1969) does not investigate the gender system of AmN as such, but he presents an overview of gender assignment in English loanwords. For the present purposes, the most important findings are perhaps that "masculine accounts for more than seven times as many fixed genders as the other two added together" and that "all 'changes' [i.e. 'unexpected' gender assignment] were in the direction of masculine" (Haugen 1969: 442; 48). Still, there are examples of loanwords assigned to all three genders, and there is no reason to believe that the three-gender system is threatened in any way. The same point applies to Hjelde's (1992) description of the *trøndsk* variety of American Norwegian. His main concern is explaining gender assignment to English loanwords, which is also the subject in Hjelde (1996), and nothing points in the direction of a vulnerable gender system. Quite on the contrary, Hjelde (1992: 83) points out that: "eit og anna døme på 'feil' genus har eg også funne, men dette er svært sjeldan og botnar som oftast i semantiske omtolkingar eller 'feiltolkingar.'"[19] It could also be mentioned that Hjelde (1992: 89) explicitly says that the gender of the noun determines the choice of definite suffix. The works of Haugen (1969) and Hjelde (1992, 1996) will prove valuable sources for interpreting the loanwords in section 6.1

3.2.2 Johannessen and Larsson (2015): gender is stable

Johannessen and Larsson (2015: 16) are investigating noun phrase-internal agreement in American Norwegian,[20] using Corpus of American Norwegian Speech, often abbreviated CANS (Johannessen 2015b). This corpus is developed by The Text Laboratory at the University of Oslo. When the investigation for their article was carried out, CANS contained recordings of 34 speakers, recorded in the 2010s. These recordings consist of sociolinguistic interviews between speaker and researcher, and conversations between speakers (Johannessen and Larsson 2015: 2). The recordings have been transcribed and morphologically tagged, and are thus searchable. Johannessen and Larsson (2015: 6–7) look at determiners and adjectives occurring with a noun in the corpus, where *determiner* includes the pre-posed article, the pre-posed possessive, and the demonstrative. They also consider the definite suffix an exponent of gender "as long as we also find gender agreement morphology in the noun phrase,"

[19] "There are occasionally examples of nouns appearing with the 'wrong' gender, but this happens very rarely and is normally caused by semantic reinterpretations or 'misinterpretations'" (my translation).
[20] They also consider Heritage Swedish, but I will not focus on that part here as it is irrelevant for the present study.

(Johannessen and Larsson 2015: 5). They argue that in the context of language acquisition, the singular definite suffix will give an unambiguous clue to the gender of the noun (cf. section 2.3.2). Therefore, they find it unwise to fully disregard this suffix.

Johannessen and Larsson (2015: 13) find that nearly all examples of the definite, singular suffix are target-consistent.[21] From this they hypothesize that it is gender *agreement* which is problematic for some heritage speakers, and not gender *assignment* (Johannessen and Larsson 2015: 7). Turning to agreement, Johannessen and Larsson (2015: 13) conclude that "gender is in place in the overall majority of speaker," based on the fact that they *only* find target-like examples for 20 of the 34 informants. However, they find great inter-individual variation; while some are fully target-consistent, one informant produces not-target forms in 38% percent of her relevant utterances. The most attrited speakers show a weak tendency to generalize the masculine gender (Johannessen and Larsson 2015: 7; 17). Because of the individual differences, they take a closer look at the two informants that produce the most deviations. One of them has a two gender-system (M/F vs N) originating from an urban, Eastern Norwegian dialect, whereas the other has a more traditional dialect with a three gender-system (Johannessen and Larsson 2015: 8). When it comes to the deviating forms, Johannessen and Larsson (2015: 15) find that there are individual strategies for dealing with gender agreement that are not necessarily shared by all speakers.

Johannessen and Larsson (2015: 9) conclude that the two speakers in question have retained their original system since they mostly produce target-like agreement and since the errors are unsystematic and without any clear pattern (Johannessen and Larsson 2015: 16):

> *The […] possibility is that gender is in fact stable in Heritage Scandinavian, and that the variation is more superficial, with the cases of non-target-like agreement being production errors. In [this] case, we expect the type of task and the processing difficulty to be factors, and we expect the behavior of the heritage speakers to be more inconsistent.*

The other possibility, that the system as a whole was changed, would result in more systematic deviations, they argue, and mention examples like loss of the feminine gender or errors only in adjectives etc. However, "Nothing in the data suggests […] that feminine gender is particularly vulnerable" (Johannessen and Larsson 2015: 13).

[21] Johannessen and Larsson (2015: 4) are using the written standard Norwegian Bokmål with the possibility for both two and three gender-system (cf. section 2.3.2) as a baseline in their study, since they found the relevant properties to be the same here as in older American Norwegian.

Johannessen and Larsson (2015: 6) find a higher percentage of deviations in noun phrases containing an adjective in addition to a determiner (*complex* noun phrase), in comparison to noun phrases that only consist of one element in addition to the noun (*simple* noun phrase); "It is the complexity of the noun phrase that causes the difficulty with agreement" (Johannessen and Larsson 2015: 8). They thus conclude that the *linguistic* factor of greatest importance when it comes to difficulties with gender agreement is *complexity* (in a pre-theoretical sense).

3.2.3 Lohndal and Westergaard (2016): gender is vulnerable

Lohndal and Westergaard (2016: 6) investigate gender *assignment* in AmN through looking at gender agreement on the indefinite article (also called indefinite *determiner*) and the possessive. They explicitly state that they will exclude the definite suffix on the noun (2016: 1): "Affixes on the noun expressing e.g., case, number or definiteness are not exponents of gender (Corbett, 1991, p. 146)." They claim that the declension of a noun never has any consequences for other elements outside the noun, which is the hallmark of gender. However, they do discuss whether excluding the definite suffix as a gender indicator is the best solution for Norwegian. This discussion is carried out on the basis of the Oslo dialect which can be said to have a two-gender system. In this variety there are no other signs of the feminine gender than the definite suffix (declension marker) and the postnominal possessive on historically feminine nouns (Lødrup 2011). In addition to this, they draw on insights from studies of acquisition of the gender markers and declension class markers in the dialect of Tromsø. Rodina and Westergaard (2015) show that whereas the definite suffix is in place from early on, the agreeing elements (indefinite article, possessives) are not learned until approximately the age of seven. The children do not seem to establish a link between the gender category and the definite suffix, and Lohndal and Westergaard (2016) take this as an indication that this suffix should only be taken to indicate declension class only.

Lohndal and Westergaard (2016) look at noun phrases containing indefinite articles or possessives, and definite singular forms of the noun in CANS (cf. section 3.2.2). They find that the definite suffix is retained. As regards the indefinite article, they do find evidence for all three genders. However, 39% of the feminine nouns appear with masculine gender marking. For neuter nouns, the number is as high as 48,8%. They also report that neuter nouns

were used with the feminine article (*ei*) in 10,4% of the instances.[22] The neuter nouns have a higher proportion of masculine agreement than feminine nouns do, both for all tokens and for type. Therefore, the authors conclude that the neuter gender is especially vulnerable in Heritage Norwegian (Lohndal and Westergaard 2016: 7–9). The details of the possessive will not be presented here, but they generally find no evidence of a clear two-gender system in any of the informants or on a collective level. All findings are presented on group level (50 informants), as there is too little data to treat each informant separately (Lohndal and Westergaard 2016).

The overall conclusion is that gender is vulnerable in AmN, with the main pattern being overgeneralization of the masculine gender to both feminine and neuter nouns (Lohndal and Westergaard 2016: 10). Like Johannessen and Larsson (2015), Lohndal og Westergaard (2016) do not find evidence of a new, reduced system, but rather a general erosion of gender. Also, the different results for suffix and other agreeing elements makes Lohndal and Westergaard (2016: 12) conclude that "the definite suffix does not have a gender feature."

3.2.4 Conclusion

To sum up, Johannessen and Larsson (2015) claim that the gender system is in place for most speakers of AmN, as can be seen from the great degree of target-consistent gender agreement in CANS. Difficulties with gender agreement could largely be explained by the complexity of the noun phrase. Lohndal and Westergaard (2016), on the other hand, conclude that the gender system is vulnerable, since they find extensive overgeneralization of masculine agreement. Johannessen and Larsson (2015) take the target-like use of the definite suffix as an argument that gender assignment is unproblematic, whereas the same findings lead Lohndal and Westergaard (2016) to conclude that the definite suffix is not an exponent of grammatical gender. Also, both studies conclude on group level, even though Johannessen and Larsson (2015) find a lot of inter-individual variation among the AmN speakers. It thus remains an open question whether the situation in AmN is similar to what Polinsky (2008) found in Heritage Russian: different gender systems for different speakers. The need for more research and more data for each participant is obvious. The status of the definite suffix is also unclear, and will therefore be investigated in relation to the other agreeing elements in this thesis.

[22] This analysis is probably not correct and is therefore discussed in some detail in section 6.2.3 The overall conclusion of Lohndal and Westergaard (2016), however, does not hinge on this.

4 Research questions and methodology

The overarching goal in this master's thesis is investigate to what extent the original three-gender system is retained in American Norwegian. As we saw in section 2.3, gender could only be seen in agreeing elements. For Norwegian, the gender agreeing elements are the indefinite article, demonstratives, possessives, adjectives, and the personal pronoun (cf. section 2.3.2).The agreeing elements that have been the main focus of this study, are the indefinite article and the personal pronoun. In section 4.1 the background for choosing these specific agreeing elements is presented. Then, the research questions will be presented. As pointed out in the previous section, the gender system has to be investigated at the level of the individual. The methodology of this project reflects the need for sufficient relevant data for each speaker, as it consists of two free elicitation tasks. *Free* indicates that the elicitation task is not strictly formalized but rather designed to elicit naturalistic speech. The design and procedure will be explained in detail in section 4.3.2, after a presentation of the participants.

4.1 Focus of research

Since the overarching question is whether the original, three-gender system is retained, the agreeing elements to be considered should distinguish between three genders (cf. section 2.3.2). Ideally, one should consider all gender agreeing elements. Due to the limitations of this project, however, the focus has been to elicit the two agreeing elements indefinite article and personal pronoun. However, other gender cues occurring in the data will also be considered, as this will serve to broaden the understanding of the complete gender system.

4.1.1 Personal pronouns as a valuable source

Prior to this project, research on gender in American Norwegian has focused on determiners and adjectives (Johannessen and Larsson 2015; Lohndal and Westergaard 2016), whereas the personal pronoun has not yet been investigated for gender purposes. In order to shed new light on the gender system in American Norwegian, this project is therefore considering the personal pronouns for 3SG as well as the indefinite article. As was shown in Table 1, there are three different pronoun forms in Nynorsk, as well as in traditional Norwegian dialects,

corresponding to the three grammatical genders masculine, feminine, and neuter respectively: *han, ho, det*. It is natural to take this system as point of departure, since most Norwegians who settled in the towns visited for this thesis came from rural areas with traditional dialects, cf. section 4.3.1. As was pointed out in section 2.3.2, pronouns referring to inanimate objects are most relevant in this respect, since they have lexical agreement as the only option. These pronouns are thus of primary interest, and are abbreviated PPI (*Personal Pronoun* referring to *Inanimate*) throughout this thesis. However, the personal pronouns could not be interpreted with regard to gender without additional data. Since the pronominal system for 3SG in Heritage Norwegian has not yet been investigated, it remains an empirical question whether it still is based on grammatical gender, cf. Curzan (2003: 19):

> *The personal pronouns, situated on the far right of the [Agreement] hierarchy, are both the most tenacious targets, for they retain gender agreement longest when the system is being lost from a language, and the most volatile targets, for they are, as Corbett (1991: 242) phrases it, 'the major initiator of changes in the balance between syntactic and semantic gender.'*

It is a possibility that the pronominal system has undergone change. Within Germanic languages, there are several examples of the basis for pronominal reference changing diachronically from lexical gender to referential gender (Howe 1996: 61).[23] For instance, Old English had three grammatical genders (masculine, feminine and neuter), which were reflected in determiners, adjectives, some numerals, possessives, and anaphoric personal pronouns. Eventually, the third singular personal pronoun was the only formal category left to express gender. At the same time, the principles for gender assignment changed, "from 'grammatical' to 'natural' gender" (Stenroos 2008: 445–50). This leads to the situation we find in standard present-day English, where the personal pronoun is almost exclusively chosen on the basis of animacy and sex: *he* (biological male) or *she* (biological female) for higher animates vs. *it* for inanimates (Howe 1996: 131; Stenroos 2008: 467). Knowing that this is diachronically a possibility, another formal category must be consulted in order to reveal the basis of the choice of 3SG pronouns in American Norwegian. To get the full understanding of the pronoun system, and thus also the gender system, reference to both animates and inanimates is required.

[23] Howe uses the terms *natural gender* and *grammatical gender*.

4.1.2 Combining the indefinite article and the personal pronoun

The indefinite article in AmN has already been studied (Johannessen and Larsson 2015; Lohndal and Westergaard 2016), but it has not been seen in relation to the personal pronoun. I argue that the combination of indefinite article and personal pronoun provide good information about the gender system for several reasons.[24] The first reason is linked to the Agreement Hierarchy (Corbett 1991, 2006), presented in section 2.3.1. Nouns referring to gendered entities could trigger different gender markings on different formal categories whenever there is a discrepancy between referential and lexical gender. An example in Norwegian is given in (2), referring to a male mailman:

(2) *I går* *såg* *eg* *eit* *postbod.* *Han* *bar* *på* *masse* *post*
yesterday saw I a.N mailman(N) PRON.M carried on much mail
'Yesterday I saw a mailman. He was carrying a lof of mail.'

According to the Agreement Hierarchy, attributive elements are most likely to agree with the lexical gender of the noun, which in (2) is neuter. In Norwegian, this would be the indefinite article, attributive adjectives and possessives, and in (2) the article (*eit*) is indeed neuter. The personal pronoun, on the other hand, is the target most prone to agreeing with the referential gender, which is masculine in example 2, since the mailman is a male. If both agreeing elements express the same gender, there is good reason for positing that this is the gender assigned to a given noun. It also gives us the opportunity to investigate the effect of animacy in the gender system and differences between formal categories in agreement.

Secondly, while the indefinite article is often considered a reliable gender cue in Norwegian (Faarlund, Lie, and Vannebo 1997: 150), Lohndal and Westergaard (2016: 11) argue that we cannot be sure that the article is chosen on the basis of the gender of the noun, since another possibility is that it is memorized as a chunk together with the noun. Thus, the indefinite article should not be the only gender indicator. The personal pronoun, on the other hand, is not susceptible to the same critique. While the personal pronoun *could* form a chunk together with the noun, as in example (3), it could also occur in any distance from its antecedent, as we see in example (4):

[24] These are the two agreeing elements Beito (1986: 155) considers when determining the number of genders in Nynorsk.

(3) ***Lamp-a,*** ***ho*** *står* *i* *hjørne-t.*
lamp(F)-DEF.F PRON.F stands in corner(N)-DEF.N
'The lamp is standing in the corner.'

(4) *Eg* *kjøpte* *ei* *ny* ***lampe*** *i går.*
I bought a.F new.M/F lamp(F) yesterday.

Eg *er* *fornøgd* *med* ***ho.***
I am happy with PRON.F

'I bought a new lamp yesterday. I am happy with it.'

The personal pronoun thus has to be retrieved for each individual noun,[25] and could therefore be a good indicator of grammatical gender. Complexity, pointed out by Johannessen and Larsson (2015) as a factor that could blur the "real" gender system, is also not a challenge since the nominal phrase would only consist of a personal pronoun.

4.2 Research questions

The different conclusions reached by Johannessen and Larsson (2015) and Lohndal and Westergaard (2016) may be an indication that the three gender-system has been retained for some speakers, but not for all. This will be in line with findings on heritage language in general, and in previous research on AmN (see section 3.2.2), showing that the speakers of heritage varieties form a continuum from the most proficient ones to the ones who only have receptive knowledge of the language (Benmamoun, Montrul, and Polinsky 2010: 8). The number of genders expressed might also differ among agreeing elements. This is often the case synchronically (cf. section 2.3.1), but the number of genders distinguished could also change at different points for different formal categories. Thus, in the history of English, the three genders were distinguished longer in the personal pronoun than in elements within the noun phrase (Stenroos 2008: 460).

The overarching goal with this project is to answer the following question:

[25] Possible exceptions to this could be fixed expressions such as "ka ho_F e, $klokka_F$?" in my dialect, lit. 'what is PRON.F, the $clock_F$?' meaning "what time is it?"

To what degree is the original three-gender system found in American Norwegian on the individual level?

In order to come closer to answering the overarching question, and with the abovementioned facts in mind, the original empirical questions this project sought to answer are:

1. How many genders could be identified in the agreeing elements indefinite article and personal pronouns for 3SG for each individual speaker?
2. To what extent are the different genders identified in the pronouns exponents of lexical gender?

During the project, it has become clear that additional research questions had to be answered. In addition to the targeted indefinite article and the PPI, the data from the elicitation tasks included a considerable amount of singular nouns in the definite form. Remembering the discussion concerning the definite suffix outlined in section 2.3.1, 2.3.2, 3.2.2 and 3.2.3, a relevant question that should be answered is:

3. To what extent is there a correlation between the definite suffix and the other gender agreeing elements?

Lastly, due to the development in some Norwegian dialects in areas of language contact (cf. section 2.3.2), a fourth question is worth asking:

4. Is the feminine gender particularly vulnerable?

4.3 Methodology

In order to get enough data for each single informant on the use of indefinite article and personal pronoun, two free elicitation tasks were developed and presented to AmN heritage speakers during fieldwork in three different towns in Minnesota and Wisconsin, USA. In order to answer research question 2, a third task was developed, designed to test comprehension rather than production. The data from this third task were not included in this thesis, since the task did not work out as planned. However, the design of the task is included in section 4.3.3.[26]

[26] The reason that the data from this task were not included will be explained in section 5.1.2.

4.3.1 Participants

All participants in this thesis are referred to with individual codes, and in that way made anonymous.[27] The code consists of the name of the area they come from, in addition to an individual number, e.g., sunburg08. This is an abbreviated form of the informant codes used in CANS (Johannessen 2015b), where the corresponding code would be sunburg_MN_08gk. In total, 30 people were interviewed for the present thesis, but the final analysis is based on only 25 of these speakers. Three participants did not complete one or both of the elicitation tasks, and were therefore excluded. One is not a heritage speaker as he is learning Norwegian as an L2 in adulthood, and thus has a different linguistic profile than the rest. One informant produced too little data for any analysis to be carried out (only one indefinite article, and two personal pronouns of non-masculine gender).

The participants' background and linguistic profile

The 25 informants to be considered in this thesis are between the age of 58 and 92, the average age being approximately 79 years; there are only two participants who are younger than 70 years old. There are 10 women and 15 men. All of them are descendants of immigrants arriving in the U.S. before 1920. One informant is a second generation immigrant, and one is fifth generation immigrant, whereas the rest have grandparents or great-grandparents who emigrated from Norway. All informants, except the second generation participant, live in or close to one of these three areas: Sunburg (MN), Spring Grove/Harmony (MN), and Coon Valley/Westby (WI). These are all quite small towns; according to the 2010 census, there were 100 people living in Sunburg, 1330 in Spring Grove, 1020 in Harmony, 765 in Coon Valley and 2200 in Westby. All these towns have traditionally had a high percentage of Norwegian immigrants and their descendants, and Spring Grove is even the oldest settlement of Norwegians in Minnesota (Haugen 1969: 614). Thus, Norwegian used to be the local language in all of these areas, also spoken in the churches. In 1969, Haugen (1969: 611) report about Coon Valley that "Norwegian is still spoken very widely on the secluded farms of this region, even by the youngest generation." A similar observation is made for Spring Grove: "The use of Norwegian has here been preserved in a remarkable

[27] All participants received an information letter and signed a consent form (see Appendix D and E) before they were presented with the elicitation tasks, in accordance with Norwegian Centre for Research Data (NSD), of which this project has been approved.

degree, even in the village itself. Many of the youngest generation can still speak the language, and it is widely used in the middle generation" (Haugen 1969: 614).

However, all of the informants in this project had to speak English at school, and the great majority had their confirmation in English. While half of them only spoke Norwegian until they started school, twelve of the informants knew some English before school age, often because they learned it from older siblings already in school. How much they spoke Norwegian after starting learning English varies a great deal, but generally, English took over as the dominant language. How much the Norwegian language has been used in adulthood is also subject to great variation. Some speak it every day with their spouse or a close family member, while some only speak it occasionally. Some of the participants also have had periods up to 60 years without speaking Norwegian at all. Only one participant has any formal education in Norwegian, but half of the informants say that they can read at least some Norwegian. However, only a few read Norwegian on a regular basis. Nearly all have ancestors from the eastern part of Norway, some of them in addition to other parts of the country, while three participants do not mention any relation to the eastern part of Norway.

When it comes to the more specific dialectal situation, the typical pattern for larger areas of Norwegian immigration was according to Haugen (1969: 342–43) that "there were cores of certain dialect groups which dominated the region, but always a large sprinkling of people from other districts." The prevailing dialects in Coon Valley originate in lower Gudbrandsdalen, particularly Biri, and farther up, the dialect is especially influenced by upper Gudbrandsdalen (Haugen 1969: 611). 'Spring Grove Norwegian' is on the other hand influenced heavily by the dialects of Hadeland and Sigdal, although there are some speakers of the Halling dialect in this area (Haugen 1969: 614).

4.3.2 Free elicitation tasks

The method used in this thesis consists of two different free elicitation tasks. In designing the two elicitation tasks, two considerations were particularly important. First of all, the main goal of both tasks was to make the informants talk about one specific item at a time, since there is a tendency for pronominal reference to be associated with topichood (Van Hoek 1997:

134), which basically is what or who a stretch of discourse is about (Dixon 2010: 171).[28] Secondly, the tasks had to be simple since the participants are elderly, bilingual people. Both high age and bilingualism could contribute to increased difficulty with language processing (De Bot and Makoni 2005; Yilmaz and Schmid 2012).[29]

The tasks were carried out using pictures, and thus participation did not require any reading or writing skill in Norwegian. The pictures were presented to the informants on a computer screen, and were accompanied by questions concerning the depicted object that triggered the use of pronouns. All pictures were meant to represent concrete nouns that are found with a certain frequency in CANS.[30] In the remainder of this chapter, the presentation of one picture to an informant is called a *screen*. The nouns occurring in the tasks are included in the appendix. The pictures were provided by Colorbox,[31] a picture database, or taken specifically for this project. Everything was recorded with a Zoom H4n Handy Recorder in .wav-format.

Free elicitation task 1

The first elicitation task consisted of pictures of eleven objects (including one "test" item),[32] which had been randomized using randomlist.org. Each object was shown on four different screens, occurring in a new place on each screen, cf. Figure 1 below:

[28] An "argument of a clause is topic if it is coreferential with an argument of a clause which is immediately (or almost immediately) preceding or following" (Dixon 2010: 171).
[29] Higher levels of education are associated with less decline in language skills and fewer memory problems (De Bot and Makoni 2005: 43), but this is not characteristic of the present informants.
[30] Since the corpus only consisted of 182 169 words during the preparations in April 2015 (Joel Priestly, personal communication), the least frequent words – which were still of the "most frequent" suitable words – occurred only six times in the corpus.
[31] For more information, see https://www.colourbox.com/.
[32] *Test item* refers to the screen(s) used while explaining what the participants were supposed to do. However, the instructions were so general that the data from the test items could be included as well.

Figure 1: Example of one item (here: AmN *portrett*$_{(N)}$ 'picture') occurring on four different screens. Note that the four screens where shown one at a time. For each screen, the participants had to answer the question "where is the portrait now?"

While looking at the first screen, the informants were asked to identify the object. This was to trigger the use of *anaphoric* pronouns, as well as to ascertain that they knew the target word. Additionally, this could result in occurrences of the indefinite article. If they could not remember the word, it was given to them. In most cases, the informants expressed familiarity with the provided word. They were then asked where the target object was placed on the screen. The goal was to obtain a discourse like (5):

(5)	Interviewer:	*Kva er dette?*	'What is this?'
	Participant:	*Det er* ***eit**$_N$* ***brød**$_{(N)}$*.	'It is **a bread**'
	Interviewer:	*Kor er brødet$_N$ hen?*[33]	'Where is the bread?'
	Participant:	***Det**$_N$* *ligg på bordet.*	'**It's** on the table'
	Interviewer:	*Kor er brødet no?*	'Where is the bread now?'[34]
	Participant:	*No er* ***det**$_N$* *på golvet.*	'Now **it's** on the floor'

In such a stretch of discourse, the target object will most likely only be mentioned in the indefinite form with the indefinite article once, in response to "What is this?" This task would then provide eleven indefinite articles, one for each noun. The personal pronouns, on the other hand, could occur in every response to the question "Where is X now?" which was asked for each of the four screens of the target object. This gives an ideal result of 44 personal pronouns altogether. The distribution according to animacy and gender is shown in table 2. The number in parenthesis represents the maximum number of personal pronouns expected.

	Masculine	**Feminine**	**Neuter**	**Total**
Animate	3 (12)	1 (4)	0	4 (16)
Inanimate	2 (8)	2 (8)	3 (12)	7 (28)
Total	5 (20)	3 (12)	3 (12)	11 (44)

Table 2: Number of items corresponding to the three genders and animate/inanimate in task 1. The number in parenthesis represents the maximum number of personal pronouns expected per informant.

Free elicitation task 2

In the second free elicitation task, which consisted of 19 items including two test items, there was only one picture of each object. The distribution according to gender and animacy is given in Table 3 at the end of this section. As in task 1, the informants were first asked to identify and name the item. The screens used here were also accompanied by questions about the target object, but the question varied according to the depicted item. Common for all questions was that they ensured that the target item would be topic. For animates, the questions were mostly variants of *what* someone was doing, or *why* someone was doing something. Example (6) illustrates the expected sequence corresponding to Figure 2.

[33] This is an orthographic version of the conversation which is not always identical to what was actually said. The definite form *brødet* was not always used, even if this is the grammatically correct form in this context. The possible influence of these definite forms will be discussed in chapter 5.3.3.
[34] When the participants had understood the task, the question was often just realized as "and now?"

Figure 2: A screen from free elicitation task 2, representing a masculine animate, *hest*$_{(M)}$ 'horse.'

(6)	Interviewer:	*Kva ser du her?*	'What do you see here?'
	Participant:	***Ein**$_{M}$ **hest**$_{(M)}$.*	'**A horse**'
	Interviewer:	*Kva gjer hesten$_{M}$?*	'What is the horse doing?'
	Participant:	***Han**$_{M}$ et.*	'**He**'s eating'

For inanimates, the task was mainly to describe the object, yielding a sequence like in (7), corresponding to Figure 3:

(7)	Interviewer:	*Kva ser du her?*	'What do you see here?'
	Participant:	***Eit**$_{N}$ **flagg**$_{(N)}$.*	'**A flag**'
	Interviewer:	*Korleis ser flagget$_{N}$ ut?*	'What does the flag look like?'
	Participant:	**Det**$_{N}$ er raudt$_{N}$, kvitt$_{N}$ og blått$_{N}$.	'**It**'s read, white and blue'

Figure 3: A screen from free elicitation task 2 of a neuter inanimate, *flagg*$_{(N)}$ 'flag.'

Whenever the first response did not include pronouns, new questions were asked for the same target item.

	Masculine	Feminine	Neuter	Total
Animate	3	3	1	7
Inanimate	3	4	5	12
Total	6	7	6	19

Table 3: Number of items corresponding to the three genders and animate/inanimate in task 2.

4.3.3 Comprehension task

This method aimed at revealing whether the pronoun system is still based on grammatical gender, by letting the personal pronoun be the only clue to identifying an item. The comprehension task consisted of screens depicting two items, most of which were familiar from the elicitation tasks. For each screen, the participants were first asked to name the items in the picture. As opposed to the elicitation tasks, the informants were in this task provided with the target noun if they provided a synonym or an English word, for reasons that will become obvious. Both objects on a given screen would be compatible with a certain description like e.g. being of the color white, or lying on a table, as in figure 4 below.

Figure 4: Example of a screen depicting two objects lying on a table, *flaske*$_{(F)}$ 'bottle' and *knife*$_{(M)}$ 'knife.' It was important that the informants had these exact nouns in mind, and not synonyms or English equivalents.

When presented with a screen, the participants heard a sentence which described either one or both of the depicted items. They were asked to point to the item(s) they thought was/were described. Crucially, the object was referred to with a personal pronoun. The screen in figure 4 was accompanied by sentence (8), the pronoun indicated in bold:

(8) ***Ho*** *ligg* *på* *bord-et*
PRON.F lies on table(N)-DEF.N
'it is lying on the table'

In the majority of cases, the items differed in grammatical gender in Norwegian. In these cases, the sentence could only refer to one of the items, namely the one that belonged to gender indicated by the pronoun. In example (8) corresponding to figure 4, the right answer would be *flaske*$_{(F)}$ 'bottle,' since it is the only feminine noun on the screen. When both nouns belonged to the same gender, there was no way of telling which item was intended. The correct answer would then be "both."

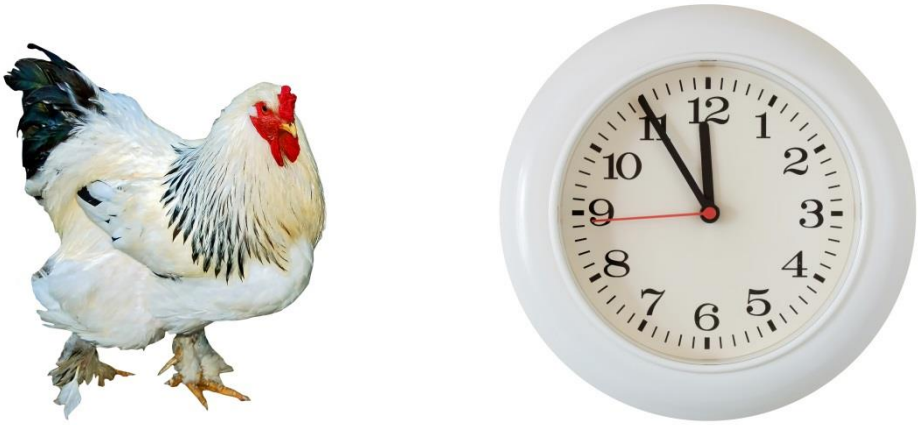

Figure 5: Example of a screen depicting two items of the same gender, *høne*$_{(F)}$ 'hen' and *klokke*$_{(F)}$ 'clock.'

The sentence in (9) was accompanying the screen in figure 5 (the pronoun is indicated in bold). The expected response to this would be "both."

(9) ***Ho*** *er* *kvit*
PRON.F is white.M/F
'it is white'

Table 4 below shows the distribution of gender (M, F, N) and animacy (i = inanimate, a = animate) according to the screens (n=13) and the target of each screen.

Gender and animacy of the two items on each screen	**Targeted item**
Ma/Fa	Ma
Mi/Fi	Mi
Mi/Ni	Mi
Mi/Fa	Fa
Fi/Mi	Fi
Fi/Mi	Fi
Fi/Ni	Fi
Na/Ma	Na
Mi/Ni	Ni
Ni/Fi	Ni
Fi/Fa	BOTH
Fa/Fa	BOTH
Ma/Mi	BOTH

Table 4: The distribution of gender (indicated in capitals) and the animacy (indicated in small letters) on the screens, and on the targeted items. i = inanimate, a = animate.

5 Experiment and results

One of the most influential researchers on heritage language, Maria Polinsky, writes that "so far, one of the most challenging aspects of heritage language studies has been finding the right methodology of investigation" (Polinsky 2008: 48). In this chapter, I will discuss some of the challenging aspects in working with heritage language and heritage speakers. It is important to evaluate the methodology employed in the current project, in order to see to what extent it is appropriate for the present purpose and the speaker group in question. The first section (5.1) is devoted to evaluating the tasks and explaining why this specific methodology was chosen. An important consideration when working with this speaker group is that the participants in some sense are part of a vulnerable group, as they are elderly people, speaking a minority language. Because of this, some choices have been made that might not be ideal from a scientific point of view. This will be the topic of section 5.2, together with challenges of more linguistic nature. Section 5.3 describes the procedure used in processing the data, as well as important decisions made during the data processing. Finally, there is a brief overview of the results on group-level in section 5.4.

5.1 Evaluation of the tasks

5.1.1 Free elicitation tasks

Overall, the free elicitation tasks were well suited for eliciting gender agreeing elements from this heritage speaker group. The target words were familiar to nearly all the informants, and many of the participants said they enjoyed the tasks. The participants had different patterns of response depending on the nature of the task. Task 1 was more repetitive than task 2, which resulted in a specific type of response for some participants, namely with a definite noun. This is illustrated in example (10). The resulting data thus contained very few personal pronouns.

(10)	Interviewer:	*Kor er brødet$_N$ hen?*	'Where is the bread?'
	Participant:	*Brødet$_N$ på bordet.*	'**The bread** on the table'
	Interviewer:	*Og no?*	'And now?'
	Participant:	*Brødet$_N$ på golvet no.*	'**The bread** on the floor now'

This problem was not recognized for task 2. However, pronouns produced in task 2 could be harder to interpret since the questions were less fixed than in task 1, cf. section 6.2.4. The combination of the two tasks was therefore advantageous.

American Norwegian is a dying language, and it is therefore of great importance that it is documented (Johannessen 2015b: 297). This has been a main concern in the present project. Ultimately, this means that getting *any* speech is more important than getting the targeted speech. This is why *free* elicitation tasks have been used instead of strictly controlled experiments. The elicitation tasks proved to be well suited for Heritage Norwegian in this respect. They resulted in a considerable amount of recorded speech of this moribund variety, and the informants found them interesting. Most importantly for the present study, the design provided a substantial amount of the targeted agreeing elements, in addition to extensive use of the definite suffix. Another positive effect of the design is that describing pictures is a way of obtaining naturalistic discourse (Chelliah 2014: 63), which is important in language documentation.

5.1.2 Comprehension task

The comprehension task did not work out very well. Most heritage speakers focused on the content of the predicate, i.e. the description of the object, rather than on the form of the subject, i.e. the personal pronoun. This means that upon hearing (8), (repeated here for the reader's convenience), the participants focused on *ligg på bordet* 'lying on the table,' seemingly without paying attention to the fact that the pronoun used was feminine.

(8) ***Ho*** *ligg* *på* *bord-et*
PRON.F lies on table(N)-DEF.N
'it is lying on the table'

Due to this focus, the answer given for all screens was "both objects," since the description of the object was always true for both items. Some of the Norwegian speakers in the comparison group (see section 6.3) also responded in this way, even if they clearly had a grammatically based pronoun system. Thus, the comprehension task did not necessarily reveal anything about the basis of the pronoun system and the gender of the nouns, and the data resulting from this task are therefore excluded from the rest of this thesis.

5.2 Challenges

5.2.1 Language anxiety

As we saw in section 2.2.1, there are traits that are specific to heritage varieties of a language. This can lead to a feeling of incompetence and insecurity for the heritage speakers when talking to a native speaker of the same language. A study by Sevinç and Dewaele (2016) shows that second- and especially third-generation Turkish immigrants in the Netherlands suffer from what they call *heritage language anxiety*, especially when speaking to native Turkish speakers (Sevinç and Dewaele 2016: 17). This feeling of insecurity and incompetence also seemed to be present in some of the American Norwegian informants. It was clear that the informants were aware that their AmN language differed from most varieties spoken in Norway today. Unfortunately, they seemed to be under the impression that the European Norwegian is the "appropriate" variety of Norwegian (cf. Eide and Hjelde 2015: 259–60). In order to make the informants feel comfortable with their own language and in the recording situation, it was important to provide approval of their way of speaking. Correcting them and trying to control the conversation too much seemed to me the opposite of this. Thus, the informants were not corrected when their response did not include the targeted constructions. Rather, I tried to rephrase the question or follow the informants' thoughts in order to create new questions that were more appropriate for the actual conversation.

Another consequence of their feeling of linguistic inferiority was that the informants often asked me if they had provided the "correct word" or if we would use a different term in Norway. This could sometimes lead to an undesired result, as some informants provided the Norwegian word for a given item instead of the American Norwegian word they would normally use. For instance, some said *bil* instead of *car* and *vei* instead of *road*, as they knew Norwegians would use these terms. Whenever this happened, I asked the informants if this was the word they normally used. If it was not, they were asked to provide the word most familiar to them. However, sometimes they would still use the Norwegian term through the rest of the experiment, and in such cases they were not "corrected." The problem with this is that the Norwegian word might not be assigned to the corresponding European Norwegian gender, and it could therefore be hard to analyze correctly. However, in these cases, the provided forms are compared to a European Norwegian baseline, for lack of a better

alternative. If we could be sure that these words were in fact newly learned, we would get an interesting insight into productive gender agreement.

5.2.2 The failure of instructions

As explained in section 4.3.2, the first elicitation task consisted of four screens of the same target item. One difficulty with this task was that the informants correctly could complete the task by just providing a prepositional phrase. That is, to the question "Where is X?" a short answer like "on the table" was a likely, and also a correct, response. To avoid this, I specifically asked some of the participants to use whole sentences when answering. Keep in mind that the desired response would contain a personal pronoun, i.e. "**It** is on the table." However, drawing their attention to their way of speaking normally led to use of the definite form of the noun instead of a personal pronoun, yielding e.g., "**The ball** is on the table". Other informants were asked to start their answer with the word *no* 'now,' since this would assure a subject following the verb in Norwegian, see example (11) below. However, this also normally led to the use of a definite noun instead of a personal pronoun. Additionally, it was hard to explain metalinguistic matters such as the desired structure of their response, especially since the informants had some trouble understanding my North Norwegian variety (even though I tried my best to adjust to their Eastern Norwegian way of speaking). The easiest way of explaining what they were supposed to do would be to provide an example of the expected answer, such as (11), referring to *ball*$_{(M)}$ 'ball':

(11)	*No*	*er*	***han***	*på*	*bord-et*
	Now	is	PRON.M	on	table(N)-DEF.N
	'now it is on the table'				

However, providing the target construction would result in priming[35] of the personal pronoun, which then would have to be discarded from the data. Due to this difficulty, the target sentence was sometimes given to the informants in English, i.e. "Now it's on the table." However, since it was uncertain a priori how this would affect the data, this was generally avoided. Eventually, I decided to draw as little attention as possible to how they phrased their answer, and thus stopped giving instructions. This proves the point of keeping it simple when

[35] "Structural priming can be defined as the speaker's tendency to use sentences in a form that is similar to that of sentences previously heard or produced" (Wolleb 2015: 19).

working with elderly heritage speakers. Fortunately from the perspective of language documentation, the lack of instructions provides more natural speech.

5.2.3 Lack of pronouns

Somewhat surprisingly, it seems that American Norwegian allows for null subjects.[36] Thus the following examples are answers to *kor er* ***kua*****$_{\mathbf{F}}$** *no?* 'where is **the cow** now?' and *korleis ser* ***høna*****$_{\mathbf{F}}$** *ut?* 'how does **the hen** look?' respectively:[37]

(12)	⟨går	åver	vei-en⟩		(13)	⟨ser	ut	såmm	æ	trøtt⟩
	goes	over	road-DEF.M			sees	out	like	is	tired
	'crossing the road' (coon_valley06)					'seems like is tired' (spring_grove07)				

On the one hand, this could be considered a problem since this construction does not provide the data needed for the present purposes. On the other hand, this phenomenon is interesting in its own respect, and the data collected here could be a valuable result for future research on null subjects. Because of the free design of the tasks, I had the opportunity to ask more questions if the informants' first response did not contain personal pronouns. However, this was not always done, for three different reasons. First of all, as already mentioned, lack of pronouns is also a result that should be analyzed (however, this will be beyond the scope of the present thesis). Secondly, the data should be as naturalistic as possible, since it is part of language documentation. The third reason is linked to language anxiety, and not giving the informants a feeling of not doing well enough and not providing "the correct answer."

The lack of pronouns is especially evident for inanimates. This includes both the use of null-subjects, the use of a noun instead of a pronoun, and responses consisting of only a prepositional phrase. Even though the tasks included more inanimate items and thus generated more sentences referring to inanimate objects than animates, the results include far more pronouns referring to animates than inanimates.[38] Unfortunately, then, the data on personal pronouns are not as numerous as sketched in section 4.3.2., especially in regard to inanimate nouns, which will be our main concern.

[36] To get an impression of how common this is, I looked at responses from elicitation task 1. Of the approximately 1200 responses, roughly 120 contained a null subject, which amounts to 10% of the responses.
[37] The transcription convention used in (12) and (13) is introduced in section 5.3.1.
[38] Only looking at responses from elicitation task 1, the data include about 530 responses corresponding to animates, and 660 responses corresponding to inanimates. Only 240, i.e. 36%, of the responses referring to inanimates include a personal pronoun, whereas the corresponding number for animates is 365, which amounts to 69% of the total responses concerning animates.

The omission of pronouns could be interpreted as an avoidance strategy due to processing difficulties (Lee-Ellis 2011: 73). However, there are great individual variations when it comes to the use of null-subjects, without any correlation with low agreement scores (cf. chapter 7). My impression is therefore that there are just individual ways of speaking.

5.2.4 A difference in vocabulary

As mentioned in section 4.3.2, the items included in the elicitation tasks were words that the informants were likely to know in American Norwegian. This was important in order to uncover as much of the current gender system as possible, since the speakers are expected to having assigned gender to these nouns. Among the targeted nouns, there were two loanwords, which have been part of the AmN vocabulary for decades, viz. *road*$_{(M)}$ (Haugen 1969: 592; Hjelde 1992: 88) and *portrett*$_{(N)}$ from 'portrait'[39] (Hjelde 1992: 87; Johannessen and Laake 2017: 15–16). Their long history in the Heritage Norwegian language ensures that they have a stable gender. In addition, the corresponding nouns in Norwegian belong to the same gender: *road*$_{(M)}$ = *vei*$_{(M);}$ *portrett*$_{(N)}$ = *bilde*$_{(N)}$. The remaining target nouns, which were selected from CANS (Johannessen 2015b), were all familiar from the European Norwegian (abbreviated EN) vocabulary. However, for some of these items the informants used AmN words, based on loans from English. For instance, the noun *mais*$_{(M)}$ 'corn' occurred in CANS. When seeing a picture of a corncob, nearly all of the speakers used the AmN word ⟨kønnkabb⟩,[40] from English *corncob*. Since the speakers were so unison in their response, this is not necessarily an issue. The challenge resides in determining which gender these words are assigned to. How this obstacle was overcome is discussed in section 6.1.

As a consequence of using a *free* elicitation task, the informants on some occasions used synonyms for the target word. For instance, one informant used the (equally correct) noun *bikkje*$_{(F)}$ instead of the expected *hund*$_{(M)}$ 'dog.' This was more commonly observed for animates than inanimates. The participants were not advised to provide a different noun when this happened, for the reasons already mentioned concerning naturalness and language anxiety. Additionally, the gender system has to be investigated at the level of the individual, and therefore it is not a problem that each informant has a slightly different data set.

[39] Hjelde (1992) mentions *portrett* as a loan from English with a homologous European Norwegian noun, *portrett*$_{(N)}$. However, as pointed out by Johannessen and Laake (2017: 15), the AmN meaning is different from both the Norwegian and the English homologous word, which both mean "a painting or photograph of a person, with special focus on the face." The AmN *portrett*, however, has the same meaning as the English noun *picture*.
[40] The transcription convention used here is introduced in section 5.3.1.

5.3 Data processing

As expected when working with heritage language (cf. section 2.2.1), the data include substantial individual variation. Treatment of such heterogeneous data requires an enormous amount of decisions on every level, from transcription of spoken language to interpretation of the individual elements and their categorization. This section presents some of the decisions that have been made during transcription of the data, whereas chapter 6 deals with the categorization of the transcribed material.

5.3.1 About the written representation of the data

The examples presented throughout the thesis reflect different levels of detail. Depending on the purpose of the example, the data are presented in one of the following written conventions.

Nynorsk

When the specific uttered form is not directly relevant, the Nynorsk written standard is used. Italics are used to indicate Nynorsk. Nearly all examples so far have been presented in this way, e.g., *kor er kua no?* 'where is the cow now?' from section 5.2.3.

The International Phonetic Alphabet

Whenever an argument hinges on a form as it is actually pronounced, two conventions are used. The first is the International Phonetic Alphabet (IPA). Mostly, IPA is used for broad or phonemic transcription, which is indicated between / /. Transcription of finer phonetic detail is given in [ ], as in the following example: "[ɾ] and [r] are allophones of /d/."

The Hagen convention

The second convention that is used for focusing on the actual form is the phonetic transcription convention outlined in Hagen et al. (2017), used with the specific adaptations for American Norwegian outlined in Kåsen et al. (2016). To indicate this convention, the utterance is given in between ⟨ ⟩. Examples we have encountered so far are ⟨går åver veien⟩ 'crossing the road' and ⟨kønnkabb⟩ 'corncob.'

Throughout the text, relevant grammatical properties like gender are indicated through the use of subscripts. Gender as a *noun class* (i.e. a property of the noun) is indicated in parenthesis, whereas gender as *agreement class* (i.e. the gender expressed by a certain form) is given in subscripts without parenthesis. Thus we get *lite*$_{N}$ *hus*$_{(N)}$ 'small house,' but *huset*$_{N}$ 'the house.' Additionally, the Leipzig Glossing Rules (May 2015) are followed for interlinear glosses. Segmental morphemes are separated by hyphens and clitic boundaries are marked by a "=" sign,[41] both in the representation of the object language and in the interlinear gloss, as in (14) and (15). The only exception made to the LGR is that < > will be used in the glossing tier to indicate extralinguistic information like pauses and laughter, see (16) and (17) below.

(14)	The Hagen convention :	⟨koffør	sitt**=n**	dær⟩
	Leipzig Glossing Rules:	why	sits=PRON.M	there
	English orthography:	'why is he sitting there?'		

(15)	Nynorsk orthography:	***Han***	*reiser*	*snart.*
	Leipzig Glossing Rules:	PRON.M	leaves	soon
	English orthography:	'he is leaving soon'		

5.3.2 Transcription

We know that there are great inter-individual differences concerning L1 proficiency among American Norwegian speakers (cf. section 3.2.2), and that the gender system could be different across speakers of the same heritage variety (cf. section 3.1). Therefore, the investigation of gender agreeing elements has to be carried out at the level of the individual. This has been of utmost importance in processing the data. All recordings of the two free elicitation tasks have been transcribed using ELAN[42] (Sloetjes and Wittenburg 2008), ensuring that all the data are easily accessible. The transcriptions are done according to the phonetic transcription convention mentioned in the previous section. While transcribing, all gender cues (cf. section 4.1) were gathered. This resulted in an overview of forms

[41] Only the lexical items that "can *only* be realized as part of a prosodic word headed by another lexical item" (Kristoffersen 2000: 332) are indicated as clitics here. Kristoffersen (2000: 332) explicitly mentions the 3SG clitics *n* and *a*.

[42] ELAN is a computer program for annotating sound or video files developed at the Max Planck Institute for Psycholinguistics, The Language Archive, in Nijmegen, The Netherlands, and can be downloaded from http://tla.mpi.nl/tools/tla-tools/elan/

corresponding to article, personal pronoun and definite suffix for each informant. The interpretation on the level of the individual has been carried out on the basis of these overviews.

Already in the transcription session, some decisions had to be made that ultimately affect the analysis. Most of the gender cues are not phonetically salient, as the definite suffix, the indefinite article, and the personal pronoun are unstressed. Additionally, the personal pronoun and the article tend to be phonologically reduced (Aasen 1965 [1899]: 171; Beito 1986: 237). It is sometimes difficult to be certain what the informants are actually saying. The following example illustrates that it could be problematic to decide how to segment running speech. The sentence comes from sunburg08 and is transcribed the following way: ⟨koffør sitt n # sitte der?⟩ The phonetic string /ˈsite/,[43] bearing stress on the first syllable, could be interpreted in two different ways. It could either correspond to ⟨sitte⟩ 'sits' or ⟨sitt de⟩ 'it sits.' The first interpretation, which was chosen for the transcription, is that /ˈsite/ is the present tense of the verb *sitte* 'sit'. This is shown in (16).

(16)	⟨koffør	sitt=n	#	**sitte**	der?⟩
	why	sits=PRON.M	<pause>	sits	there?
	'why is he sitting # sitting there?'				

Prior to this utterance, the informant has used both the form ⟨sitte⟩ and ⟨sitt⟩ in contexts where the present tense of the verb is expected. Therefore, it is possible that the two different forms of the verb *sitte* in (16) are variants of the present tense. The other possibility is that /ˈsite/ corresponds to two words, namely *sit* 'sits' and *det* 'it':[44]

(17)	⟨koffør	sitt=n	#	**sitt**	**de**	der?⟩
	why	sits=PRON.M	<pause>	sits	PRON.N	there?
	'why is he sitting, sitting there?'					

In this interpretation, the verb has the same form in both instances, whereas the pronoun form changes. This is also plausible, as there are examples showing that this informant uses different pronouns (corresponding to different genders) for one and the same item. The two

[43] Primary stress syllables may be realized with two different, pitch contours in Norwegian, indicated with superscript 1 (for *accent 1*) and 2 (for *accent 2*) (Kristoffersen 2000: 11). However, in this example it is hard to tell which accent is being used, and the symbol for primary stress is therefore used.

[44] Normally the accent (1 or 2) would give away which of the alternatives is right, put as already pointed out, in this specific utterance it is impossible to determine from the intonation.

different transcriptions in (16) and (17) will give different results. However, these situations occur now and then, and decisions have to be made. Here, the first interpretation, ⟨sitte⟩, was chosen.

5.3.3 Influence of interviewer

An issue while conducting the experiments was the number of gender cues provided by me as an interviewer. In Norwegian, it is nearly impossible to talk about an item without providing gender cues, either through determiners, the definite suffix, the personal pronoun and/or adjectives. All indefinite determiners and personal pronouns that were directly primed by me are excluded from the data. This means that if I utter e.g. *hund**en***$_{\text{M}}$ 'the dog' before the informant uses this form, all occurrences of *hunden* from that informant will be disregarded.

However, all other gender agreeing forms are included in the data. If this project were investigating gender assignment in AmN, my providing gender information would be a problem. However, since the object of study is the gender *system* in general, providing gender clues should not be problematic. If the informants are able to use gender agreeing elements for assigning gender to a given noun and produce the corresponding target forms, this would be an indication that the AmN gender system is in essence the same as the system of their Norwegian ancestors. To put it in other words, an informant with a reduced or non-existing gender system is not expected to be able to use gender indicators for creating the expected target form. Therefore, gender agreeing elements for which I provided gender information will not be omitted.

5.4 Overall results

Altogether, the free elicitation tasks provided 1005 tokens of the indefinite article – an average of 40 per informant – and 657 PPIs (*Personal Pronoun* referring to *Inanimate*), which is roughly 26 per informant. In addition, the current methodology yielded 827 singular, definite forms. These will also be analyzed in order to get a better understanding of the gender system of American Norwegian, as well as of the role of the definite suffix when it comes to gender, cf. section 2.3.1. It should be noted that the resulting data do not only correspond to the targeted nouns presented in section 4.3.2. Rather, *all* nouns for which the gender is indicated are included for analysis. Due to the lack of strict controlling, there are also quite

big individual differences when it comes to the number of gender agreeing elements. The number of articles ranges between 16 and 72 per speaker, and of PPIs between 13 and 44.[45] Since the analysis is carried out on the level of the individual (cf. chapter 7), this is not considered a problem.

5.4.1 The Indefinite article

Table 5.1 below shows the distribution of the indefinite article (tokens) for the 25 speakers.

	masculine nouns	feminine nouns	neuter nouns
target-like article	458	130	150
***ein*$_{M}$ (non-target)**		107	132
***ei*$_{f}$ (non-target)**	12		0
***eit*$_{N}$ (non-target)**	10	6	
Total	480	243	282

Table 5: The total occurrences of the indefinite article. All the above numbers represent tokens, i.e. one noun could be used more than once.

It is clear that the masculine nouns have most occurrences that are target-like (to be explained in section 6.2.3), with a score of 96% target-like use. In comparison, only 53% of both feminine and neuter nouns appeared with the target-like article. Figure 6 below clearly illustrates that the non-target uses consist in a masculine article occurring with non-masculine nouns.

[45] The participant who was excluded from analysis had altogether 9 indefinite articles and 15 PPIs.

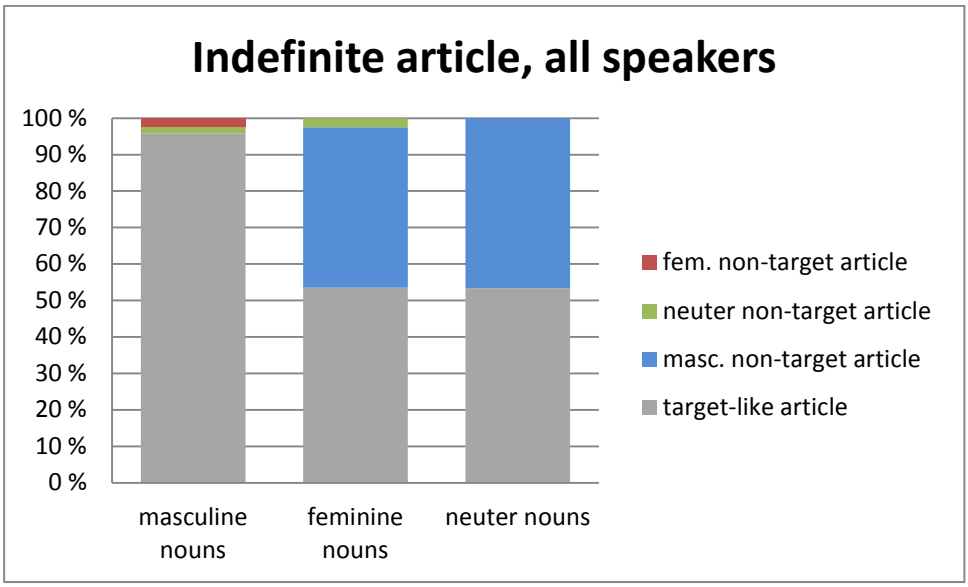

Figure 6: Distribution of indefinite article in percentage for all 25 speakers. All the above numbers represent tokens, i.e. one noun could be used more than once.

5.4.2 PPI

Table 6 below shows the overall use of PPI referring to nouns of the three genders. Two speakers are omitted from the overall results of PPI since they clearly have a new pronoun system which is not based on grammatical gender. This will be discussed in more detail in section 7.6.2.

	masculine nouns	feminine nouns	neuter nouns
target-like PPI	165	70	160
non-target masc.		68	80
non-target fem.	1		3
non-target neut.	20	35	
Total	186	173	243

Table 6: The distribution of PPIs referring to nouns of each of the three genders. Data from 23 speakers.

Again, the tendency is that the masculine nouns are referred to with an expected masculine PPI, whereas reference to non-masculine nouns might be done with a masculine PPI. Note that the feminine gender seems more vulnerable than the neuter gender here. This could be seen in figure 7 below. For both non-masculine genders, the masculine PPI occurs quite frequently. Additionally, the neuter PPI is used to some degree for the feminine nouns.

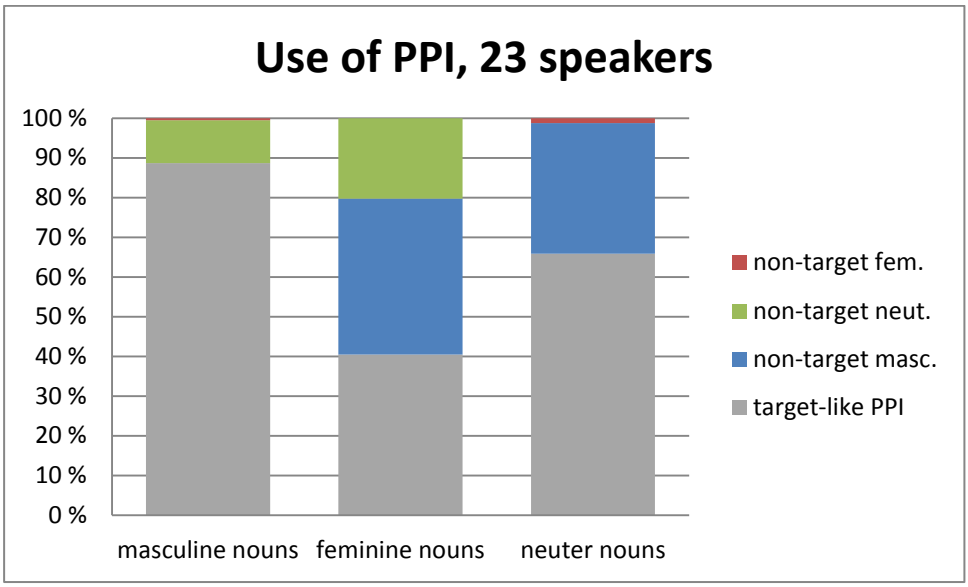

Figure 7: Results for PPI in percentage for 23 speakers. Target-like score: M = 89%, F = 40%, N = 66%.

Comparing the results for the indefinite article and the PPI, there is overall lower target-like scores for the PPI than the indefinite article for masculine and feminine. The opposite is true of the neuter gender. At first sight, the neuter seems to be better retained in the PPI than the indefinite article, and is also overgeneralized to some extent to the other genders in the PPI.

5.4.3 The definite suffix

The use of the definite suffix in the singular is overall much more target-like than the two other agreeing elements considered, with the lowest score being 87%, corresponding to the feminine gender (cf. figure 8 below).

	masc. def. nouns	fem. def. nouns	neuter def. nouns
target-like	286	175	292
***-en*$_{M}$**		25	34
***-a*$_{F}$**	4		0
***-e*$_{N}$**	12	1	
Total	**302**	**201**	**326**

Table 7: The distribution of definite suffixes according to gender for all 25 speakers. Note that the suffixes in the leftmost row are representations for all forms that could express each of the genders, cf. section 6.2.5.

Note, however, that the deviations for the definite suffix consist of overgeneralizing the masculine form, similar to the pattern found for the indefinite and the PPI. This could be seen in figure 8 below.

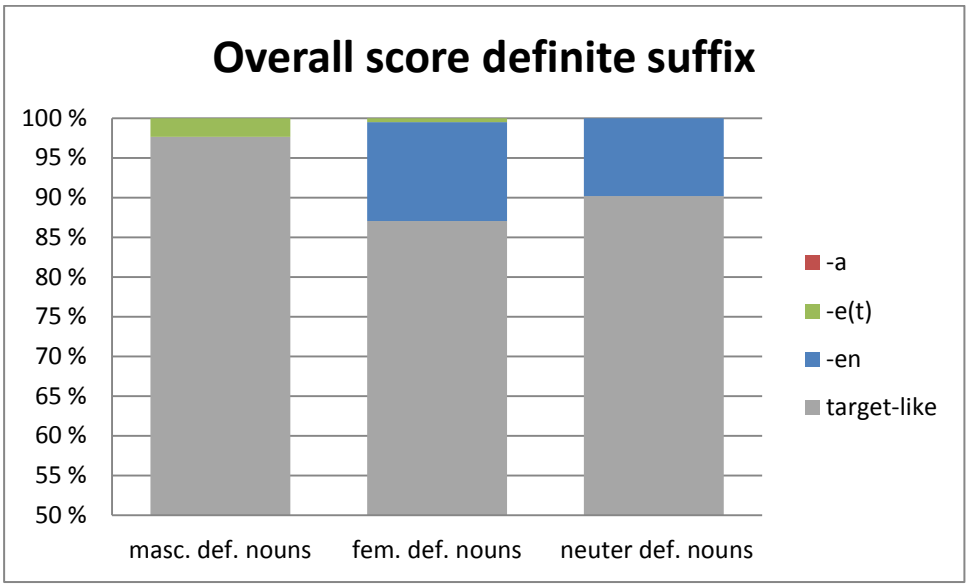

Figure 8: The overall results for definite suffix. Note that the y-axis starts on 50%. We see that the scores are high for all genders. However, there is a slightly poorer result for feminine than neuter gender. Target-like score: M = 95%, F = 87%, N = 90%.

5.4.4 Summing up

The main observation for the results on group-level is that the masculine gender is clearly best retained in all agreeing elements considered, and that masculine forms are extensively overgeneralized to the two other genders.

6 Data interpretation

As mentioned in section 5.3, a great number of decisions have been made during the interpretation of the heterogeneous data. In the present chapter, the decisions and the reasoning underlying the categorization of agreeing forms into genders are described. Firstly, for correct interpretation of the gender agreeing elements, the gender of each noun has to be known. Section 6.1 describes how the gender of different noun has been determined, with particular focus on English loanwords in AmN. Secondly, the gender cues cannot be fully understood without knowing the specific dialect in question. Therefore, a detailed analysis of the formal realization corresponding to the different genders in American Norwegian is carried out in section 6.2. Lastly, in order to give a fair evaluation of the heritage speakers' performance on the elicitation tasks, these tasks were presented to a Norwegian comparison group. This group consisted of three speakers from the valley of Gausdal age-matched with the AmN speakers. Their results on the elicitation tasks are presented in section 6.3.

6.1 Knowing the gender of the noun

For nouns that are not confined to American Norwegian, it is assumed that they are assigned to the same gender as in European Norwegian (cf. Enger and Corbett 2012: 293) as it is represented in the Nynorsk dictionary (*Nynorskordboka*). However, one of the goals of this thesis is to let the data speak for themselves, and to trust the AmN speakers to be the experts of their own variety. If there is overwhelming evidence that a noun is assigned to a different gender in AmN than in EN, the AmN gender is counted as the "correct" gender. At the same time, there could be changes to the original system that should be captured, and a great deal of inter-individual variation is expected. Therefore, the data from speakers with the greatest degree of retention of the original three-gender system are considered most important in determining the gender of a noun. In effect, then, the agreeing elements are interpreted in light of the gender of the noun, at the same time as the gender of the noun in some cases will be interpreted from the agreeing elements. There is a certain circularity in this, which unfortunately seems impossible to avoid.

Loanwords

The English loanwords in AmN that were borrowed into the language after settling in the new country pose a challenge when it comes to knowing the gender. Therefore, the relevant loanwords in the present material have been thoroughly investigated.[46] The gender of English loanwords in American Norwegian has been carefully studied by Flom (1926), Haugen (1969), and Hjelde (Hjelde 1992, 1996). These works, in addition to the gender cues given by the informants themselves, have been consulted[47] in order to determine the gender of the loanwords. In total, the material contains 87 loanwords of English origin not found in the European Norwegian vocabulary. 39 of these were mentioned by one or several of the aforementioned linguists. For these words, then, the literature provides the basis as regards gender.[48]

For the remaining 48 loanwords, the literature provides no information. 32 of these words were used by one single informant. This could indicate that these nouns are not a part of the conventionalized, AmN vocabulary, but that they were borrowed from English "on the spot" because the AmN word could not be accessed. The material is arguably too small to confirm this. Either way, we would expect these nouns to be mostly of the masculine gender; Haugen (1969: 442) finds that 72% of the loanwords he investigated belonged to the masculine gender, whereas Flom (1903: 12) identifies 71% of the loanwords as masculine when investigating dialects originating from Sogn, Telemark and Numedal in Wisconsin. As expected, only 2 of these 32 nouns occur with gender markers that are incompatible with the masculine gender. For each of these two nouns, provided by two different informants, there is only one gender cue: the definite suffix in ⟨høne-næsst**e**$_{N}$⟩ 'the hen's nest,' and indefinite article in ⟨**ett**$_{N}$ kustål⟩ 'a cow barn.' Since there is no other information as to the gender of these nouns, both will be accepted as neuter.

[46] A list of all the loanwords occurring in the present material can be seen in Appendix #.
[47] Flom (1926) was only consulted when the words were not found in neither of the other works.
[48] Whenever different sources list conflicting genders or several genders for the same noun, all of these genders are accepted. For instance, Haugen (1969: 566) lists *cake* as masculine gender, whereas Hjelde (1992: 92) ascribes it to the feminine gender. This could be due to dialect differences, as Hjelde describes the dialect of Trøndelag, whereas Haugen's informants have different dialect backgrounds. Either gender (M or F) for this noun would be accepted in the present project. When it comes to the loanword *truck*, Haugen (1969: 603) claims it could be either masculine or feminine, whereas Hjelde (1992: 91) only mentions masculine. For the present purpose, both genders would be accepted.

16 loanwords remain to be accounted for. For eight of these nouns (*toilet, bench, drawer, counter, stairway, dør-knocker, cover, grill*),[49] it seems unproblematic to say that they belong to the masculine gender; there were no indications that they could be assigned to a different gender.[50] For two words (*bicycle* and *pickup*), the majority of the informants (8/9 and 6/7 respectively) used masculine gender indicators. However, one informant used both masculine and neuter gender indicators for *pickup*. For *pickup* then, all informants agreed that the masculine gender could be used, and this noun is thus counted as masculine. When it comes to *bicycle*, one informant provided neuter gender cues. However, this particular speaker (sunburg17) provided neuter gender agreement for other loanwords as well, which according to the aforementioned literature and the other informants should be masculine. It thus seems like an overuse of the neuter gender on the individual level, and *bicycle* is accordingly categorized as a masculine noun, and the neuter gender agreement will be counted as non-target-like.

Now the last six of the 16 loanwords have to be dealt with. Five of these nouns (*steeple, hill, letter, story* ('floor,' 'level') *step*) were used by four, three or two informants, but without any consensus regarding the gender. For *steeple* for instance, three out of four informants indicated masculine gender, whereas the last informant indicated neuter gender.[51] Both informants using the noun *letter* used masculine gender agreement, but one informant additionally provided neuter gender cues for this noun. It seems impossible to draw a conclusion regarding the gender of these nouns based on this scarce and conflicting information, and they have thus been excluded for the rest of the analysis.

The last loanword is *shelf*, which is used by eight different informants. The informants form two groups when it comes to the gender of *shelf*. Half of them only give indications of masculine gender. The other half uses masculine agreement in addition to neuter (three informants) or feminine agreement (one informant). According to Hjelde (1992: 84) and Haugen (1969: 442), it is not unusual for loanwords to belong to more than one gender. The noun *shelf* will therefore be accepted as both masculine and neuter in American Norwegian. The feminine gender, however, will be analyzed as incorrect gender assignment.

[49] I count *dør-knocker* as a loanword since the last element – which is taken to be the head in Norwegian compounds (Eiesland 2015: 14) – is the English noun *knocker*.
[50] For *grill*, sunburg_MN_14gm used the indefinite determiner ⟨eid⟩. It is unclear to me whether this should be interpreted as a neuter determiner (*eit*) with a voiced plosive due to regressive assimilation, or the masculine determiner (*ein*) where the final element has become denasalized. This determiner is therefore discarded.
[51] Or possibly feminine gender, see section 6.2.3.

6.2 Categorization of gender agreeing elements

The Norwegian dialects differ both in how many genders they have (cf. section 2.3.2), as well as in the realization of forms corresponding to each gender. Some forms are widespread throughout the whole country, like these variants of the indefinite article: *e(i)n*$_{M}$, *ei*$_{F}$, *e(i)t*$_{N}$, and these variants of the definite suffix: *-en*$_{M}$, *-a*$_{F}$, *-e*$_{N}$.[52] However, there might be forms that are dialect-specific. Thus, the gender cues cannot be fully understood without also knowing the dialect in question. To my knowledge, there has not been such a thorough study of the formal realization corresponding to the different genders in American Norwegian.

6.2.1 Earlier treatments of gender agreeing elements

Earlier treatments of gender in Heritage Norwegian have used the written standards as baseline. Lohndal and Westergaard (2016: 7) use the Nynorsk dictionary with some adaptations to the Eastern Norwegian varieties in order to determine the gender of a noun. However, they use the Bokmål standard to present the gender agreeing forms. There is no discussion of the agreeing forms of e.g. the indefinite article beyond that brief presentation. Johannessen and Larsson (2015) take the Bokmål standard as point of departure for a baseline, maintaining "a rather liberal view of the baseline language, and only treat[ing] something as a deviation if the examples do not occur as dialect forms." According to these baselines, the article realized as /ei/ should be interpreted as feminine. Lohndal and Westergaard (2016: 8) are surprised to find that the feminine article is overused with neuter nouns. Johannessen and Larsson (2015: 9) makes the same observation, but they discuss whether /ei/ actually could be a neuter indefinite article, since the ancestors of the speaker in question came from areas where "an unstressed neuter indefinite article is pronounced /ei/ or /i/, like the feminine article, instead of the stressed (and more standard) /et/." If /ei/ in AmN *is* a realization of the neuter article, it would give the wrong result to count it as feminine. This shows the need for finding the most apt baseline when discussing heritage language.

[52] In Nynorsk orthography, the neuter suffix is spelled *-et*, but the final /t/ is not present in spoken Norwegian, except for in Southern Østfold (Sandøy et al. 2016: 235). Since this chapter is concerned with the spoken realizations of gender forms, *-e* will be used instead of the correct orthographic *-et.*

6.2.2 Goal of the present section

In order to answer the research questions presented in section 4.2, a baseline which is more apt than the written standards of contemporary Norwegian has to be established for American Norwegian. Now that all nouns have been assigned to (at least) one gender, the gender agreeing elements could be analyzed. The goal of the present section is to find a baseline for the gender agreeing *forms*, that is, to decide which gender each of the forms should be counted as realizations of. The challenging aspects of finding the right baseline were discussed in section 2.2.2. With these challenges in mind, a range of different sources have been consulted in order to get as close as possible to the various gender forms and the gender assignment in the input of the informants of this project. The works of Haugen (1969) and Hjelde (1992) have been important sources on AmN at an earlier stage. To get an impression of the original Norwegian dialects, descriptions of relevant Eastern Norwegian dialects have been consulted. "Relevant" means that the dialect was mentioned either by Haugen (1969) as a major dialect in the regions mentioned in section 4.3.1, or that the area where the dialect spoken is mentioned by the informants themselves in the background information. In total, six dialect monographs have been consulted, and these are included in the appendix.

The following analysis will be based on the data from the two free elicitation tasks for the fourteen informants who produced three different variants corresponding to the three genders for each of the two agreeing elements, i.e. *ein, ei, eit* for article and *han, ho, det* for PPI.[53] First, the indefinite article is considered in section 6.2.3, focusing mainly on the case of ⟨ei⟩, before the PPI is investigated in section 6.2.4. This section also includes a discussion of how to analyze particularly challenging anaphoric pronouns, namely *det, den* and ⟨n⟩.[54] Since the data from the free elicitation tasks include a considerable amount of definite suffixes, these are categorized according to gender in section 6.2.5.

In the following, the issue of dative is relevant, as the dative case marking of masculine nouns and pronouns is often realized with morphemes otherwise associated with feminine gender – and vice versa (Sandøy et al. 2016: 244). Dative was lost in many Norwegian dialects when the emigration to America started (Eyporsson et al. 2012: 222). However, it was retained at least until 1940 in areas that strongly influenced the dialects in the relevant areas of the

[53] As will be clear in section 7.3, one more speaker (sunburg11) is included in this group. However, she did not provide all gender forms in this particular project. Therefore, her data are not included here.
[54] Throughout the remainder of this thesis, the Nynorsk orthography will represent all possible phonetic realizations of the given morpheme. For instance *det* here represents /re:/, /de:/, /dæ:/ etc.

Midwest, e.g. in the valleys Hallingdal and Gudbrandsdalen (Beito 1973; Øygarden 1995). To my knowledge, there have not been any meticulous studies on the use of dative case in present-day Heritage Norwegian. On the basis of recordings from the 1940's in the Coon area, Hjelde (2015: 292) concludes that "the use of dative case is on its way out." A quick comparison with the data from the comparison group from Gausdal (cf. section 6.3) shows that the use of dative is relatively rare in AmN. However, the dative forms of e.g. definite, singular nouns could be preserved e.g. in combination with certain prepositions. Since Norwegian dialects only have case marking on singular, definite nouns and pronouns (Eyporsson et al. 2012: 223–24), the issue of dative will be discussed when dealing with the personal pronoun and the definite suffix.

6.2.3 The indefinite article

The case of ⟨ei⟩

As was pointed out at the beginning of this section, an important question issue is whether the article ⟨ei⟩ could reflect neuter gender. A dialect monograph of Ådal, Ringerike, in the Eastern part of Norway, lists ⟨ei⟩ (my notation) as a possible realization of the neuter article (Skulerud 1927: 410). At least two of the present informants have ancestors from Ringerike. A description of a dialect nearby, the Modum dialect, says that the neuter article ⟨ett⟩ is often reduced to ⟨i⟩ or ⟨e⟩ (Hunstadbråten 1973: 53, my notation). [55] This is also found in newer Norwegian material in the Nordic Dialect Corpus (Johannessen et al. 2009). A search for neuter determiner realized as ⟨ei⟩ and ⟨æi⟩[56] yields 64 hits from the region of *Østlandet* (the Eastern part of Norway). Ten of these hits have additional agreeing elements, which clearly show that this article indeed is to be taken as neuter:

(18)	⟨**ei**	**lite**	hus⟩
	a.F/N	little.N	house(N)
	(aasnes_ma_02)		

[55] A reduction to ⟨i⟩ and ⟨e⟩ is also described for the feminine indefinite determiner ⟨æi⟩ (Hunstadbråten 1973: 52, my notation).
[56] The diphthong written *ei* in orthography is realized as ⟨ei⟩ in some dialects, and ⟨æi⟩ in others.

Likewise, a search for neuter determiner realized as ⟨i⟩ and ⟨e⟩ yields 12 and 47 hits respectively. The neuter gender is confirmed by additional gender agreeing formal categories in two cases for ⟨i⟩ and twelwe for ⟨e⟩, e.g.:

(19) ⟨**i** langng-**t** tog⟩
a.F/N long-N train(N)
(engerdal_ma_02)

(20) ⟨**e** kjemmpestor-**t** fjell⟩
a F/N very.big-N mountain(N)
(alvdal_02uk)

There is thus the possibility that the article ⟨ei⟩ and its variants ⟨i⟩ and ⟨e⟩ could be realizations of the neuter indefinite article in Heritage Norwegian too. Table 8 below shows all occurrences of the indefinite article with neuter nouns produced by the fourteen speakers with signs of all gender forms in the two agreeing elements. Since we know that there is overuse of the masculine article, also with neuter nouns (cf. section 3.2.3), the masculine variant *ein* has not been included here.

Neuter			
⟨eit⟩	23	⟨ei⟩	28
⟨ett⟩	29	⟨i⟩	30
⟨itt⟩	3	⟨e⟩ or ⟨æ⟩	11
	55		**69**

Table 8: All occurrences of the indefinite article (except occurrences with /n/) with neuter nouns from the fourteen AmN speakers who show sign of three genders in both the indefinite article and the PPI.

The variants without final *-t* (*ei*) are in fact more numerous than the more standard variants with *-t* (*eit*).[57] There are many examples where additional agreeing elements show that the noun indeed is assigned to the neuter gender, e.g.:

(21) ⟨**i** stor-**t** hus **– de** ser ut ny-**tt**⟩
a.F/N big-N house(N) – PRON.N looks new- N
'a big house – it looks new' (westby01)

The variants ⟨ei⟩, ⟨i⟩ and ⟨e⟩ will in the present work be counted as feminine or neuter depending on the gender of the noun they accompany.

[57] Actually, there seem to be different preferences in the three different areas. In the Coon Valley/Westby area, the use of *ei* is clearly more common than *eit*, whereas *eit* seems to be more common than *ei* in the Spring Grove/Harmony area. For the latter though, more data is needed. Both variants seem to be equally common in Sunburg.

One question that arises in dealing with the article ⟨ei⟩ is whether it could be a realization of the English indefinite determiner *a*. Several studies of Heritage Norwegian point to examples of transfer of functional vocabulary from English due to similarity in form, meaning and distribution (Larsson, Tingsell, and Andréasson 2015; Johannessen and Larsson 2015). In fact, Annear and Speth (2015: 209) lists *a* as a lemma that is undergoing lexical transfer in AmN. However, they merely list this as one of 87 lemmas, without entering into discussion about this particular word. It is thus unclear how they arrived at this as an example of lexical transfer. Looking at the present data, it seems more fruitful to count this as a variant of the Norwegian feminine and neuter indefinite article, since it mainly occurs with feminine and neuter nouns.

Overview of realizations of the indefinite article

In all varieties of Norwegian, the masculine article is some variant of *ein*, and the feminine article is *ei*. The variants with *-t* are always associated with the neuter gender. With this and the discussion of ⟨ei⟩ above in mind, the realizations of the indefinite article corresponding to each gender found in the data of the fourteen aforementioned speakers are shown in table 9.

Realizations of masculine indefinite determiner[58]	Realizations of feminine indefinite determiner	Realizations of neuter indefinite determiner
⟨ein⟩	⟨ei⟩	⟨ei⟩
⟨in⟩	⟨i⟩	⟨i⟩
⟨en⟩	⟨e⟩	⟨e⟩
⟨n⟩		⟨eit⟩
		⟨it⟩
		⟨ett⟩

Table 9: Overview of the target-like realizations of the indefinite determiners corresponding to the three genders in AmN, based on the data of fourteen speakers with signs of a three-way gender distinction in the article and the PPI.

There were three occurrences of ⟨e⟩ with masculine nouns. In comparison, the alveolar nasal /n/ was present in the article accompanying masculine nouns in 264 occurrences. The alveolar nasal is therefore considered necessary in order for a masculine article to be target-like, and ⟨e⟩ is thus not considered target-like. All realizations involving a voiceless alveolar stop /t/ are considered instances of the neuter article

[58] Also for the masculine article there seems to be regional preferences. *En* (i.e. a variant without /i/) seems to be prevailing in the Coon Valley/Westby area, whereas *ein* (i.e. a variant with /i/) is more common in Spring Grove/Harmony. In Sunburg, *ein* is most frequent in the present material, but *en* is not infrequent either.

6.2.4 Personal pronoun

The most common forms of the personal pronouns in oral speech are variants of ⟨hann⟩ for masculine, ⟨ho⟩ or ⟨hu⟩ for feminine, and ⟨de⟩ (orthographic 'det') for neuter (Christiansen 1976: 220, my notation). However, there could be many forms corresponding to one gender in a given dialect, depending on grammatical relation and whether or not the pronouns bear stress. For the unstressed pronouns, the form also depends on where the pronoun is positioned (Skjekkeland 1997: 154; Papazian 1978: 239). Personal pronouns are often phonologically reduced and realized as clitics. Thus, for the masculine personal pronoun there could be two unstressed (nominative) variants, e.g. (Papazian 1978: 251):

(22)	***Han***	*reiser*	*snart.*		(23)	*Snart*	*reiser=**n.***
	PRON.M	leaves	soon			soon	leaves=PRON.M
	'he is leaving soon'					'soon he is leaving'	

Due to the abundance of forms, it is important to investigate the possibilities found in AmN.[59]

The categorization into gender is done on the basis of the forms provided by the fourteen informants who employ both indefinite determiners and personal pronouns corresponding to the three traditional genders of Norwegian. All pronoun forms that were directly primed by me have been discarded. As was pointed out in section 2.3.2, the same pronoun forms are used for reference to animates and inanimates in traditional, Norwegian dialects. Therefore, pronouns referring to both animate and inanimate nouns are considered here. However, whenever there is a mismatch between the lexical and the referential gender, the corresponding pronouns are not included. One example would be pronouns referring to *kvinnfolk*$_{(N)}$ 'woman,' since this is a neuter noun referring to a female.

Sometimes in the data there seems to be a mismatch between the gender of the personal pronoun and the gender of the noun it is supposedly referring to, e.g. when the pronoun *han*$_{M}$ is employed when talking about *flaske*$_{(F)}$ 'bottle'. In order to remove instances where this is due to reassignment of the noun to the masculine gender, the pronouns of such cases are only included if all other gender agreeing elements reveal that this specific noun indeed is assigned to the expected gender. For the example just mentioned, *han*$_{M}$ will be included if the speaker

[59] A possible complicating factor for the personal pronoun could be that the standard masculine clitic pronoun is identical to the dative feminine clitic pronoun, and vice versa, in many Norwegian dialects (Christiansen 1976: 219). In the present data, however, no pronouns occur in a dative context.

also has said e.g. *ei*$_{F}$ *flaske*$_{(F)}$ 'a bottle,' without using additional *masculine* agreement. Occurrences of the neuter personal pronoun *det* have not been counted here when referring to feminine or masculine nouns because of the difficulties in deciding the exact reference for this pronoun. This will be discussed more thoroughly in the next session. The resulting forms that were identified are presented in table 10, according to gender. The problematic forms that need to be thoroughly discussed are indicated in bold.

Pronouns referring to masculine nouns		**Pronouns referring to feminine nouns**		**Pronouns referring to neuter nouns**	
phonetic form	*tokens*	*phonetic form*	*tokens*	*phonetic form*	*tokens*
⟨(h)ann⟩	107	⟨(h)o⟩	123	⟨de⟩	79
⟨enn⟩	59	**⟨enn⟩**	**9**	⟨re⟩	19
⟨n⟩	62	⟨(h)u⟩	8	⟨e⟩	11
⟨ha⟩	4	⟨a⟩	4	⟨dæ⟩	5
den[60]	4	**⟨n⟩**	**4**	**⟨a⟩**	**1**
⟨(h)ænn⟩	2	**⟨hann⟩**	**3**	**⟨å⟩**	**1**
⟨hønn⟩	1	*den*	2		
⟨henn⟩	1	⟨hø⟩	2		
⟨ne⟩	1	⟨å⟩	1		
⟨i⟩	**1**	⟨ei⟩	1		
⟨e⟩	**1**	**⟨e⟩**	**1**		
⟨a⟩	**1**				
Total	**244**		**158**		**116**

Table 10: Overview of the realizations of the personal pronoun by fourteen informants, categorized according to the gender of the anteceding noun. The bold font indicates forms that will be discussed in the following.

As expected, there are many different forms of the personal pronoun found in the data. However, the great majority of the occurrences correspond to the general tendency in Norwegian: ⟨hann⟩ for masculine, ⟨ho⟩ for feminine, and ⟨de⟩ for neuter.[61] All occurrences with /n/ (except *den*, see further below) will be counted as variants of the masculine pronoun. Additionally, the variant ⟨ha⟩ will be accepted as a masculine pronoun because of phonological similarity to the full form ⟨hann⟩. This form was also used by the Gausdal subjects in the comparison group. ⟨i⟩ and ⟨e⟩ on the other hand, do not bear any phonological

[60] The realizations of *den* varies among ⟨denn⟩, ⟨renn⟩ and ⟨d'n⟩. *Den* is used for representing all these variants.
[61] In many Norwegian dialects, [ɾ] and [r] are allophones of /d/, and this is particularly frequent with function words like personal pronouns and in the Eastern part of Norway (Hanssen 2010: 106; Johannessen 2012: 183; Skjekkeland 1997: 155); Venås (1977: 128) specifically mentions that the personal pronouns starting with d- could be realized with /r/ in the dalect of Hallingdal. ⟨dæ⟩ (my notation) is the neuter personal pronoun in the Halling dialect (Venås 1977: 127), and in the dialect of Heidal it is the form used for neuter when the pronoun is bearing stress (Heringstad, Fjerdingren, and Nesse 1979: 30).

resemblance to the other masculine forms. Since ⟨i⟩ does not occur in any of the other genders either, this token will be discarded. When it comes to ⟨e⟩, Beito (1986: 237) writes that in some Southeastern Norwegian dialects there is a clitic form of the neuter pronoun, namely "*'et*." Therefore, ⟨e⟩ will be counted as neuter. ⟨a⟩ is a common realization of the feminine pronoun, and is therefore counted as feminine (cf. Hanssen 2010: 110). Finally, *den* is the masculine/feminine Norwegian demonstrative, which also has the status of personal pronoun in the written standard Bokmål as well as in several Norwegian dialects (Sandøy et al. 2016: 251). The status of this form in AmN will be thoroughly discussed later in this section. For the time being it suffices to say that it is accepted as a marker of both the masculine and the feminine gender.

As regards the feminine, ⟨hø⟩ is accepted because of phonological similarity to the standard *ho*. The initial /h/ is often not pronounced in unstressed feminine pronouns (Skjekkeland 1997: 157). Since the feminine form ⟨hå⟩ was found in the data from Gausdal, ⟨å⟩ should be accepted as a feminine pronoun form. ⟨ei⟩ is formally identical to the feminine indefinite determiner, and is therefore counted as indicative of the feminine gender. The pronoun forms ⟨hann⟩, ⟨enn⟩ and ⟨n⟩ pose a challenge when referring to feminine nouns. This is especially true of the form *n*, which is therefore treated separately further down. Formally, the forms ⟨hann⟩, ⟨enn⟩ and ⟨n⟩ are identical to the masculine personal pronoun. Still, they have been employed for referring to nouns which are clearly marked as feminine in other agreeing elements. The question is if this should be considered a feminine form, or if the use of these forms referring to feminines should be regarded a deviation from the baseline. If these forms were used e.g. due to confusion induced by the dative forms (cf. section 6.2.2), we would expect feminine forms to occur in reference to masculine nouns. This is not found. Treating these instances as deviations from the baseline thus seems to be more correct, and it allows us to capture important generalizations about how the use of pronoun has changed from the original system. This analysis would also be in line with the findings of Lohndal and Westergaard (2016), i.e. that there is overgeneralization of the masculine gender.

The following table will serve as a baseline of forms for the remaining speakers:

Realizations of masculine personal pronoun	Realizations of feminine personal pronoun	Realizations of neuter personal pronoun
⟨(h)ann⟩	⟨(h)o⟩	⟨de⟩
⟨ha⟩	⟨(h)u⟩	⟨dæ⟩
⟨(h)ænn⟩	⟨hø⟩	⟨re⟩
⟨hønn⟩	⟨a⟩	⟨e⟩
⟨henn⟩	⟨å⟩	
⟨enn⟩	⟨ei⟩	
⟨n⟩	*den*	
⟨ne⟩		
den		

Table 11: Overview of realizations of the three personal pronouns corresponding to three genders that are counted as target-like.

The problem of "det"

As we have seen, *det* is the anaphoric personal pronoun corresponding to the neuter grammatical gender. However, the neuter pronoun *det* is also used for reference to more abstract notions than noun phrases. It could refer to a proposition, parts of a proposition, a subordinate clause or an infinitival clause, among other things (Faarlund, Lie, and Vannebo 1997: 332–34). It is also realized as subject with meteorological verbs (e.g. *det regner* 'it's raining'), in so-called presentation clauses or existential clauses, and in impersonal passives (Faarlund, Lie, and Vannebo 1997: 827ff; 45ff). In other words, "the word *det* covers a particularly large variety of functions" (Enger 2004b: 20). A complicating factor in dealing with *det*, is that *det* could even refer back to noun phrases consisting of non-neuter nouns, a property already observed in Old Norse (Nygaard 1966: 81). This is particularly common with left dislocated antecedents (Faarlund, Lie, and Vannebo 1997: 331). A constructed example which is similar to many of the challenging occurrences in the data of the present project is (24):

(24)	*Fersk*	*mjølk,*	***det***	*er*	*god-t*
	fresh.M/F	milk(F)	PRON.N	is	good-N
	'Fresh milk is good'				

In such constructions, the neuter pronoun is used for expressing a low degree of individuation, i.e. referring to a whole set or a category instead of a specific individual/item (Enger 2004b, 2013; Josefsson 2009, 2014). The neuter gender in Scandinavian is generally associated with lower degree of individuation than masculine and feminine (Enger 2004b: 26). Here we see the effect of the Agreement Hierarchy; the personal pronoun agrees with properties of the

referent (i.e. low degree of individuation), whereas the attributive adjective (*fersk*) agrees with the lexical gender of the controller (cf. section 2.3.1).

Because of this wide range of functions and possible referents, it has at times been challenging to determine the reference of the neuter pronoun *det*. While analyzing, I have tried to keep the possible referents of *det* in mind. Ultimately, the analysis hinges on my intuitions as a native speaker. This intuition leads to a bias for counting neuter pronouns as referring to a specific noun rather than i.e. a proposition more often when the noun *is* neuter, as this is how we as native speakers normally interpret such pronouns. The same challenge was noted by (Stenroos 2008: 453) in her study of the gender system in the thirteenth-century Southwest Midlands:

> *Considering the nature of anaphoric reference, some of the examples used for the statistics might still have been interpreted otherwise by somebody else. There is also a slight possibility of circularity of argument, in that the researcher defining the antecedent of a pronoun will inevitably tend to use gender concord as a clue. However, it may be argued that the researcher is simply making use of the same kind of clues that the intended thirteenth-century reader would have used.*

First, an example is provided where *det* has not been taken to indicate the lexical gender of the noun. Rather, *det* has been interpreted as having a more generic meaning. The informant is looking at a screen depicting a glass of milk and a pitcher of milk.

(25)	Interviewer:	*korleis*	*smakar*	*mjølk-**a***	*synest*	*du?*
		how	tastes	milk(F)-DEF.F	think	you
		‘how do you think the milk tastes?’				
	Sunburg12:	⟨å ja	de	æ	gått⟩	
		oh yeah	PRON.N	is	good.N	
		‘oh yeah, it’s good’				
	Sunburg12:	⟨e	like	re	kall-t⟩	
		I	like	PRON.N	cold-N	
		‘I like it when it’s cold’				

In (26), on the other hand, there was no reason to assume that the pronoun was not agreeing with the noun:

(26) Interviewer: *kor hen ligg kirk-**a** ?*
where lies church(F)-DEF.F
'where does the church lie?'

Sunburg12 ⟨å **de** står oppå ee⟩
oh PRON.N stands on <hesitation>
'oh, it lies on ee'

On *den* and *n*

The frequently occurring clitic pronoun form *n* pose a challenge. According to Falk and Torp (1900: 118), this form could in "bygdemaalene og vulgært bymaal" ('rural dialects and vulgar city dialect') and be a variant of both the masculine pronoun *han* as well as of the newer, common gender inanimate pronoun *den*. How is this form to be interpreted in the AmN data? In table 10, we saw that *n* was used for reference to both masculine and feminine nouns. This could be an indication that *n* is an instance of the common gender *den*. However, we know that the masculine gender is overused in AmN, so it could also be the masculine *han* which is being overgeneralized to feminine nouns. Firstly, we need to know if *den* is a possible personal pronoun in American Norwegian at all, or if it only functions as a demonstrative. The difference between demonstrative and pronoun, however, is not always obvious, which has led (Halmøy 2010: 132) to conclude that "in Norwegian, there is no need to distinguish two distinct categories determiners and pronouns." While this illustrates the difficulties in determining what we find in AmN, I will follow Faarlund, Lie, and Vannebo (1997: 327) in categorizing *den* as a demonstrative if it is stressed or modified by a relative clause or a propositional phrase.[62]

'Den' as a personal pronoun

The use of the demonstrative *den* as a personal pronoun is a relatively new innovation. As a personal pronoun, *den* is used for reference to masculine and feminine inanimates. In 1954, Beito reports that there *are* examples of *den* (without stress) used of inanimate objects, "men i høve til *han* og *ho* har *den* ei langt veikare stode i nyn. enn i sv. og dsk."[63] (1954: 12, my

[62] See Halmøy (2010) for a discussion of the morphological and syntactic criteria mentioned in Faarlund, Lie, and Vannebo (1997) for distinguishing between determinatives and pronouns.
[63] "However, in comparison with *han* and *ho*, the status of *den* is much weaker in Nynorsk than in Swedish and Danish" (my translation).

italicization). With the introduction of *den*, bigger emphasis is put on the distinction between animate and inanimate; earlier the lexical gender alone determined the choice of pronoun (cf. section 2.3.2). This change does not, however, take place in all Norwegian dialects (Enger 2004c: 126). One of the challenges is finding out whether the dialects that formed American Norwegian (as encountered in this thesis) underwent such a change.

Among the six dialect descriptions that were consulted for this project (listed in the appendix), reference to masculine and feminine inanimates was explicitly mentioned in two. In the description of the Halling dialect, *den* is listed as the anaphoric pronoun used for this purpose (Venås 1977: 133). In the description of the Toten dialect (Faarlund 2000: 49), on the other hand, *han* and *ho* (or *hænn* and *hu*) are explicitly mentioned as referring to inanimates as well as animates. Whether *den* is used for this purpose in the remaining dialects, is uncertain. According to Torp (1969: 55), the more traditional *han/ho* are the main anaphoric pronoun used for all M and F inanimates (in line with the general picture presented in section 2.3.2), except in some southern dialects. For Eastern dialects, Torp (1969) found some occurrences of *den*, but it was underrepresented as compared to *han/ho*. Also, *den* was bearing more stress when it occurred in the Eastern varieties than what was the case for the Southern dialects (Torp 1969: 57). The Eastern dialects thus seem to use *den* mainly with demonstrative function, with the exception of the Halling dialect.

'Den' in the American Norwegian data

Only a thorough investigation of the American Norwegian data could give us an indication of whether *den* is a possible personal pronoun in this variety, or if it only functions as a demonstrative. This is the purpose of the present section. All modified occurrences of *den* were excluded from table 10 above. However, stress was not considered. It must be noted that it could be quite hard to determine if a word is stressed or not, which was also noted by Torp (1969: 14): "Man som kjent kan uttale et ord med uendelig mange forskjellige grader av trykk."[64] In total, the two free elicitation tasks resulted in 657 personal pronouns referring to inanimate objects.[65] Of these, ten occurrences (approximately 1,5%) were of the form ⟨denn⟩, ⟨renn⟩, or ⟨d'n⟩, uttered by nine of the twenty-five speakers. As a comparison, the full form ⟨hann⟩ was used 135 times. In two of the instances with *den*, contrast was intended, thereby

[64] "As we all know, a word could be pronounced with infinitely many degrees of stress" (my translation).
[65] This number is different from the numbers presented in section 5.4.2 since the two informants with a new, semantic pronoun system were excluded from that section. This number, however, represent all 25 speakers.

indicating demonstrative function (cf. Sandøy et al. 2016: 251), as the speaker was comparing the item on the screen to an item of the same kind in the real world. However, in the remaining eight cases there was no sign of contrastive focus or stress. This means that *den* does occur as an anaphoric personal pronoun in AmN, albeit quite rarely.[66] In the present data, *den* was used for reference to masculine nouns three times, feminine nouns three times and neuter nouns four times. Note that *den* is only used for masculine and feminine nouns in European Norwegian.

The next question is whether ⟨n⟩ should be interpreted as *han* – i.e. only masculine – or as *den* – i.e. both masculine and feminine. Often during the elicitation tasks, one target item triggered more than one pronoun, and we would expect ⟨n⟩ to co-occur with its full version. ⟨n⟩ co-occurs only twice with *den*. In one of these instances, ⟨hann⟩ is also used, i.e. the informant uses ⟨n⟩, ⟨hann⟩ and *den* to refer to the same noun. In general, ⟨n⟩ very often co-occurs with ⟨hann⟩. Importantly, Torp (1969: 55) states that in the Eastern part of Norway, ⟨en⟩ and ⟨n⟩ (my notation) could only be interpreted as clitic forms of *han*.[67] This is supported by the data from the comparison group in Gausdal, where the reduced forms ⟨en⟩ and ⟨n⟩ are used almost exclusively for referring to masculine nouns, and not feminine nouns.[68]

Because of the few occurrences of *den* in comparison with ⟨hann⟩, all occurrences of ⟨n⟩ in this thesis will be analyzed as variants of the masculine personal pronoun *han*, in line with Torp's (1969: 66) interpretation of ⟨n⟩ in Norwegian dialects: "Vi kan altså i bygdemålene tydeligvis (nesten) alltid tolke 'n som enklitisk form av han."[69]

6.2.5 The definite suffix

As was clear from section 2.3.1 and 2.3.2, it is not obvious whether or not the definite suffix should be counted as a gender agreeing element. In order to shed more light on this discussion, the definite suffix is investigated in relation to the other agreeing elements in this

[66] A detailed investigation of the use of *den* in AmN would be interesting, but this is beyond the scope of the present thesis.
[67] The exact phrasing is "vær for øvrig oppmerksom på den forskjellige tolkning vi må gi former som 'en, 'n i østnorsk og vestnorsk (henholdsvis han og den)," which is ambiguous between 1) different interpretations of the two forms, and 2) different interpretations in different dialects. However, Arne Torp has confirmed through personal correspondence (e-mail, March 22, 2017) that the intended meaning was that the two forms need to be interpreted differently in different dialect regions.
[68] One Gausdal speaker (gausdal01) used these forms in reference to feminine nouns. However, she does not use the full form *den* at all. Additionally, she generally has a remarkably low target-like score for PPI, to be discussed in section 6.3.
[69] "In rural dialects, it seems that we (almost) always can interpret 'n as a clitic form of han" (my translation).

thesis. This can only be done after having categorized the definite suffixes according to gender.

The common definite suffixes in Norwegian are *-en*$_{M}$, *-a*$_{F}$, *-e*$_{N}$, clearly corresponding to the three genders in three-gender dialects. I have not found a description of definite suffixes in AmN, but Haugen (1969: 440) gives an overview of Norwegian definite suffixes found on English loanwords in American Norwegian, categorized by gender. Again, the data from the fourteen speakers with all three genders represented in articles and pronouns will serve as the baseline of forms for the definite suffix. In table 12 below, all definite suffixes produced by these fourteen speakers are presented, categorized according to the gender of the noun. All occurrences of the typically masculine ⟨-(e)n⟩ have been left out if used with feminine and neuter nouns that seem to have been reanalyzed to the masculine gender. The forms indicated in bold are especially problematic and be discussed in some detail in the following section.

Suffixes on masculine nouns		**Suffixes on feminine nouns**		**Suffixes on neuter nouns**	
Phonetic form	*Tokens*	*Phonetic form*	*Tokens*	*Phonetic form*	*Tokens*
⟨-(e)n⟩	189	⟨-a⟩	105	⟨-e⟩	177
⟨-in⟩	2	⟨-e⟩	8	⟨-a⟩	13
⟨-e⟩	**3**	⟨-i⟩	1	⟨-o⟩	2
⟨-a⟩	**2**	⟨-u⟩	1	**⟨-i⟩**	**1**
⟨-an⟩	1			**⟨-n⟩**	**1**
Total	**197**		**115**		**194**

Table 12: Overview of the realizations of the definite suffix by fourteen informants, categorized according to the gender of the noun. The suffixes in bold are problematic, and are therefore discussed below.

Masculine

We see that the most common suffixes in European Norwegian are also found in Heritage Norwegian, with the same gender distribution. These will not be discussed any further here. As Hjelde (1992: 89–90) notes, definite, singular morphemes occurring on masculine nouns contain a nasal. For masculine nouns, the problematic instances are the occurrences of ⟨-e⟩ and ⟨-a⟩. ⟨-e⟩ is found with three different nouns, and is used by three different speakers. In fact, ⟨-e⟩ is a singular dative form of masculine nouns in both the Heidal dialect (Heringstad, Fjerdingren, and Nesse 1979: 24, my notation) and in the Nes dialect of Hallingdal (Venås 1977: 73; 75). The first occurrence considered, *ise* 'the ice,' is actually used in a proper dative context, which is shown in (27). The sentence is uttered while looking at a screen depicting a fish (*fisk*$_{(M)}$):

(27) ⟨ser ut såmm enn kunne vare i **is-e**⟩
looks like PRON.M could be in ice(M)-DAT.M
'looks like it is inside the ice' (harmony02)

The Spring Grove area, near to where this particular informant lives, had some immigration from Hallingdal (cf. section 4.3.1). According to Venås (1977: 228), dative case is used in the Halling dialect following the preposition *i* to express location (in contrast to direction). The same analysis applies to the two other cases with ⟨-e⟩ as well. Since this form is relatively infrequent with masculine nouns, ⟨-e⟩ will only be accepted as target-like when the dative interpretation seems likely.[70] Note that this applies to loanwords as well as native words: "Loanwords showed dative […] forms to about the same extent as native words" (Haugen 1969: 449).

The same conclusion could be drawn for ⟨-a⟩ as a masculine suffix, as it is the masculine dative suffix in many Norwegian dialects, including in Heidal (Heringstad, Fjerdingren, and Nesse 1979: 26, my notation). The suffix is used twice, by the same informant, and on both instances the use of dative case is warranted: the noun in question follows a preposition that takes dative case to express location (Heringstad, Fjerdingren, and Nesse 1979: 50). One occurrence is given in (28), which is a response to *kor ligg brødet*$_{N}$? 'where is the bread?'

(28) ⟨ligg n på glas**benngk-a** ⟩
lies PRON.M on window.sill(M)-DEF.DAT.M
'it is lying on the window sill' (westby06)

A complicating factor is that the same informant uses the masculine standard case[71] in a similar context, referring to a ball (*ball*$_{(M)}$):

(29) ⟨hann stå på **benngk-en**⟩[72]
PRON.M stands on bench(M)-DEF.M
'it is lying on the bench' (westby06)

[70] Altogether, 11 occurrences of presumably dative definite forms where identified in dative contexts, produced by 10 informants. In all cases, the definite form followed a preposition that triggers dative case.
[71] Following Eyporsson et al. (2012), *standard* case is the name of the case that contrasts with dative.
[72] The relevant word in (28), *glasbenk*, is a compound. The head of this compound (*benk*) is the relevant noun in (29). The head generally decides the inflection of the compound as a whole in Norwegian (Eiesland 2015: 17), and these two examples are thus comparable.

However, there is typically vacillation in one and the same speaker between dative and standard case – even when the context is formally and semantically similar –in areas where the dative case is disappearing (Eyporsson et al. 2012: 230). In the following, I will accept dative forms as target-like in dative contexts.

Feminine

The three infrequent definite suffixes found on feminine nouns, ⟨-e⟩⟨-i⟩ and ⟨-u⟩, are also found in the Nordic Dialect Corpus (Johannessen et al. 2009), e.g., *ti**e***$_{\text{F}}$ 'the time' **(**uvdal_ma_04), *trapp**i***$_{\text{F}}$ 'the stairway' (vinje_04gk), *stug**u***$_{\text{F}}$ 'the living room' (gausdal_04gk). More importantly, these suffixes are found in the Norwegian areas mentioned by the informants as their place of origin. The definite singular suffix ⟨-e⟩ for a group of feminine nouns (often strong nouns) is characteristic of the dialects found in the valleys Hallingdal, Gudbrandsdal and parts of the county of Telemark. ⟨-i⟩ is associated with another group of feminine nouns in Hallingdal, and yet another group of feminine nouns take the definite suffix ⟨-u⟩ (Venås 1977: 87; 34, my notation). Finally, Haugen (1969: 452) states that the singular definite suffix predominantly found on feminine loanwords in AmN is "the *-a* or **other vowel**" (my emphasis). He lists the dialect forms ⟨-i⟩, ⟨-e⟩, ⟨-æ⟩, ⟨-o⟩ and ⟨-å⟩ for strong feminine nouns, and ⟨-å⟩ and ⟨-o⟩ for weak ones (my notation). As pointed out in section 4.3.1, there were people from different Norwegian districts in all larger immigrant areas (Haugen 1969: 342–43). It is thus expected that a few occurrences of a specific dialect form show up. All suffixes listed by Haugen as feminine will therefore be accepted in addition to ⟨-u⟩.

Neuter

For neuter nouns, Haugen (1969: 452) lists ⟨-a⟩ as a definite singular suffix, but it is specified for *weak* neuter nouns. This is attested in the dialect of Numedal in Norway (Hoff 1949: 70). Even if ⟨-a⟩ is found on some strong nouns in the present data, it will be accepted as a target-like instance of the neuter suffix, assuming that the distinction between weak and strong nouns has been lost. In the dialect of Heidal, the dative form of the neuter nouns in singular is described as an ⟨-e⟩ that is so closed that it almost sounds like ⟨-i⟩ (Heringstad, Fjerdingren, and Nesse 1979: 29, my notation). Thus, this suffix found in a context compatible with the use of dative will be counted as target-like. This is the case for the one occurrence in table 12, which is an answer to *kor ligg brødet hen?* 'where is the bread lying?'

(30) ⟨på **bol-i**⟩
on table(N)-DEF.DAT.N
'on the table' (coon_valley06)

According to Jahr (1990: 109), the dative suffix could also be ⟨-n⟩ (my notation) when the neuter nouns ends in a vowel, especially in the area around Mjøsa. The one instance in table 12 above actually conforms to this (referring to eple$_{(N)}$ 'apple'):

(31) ⟨de æ opp-i **tre-en** ⟩
PRON.N is up-in tree(N)-DEF.DAT.N
'it is on the tree' (westby11)

Since the suffix ⟨-n⟩ is typically associated with masculine nouns, it will only be accepted as target-like for neuter nouns if the noun ends in a vowel and the context is compatible with use of dative. Additionally, there should be no other sign of masculine agreement for the noun in question, as this could be a sign of reassignment to the masculine gender.

When it comes to ⟨-o⟩, it has only been found as a marker of the neuter *plural* dative suffix in the literature on Norwegian dialects. In total, ⟨-o⟩ occurs on neuter nouns in five instances (two different nouns, three speakers), and once on a feminine noun (si**o**$_F$ 'the side' – sunburg04). For neuter, it occurs four times on the noun *bord* 'table', and once on *tre* 'tree.' Since this suffix co-occurs with other markers of neuter agreement, and since it is not strongly correlated with any other gender, it will be accepted as a neuter definite suffix. The suffixes that are accepted as target-like according to each gender are shown in table 13 below.[73]

Masculine suffix	**Feminine suffix**	**Neuter suffix**
⟨-(e)n⟩	⟨-a⟩	⟨-e⟩[74]
⟨-in⟩	⟨-e⟩	⟨-a⟩
⟨-an⟩	⟨-i⟩	⟨-o⟩
⟨-e⟩ (only dative)	⟨-u⟩	⟨-i⟩ (only dative)
⟨-a⟩ (only dative)	⟨-o⟩	⟨-n⟩ (dative + no sign of masculine agr. + noun ends in vowel)
	⟨-æ⟩	
	⟨-å⟩	

Table 13: Baseline of forms for the singular, definite suffix, categorized according to gender.

[73] This provides a very broad and varied baseline for the speakers. However, this baseline is made on group-level. The suffixes used by each individual are listed in section 7.2, and a maximum of three suffixes is found for one given gender on the individual level.
[74] ⟨-æ⟩ is also accepted, cf. Venås (1977: 98, my notation).

6.3 Comparison group

To make sure that the free elicitation tasks triggered the targeted agreeing elements, and to get an indication of how native speakers would perform on the tasks, these were presented to three subjects from Gausdal in lower Gudbrandsdalen in Norway. Two of the American Norwegian informants cites Gausdal as the homeplace of their ancestors, while eleven more informants have ancestors from Gudbrandsdalen, making Gausdal an adequate place for finding a comparison group. Lower Gudbrandsdalen is also cited as one of the prevailing dialects in the Coon Valley district (Haugen 1969: 611), where almost a third of the informants come from. Importantly, the Gausdal dialect has a three-gender system (cf. Blekastad et al. 2012).

The comparison group is too small for any statistical analysis to be carried out. This means that the data from the three speakers could not be generalized to represent the Gausdal dialect in general. The main point of this group, however, is to make sure that the American Norwegians are not expected to perform in a way that not even native Norwegians do. A native Norwegian speaker is assumed to have a target-consistent gender system. Therefore, the lowest score of the Gausdal subjects for each agreeing element will serve as an indication of which score could be expected from a speaker with a fully retained three-gender system. It is admittedly too small a group for this score to be anything but arbitrary, but it still seems more unfair to set an acceptability score for the American Norwegians that could be higher than what a native Norwegian would produce.

The Gausdal subjects were age-matched with the American Norwegian informants, and were 79, 82 and 85 years old. Two of them (gausdal01 and gausdal03) have been farmers and are in that sense a good match for most of the American Norwegian informants socioeconomically, whereas the last Gausdal subject (gausdal02) has had a range of professions within banking and health care.

6.3.1 Results

The overall results for the three relevant agreeing elements are given in figure 9 below.

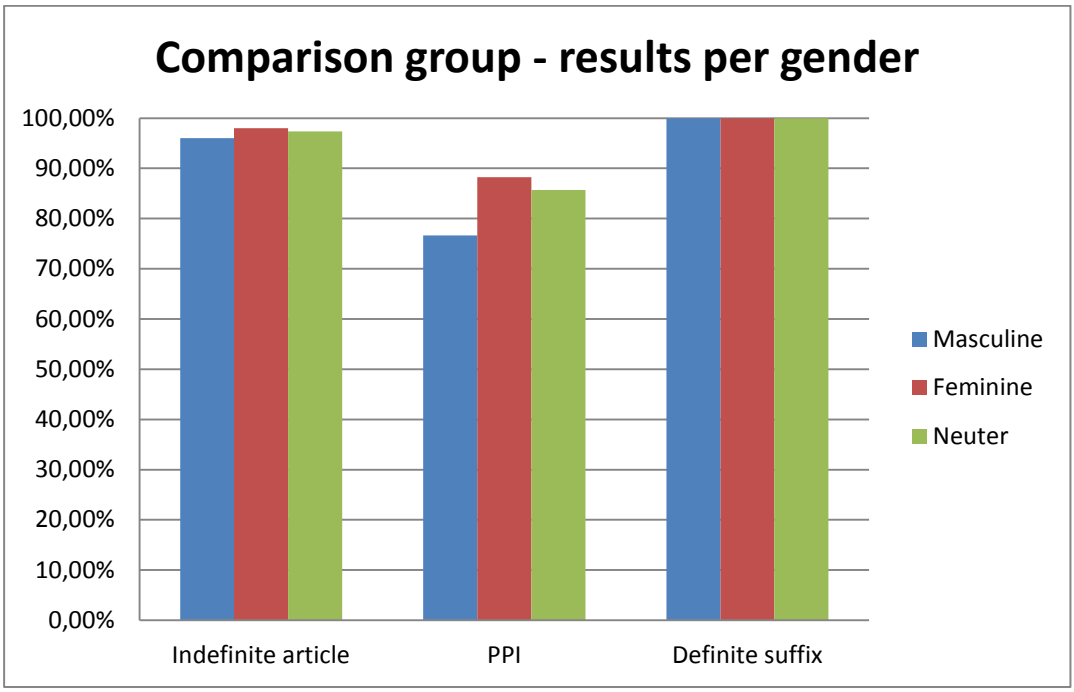

Figure 9: Overall target-like scores according to each agreeing element for the comparison group from Gausdal. There are no deviations in definite suffix, whereas the scores for PPI are surprisingly low.

Surprisingly, the Gausdal subjects produce a relatively high amount of non-target-like PPIs. All three informants used non-target-like PPIs for at least two genders, as can be seen in table 14.

Target-like occurrences of PPI according to gender

	Masculine	*Feminine*	*Neuter*
gausdal01	11/12	12/18	6/9
gausdal02	5/10	13/13	8/9
gausdal03	7/8	19/20	10/10

Table 14: Number of target-like PPIs and the total number of PPIs corresponding to a given gender for each of the three Gausdal subjects in the comparison group.

The two red squares in table 14 above indicate the most problematic instances as regards PPI. For gausdal02, the deviations corresponding to the masculine gender exclusively consist in using the neuter PPI *det*, and four of the five occurrences correspond to one single item (*stein*$_{(M)}$ 'stone') in elicitation task 1. As pointed out in section 5.1.1, this task is quite repetitive, and for this particular item, gausdal02 seemed to get into a pattern where the same phrase was repeated, regardless of gender.

For gausdal01, the deviations for feminine gender consist in using a masculine PPI for feminine nouns, which could indicate a change in the pronoun system. However, the

remaining deviations do not follow a certain pattern, and non-target forms often co-occur with target-like forms. Examples of both non-target-like (indicated in bold) and target-like PPIs are presented in table 15 below. The article and the PPIs provided for a given noun occur in the same cell.

Article	Non-target PPI	Target PPI	Article	Non-target PPI	Target PPI
⟨n stæin⟩	– ⟨**ho**⟩	⟨ann⟩	⟨i flasske⟩	– ⟨**n**⟩	⟨o⟩
a.M stone(M)	– PRON.F	PRON.M	a.F bottle(F)	– PRON.M	PRON.F
⟨ei billed⟩	– ⟨**ho**⟩	⟨de⟩	⟨i søtæpple⟩	– ⟨**n**⟩	
a.N picture(N)	– PRON.F	PRON.N	a.N apple(N)	– PRON.M	

Table 15: The PPIs produced for the nouns *stein, bilde, flaske* and *søteple* by gausdal01. Deviations (indicated in bold) co-occur with target-like forms. It is hard to find a pattern to the deviations.

There are questions that could be raised in relation to these data. Could this be a symptom of the dative case breaking down (Eyþórsson et al. 2012), so that dative forms (of the pronoun) are found in non-dative positions?[75] Are there production difficulties due to age and difficulties with keeping the noun in working memory? These questions could not be answered from the present material. However, we should in any case not expect any higher scores from the heritage speakers. After all, the same considerations apply to them.

6.3.2 Quantifying 'native-like'

The lowest score for each agreeing element from this comparison group will be taken as an indication of what could be expected from a speaker with a three-gender system. All scores identical to or higher than this score will be regarded as native-like. Since the retention of the *three*-gender system is the main concern of this thesis, all three genders have been given equal importance when finding the average score for an agreeing element. Thus, the average percentage of target-like responses was first found for *each gender* in each of the three agreeing elements. For instance, gausdal03 has the following scores for PPI: M = 88% (7/8), F = 95% (19/20), N = 100% (10/10) (cf. table 14). Then, the average percentage of the three

[75] It could be noted that in certain areas in Eastern Norway where urban and more rural varieties meet, the 3SG pronoun system is said to have changed, so that the masculine PPI is also used for feminine nouns. To my knowledge, this has not been investigated, so it could not be confirmed. If gausdal01 has received input corresponding to two different pronoun systems, this could explain at least the six masculine PPIs referring to feminine nouns.

genders gives the final score. For gausdal03, then, the overall score for PPI is 94% (283% divided by 3). However, this number is merely meant to give an indication of a speaker's performance, and should not be given too much weight. As already mentioned, this score is ultimately arbitrary due to the low number of participants. Additionally, the average percentage could be found in a different way, e.g. by dividing the total number of correct occurrences of one element (e.g. target-like occurrences of PPI) by the total number of occurrences of that same element (all PPIs). For gausdal03 on the agreeing element PPI, this would be 36/38 = 95%. This would give us a number that indicates the percentage of tokens of "correct" PPI. However, nearly all speakers produce more masculine nouns, and thus more masculine PPIs. Additionally, many speakers – as we will see – overuse the masculine forms. Counting all instances as equally relevant, then, would for most speakers lead to a higher overall percentage of correct occurrences. However, both methods have been tested, and the results turn out not to be too different. Throughout the rest of this thesis, the first method described has been used for all average percentages.

7 Analysis

The agreeing elements which are analyzed in this thesis and which are taken to be indicative of the gender system as such are the indefinite article, the personal pronoun referring to inanimates (PPI), and the definite suffix. The data contain a certain amount of adjectives as well, which ideally should be considered. However, for some speakers there are no adjectives occurring for one of the genders, and there is thus not enough data for any conclusion to be drawn. Moreover, most adjectives in Norwegian only have a two-way distinction for gender, between non-neuter (that is, feminine and masculine) and neuter. Since the main research question is to see whether the three-gender system is retained, the above-mentioned agreeing elements are better suited for this purpose. In this chapter, the gender systems of the AmN speakers are presented at sub-group level, starting from section 7.3. In each section, the typical pattern found within each group will be illustrated with a table containing the indefinite article, definite, singular form, and PPI corresponding to each gender. The distribution among the different gender forms within each agreeing element will be discussed for each group. But first, section 7.1 explains the characteristics of the different sub-groups, followed by an overview of the results for the use of definite suffix for all speakers in section 7.2.

7.1 Subgroups and main tendencies

On the basis of the gender agreeing forms found for indefinite article and PPI, the AmN speakers have been divided into four major groups.[76] Table 16 below shows the distribution of the agreement forms according to the groups, and could prove useful for the reader throughout this chapter.

	***ein*$_{M}$, *ei*$_{F}$, *eit*$_{N}$**	***ein***
***han*$_{M}$, *ho*$_{F}$, *det*$_{N}$**	group 1 (n=15)	
han, det	group 2 (n=5)	group 3 (n=3)
Referential system → *det*	group 4 (n=2)	

Table 16: Overview over which indefinite articles and PPIs are found in each of the groups. Vertically: PPIs, horizontally: indefinite articles.

[76] All speakers show a three-way distinction within the definite suffix, which has therefore not been considered as a means of identifying the groups.

The groups are based on purely qualitative grounds, which means that one single occurrence of a given gender form is sufficient for inclusion in a group. The first group (**group 1**) shows signs of retaining all the three gender forms in both agreeing elements. However, there is a continuum within the group from the more native-like to the less proficient speakers. Based on the scores for the indefinite article and the PPI, group 1 is further divided into two subgroups: group 1a (native-like) and group 1b (non-native-like). Group 1a consists of speakers who perform as well as or better than the (weakest score of the) comparison group for at least one of the agreeing elements. Conversely, speakers in group 1b scored lower than the comparison group for both agreeing elements, and are hence called *non-native-like*. The second group (**group 2**) distinguishes among three genders in the indefinite article only. Their PPI only has two different gender forms, as the feminine PPI has been lost. The same PPI system is found in the third group (**group 3**), but these speakers use one, invariant indefinite article irrespective of the gender of the noun. The fourth and last group (**group 4**) has retained a three-way distinction in the indefinite article, but a whole new, referential pronoun system is identified for these speakers: *det* is used for all inanimates, whereas *han* and *ho* are reserved for male and female animates respectively. An overview of the informants according to the above-mentioned groups is given in table 17 below.

Group 1		Group 2	Group 3	Group 4
a) native-like	b) non-native-like			
CV06	S06	H01	S08	SH01
CV07	S17	SG07	S18	W10
H02	S11	S04	CV12	
H04	W06	S14		
S03		S15		
S07				
S09				
S12				
W01				
W02				
W11				

Table 17: The 25 participants divided into groups based on occurrence and absence of gender forms. See description above and table 16. The participant codes are abbreviated in the following way: CV = coon_valley, H = harmony, S = sunburg, W = westby, SG = spring_grove, SH = sacred_heart.

On the individual level, traces of the original three-gender system are found for each speaker. For at least one third of the speakers (n=8), grammatical gender seems to remain intact, as they reach native-like scores for all agreeing elements. Three more speakers are considered nearly native-like. There is thus no restructuring of the gender system into a completely new system. However, the pronoun system has undergone changes for over half of the participants. For two of these speakers, the pronoun system has even been completely reorganized as compared to the original system; the new pronoun system is independent of grammatical gender. Moreover, some gender distinctions are lost for some of the speakers, and there is a great deal of vacillation for the indefinite article, PPI and the definite suffix. Thus, the gender system as a whole is vulnerable.

Since vacillation in agreement is often found for a given noun, this chapter is based on *tokens* instead of *types*. This means that one noun could be counted more than once. Since the focus of this study is on the grammar of the individual, statistical analyses will not be carried out in this thesis.

7.2 The definite suffix

For the definite suffix, the comparison group performed at ceiling, i.e. an average of 100% target-like responses. It seems unfair to deem the AmN non-native-like if they do not perform at ceiling. Within research on first language acquisition, a child is considered to have mastered the construction or system in question when s/he reaches 90% target-like production (Westergaard and Rodina 2017: 167). This measure will be adopted for the definite suffix here.

Target-like use of definite suffix	
westby01	100%
sunburg09	100%
sunburg07	100%
westby02	100%
coonvalley07	100%
sunburg03	100%
westby11	100%
harmony02	100%
harmony04	100%
sunburg12	100%
coonvalley06	100%
coon_valley12	100%
sunburg17	100%
sunburg06	98%
sunburg04	94%
sacred_heart01	89%
sunburg11	87%
westby06	87%
sunburg15	84%
harmony01	83%
spring_grove07	78%
sunburg14	77%
sunburg18	77%
westby10	76%
sunburg08	74%

Table 18: Average target-like production of the definite suffix for all speakers, calculated as explained in section 6.3. The color indicative of each group is identical to what is found in table 17, with the exception of group 1b which is indicated in white here.

Thirteen AmN speakers performed at ceiling in production of the definite suffix, which means that they produced only target-like forms. These include all eleven speakers who are called *native-like* in table 17, i.e. group 1a. Additionally, the speakers of group 1b (signaled by white cells) perform nearly target-like, i.e. 90%. Apart from this, there is no clear correlation between group and target-like use of the indefinite article. Somewhat surprisingly, one of the speakers to perform at ceiling belongs to group 3, which means that his average score for the indefinite article and the PPI could not be native-like.

Generally, the definite suffix seems to be well retained in AmN, as the lowest score is 74%. Going through the individual scores reveals that all speakers have maintained a three-way distinction in declension classes, corresponding to the traditional three genders, cf. Table 19 below.

Non-dative, definite suffix	**M**	**F**	**N**	**Group**
coon _valley06	*-(e)n*	*-a*	*-e*	1a
westby01	*-(e)n, -in*	*-a*	*-e*	1a
westby11	*-(e)n*	*-a*	*-e*	1a
westby 02	*-(e)n*	*-a*	*-e*	1a
harmony04	*-(e)n*	*-a*	*-e*	1a
sunburg12	*-(e)n*	*-a*	*-e*	1a
sunburg07	*-(e)n, -an*	*-a*	*-e, -a*	1a
sunburg03	*-(e)n*	*-a, -e*	*-e*	1a
sunburg09	*-(e)n*	*-a, -e, -i*	*-e*	1a
coon _valley07	*-(e)n*	*-a, -u*	*-e, -a*	1a
harmony02	*-(e)n*	*-a, -e*	*-e, -a, -o*	1a
sunburg17	*-(e)n*	*-a*	*-e, -a*	1b
westby06	*-(e)n*	*-a, -e*	*-e, -a*	1b
sunburg11	*-(e)n*	*-a, -e*	*-e, -a*	1b
sunburg06	*-(e)n*	*-a, -e*	*-e, -a, -o*	1b
sunburg14	*-(e)n*	*-a*	*-e, -a*	2
sunburg15	*-(e)n*	*-e, -a*	*-e*	2
spring_grove07	*-(e)n*	*-a, -e*	*-e, -a*	2
harmony01	*-(e)n*	*-a, -e*	*-e, -a, -æ*	2
sunburg04	*-(e)n*	*-a, -e, -o*	*-e, -a*	2
sunburg18	*-(e)n*	*-a*	*-e, -a*	3
sunburg08	*-(e)n*	*-a*	*-e, -a*	3
coon_valley12	*-(e)n*	*-e, -a*	*-e*	3
sacred _heart01	*-(e)n*	*-e, -a*	*-e*	4
westby10	*-(e)n*	*-a, -e, -æ*	*-e, -a*	4

Table 19: Target-like realizations[77] of the definite suffix per informant, according to gender. The order of the suffix depends on frequency: the more frequent suffix appears to the left. The grey color indicates the suffix that seems to be most strongly correlated with the given gender at group-level.[78]

[77] Notice that these are only the *target-like* realizations of the definite suffix. This means that some speakers may have used e.g. *-en* with neuter nouns. However, section 6.2.5 concluded that *-en* is only indicative of masculine gender, and such examples are therefore not included here.

[78] All forms are given in italics in this table to facilitate readability, even if the forms represent pronunciation.

The order of the suffix for each gender on the individual level is given according to the frequency: the more frequent suffix(es) appears to the left. The grey color indicates the suffix that seems to be most strongly correlated with the given gender at group-level.

The deviations are presented in Figure 8 in section 5.4.3 and form a clear pattern. Mainly, the deviations consist of feminine and neuter nouns occurring with masculine definite suffixes. In total, 12% of all feminine, definite nouns and 10% of all neuter, definite nouns occur with -*en*$_{M}$. On the individual level, three speakers (sunburg15, sunburg14and sunburg08) score significantly lower (here: at least 40%) for feminine than non-feminine genders.

	Target-like definite suffix			
	masc. nouns	**fem. nouns**	**neuter nouns**	**group**
sunburg14	100%	43%	89%	2
sunburg15	94%	57%	100%	2
sunburg08	100%	33%	89%	3

Table 20: Overview of speakers who score significantly lower (here: at least 40%) in the use of the definite suffix for the feminine gender.

However, inter-individual differences are found. Westby10 is overusing the non-masculine definite suffix –*e*$_{N/F}$. As much as 46% of the masculine definite nouns occur with this suffix, e.g. ⟨kniv$_{(M)}$-e$_{N/F}$⟩ 'the knife' and ⟨kråpp$_{(M)}$-e$_{N/F}$⟩ 'the body/person.' This is similar to the findings of Johannessen and Larsson (2015: 15) that "there are individual strategies that are not shared by all the speakers."

7.3 Group 1

Since the groups are based on purely qualitative grounds, one single occurrence of each of the gender forms is sufficient for inclusion in this group.[79] Table 21 illustrates the gender agreeing forms that are characteristic of group 1. These are identical to the original three-gender system, cf. Table 1 in section 2.3.2

[79] Sunburg11 does not produce any neuter indefinite articles during the two free elicitation tasks. However, interviews recorded for the NorAmDiaSyn project in 2010–2011 revealed one neuter, indefinite article: ***eit***$_{N}$ *år*$_{(N)}$ 'a year.' There is a possibility that the neuter article could no longer be accessed, due to low degree of use and activation (cf. section 8.1.3), but she is included in this group since she does not conform to any of the other groups.

	Indefinite article		Definite form	PPI
Masculine	***ein***	*bil*	*bil-**en***	***han***
	a.M	car(M)	car(M)-DEF.M	PRON.M
Feminine	***ei***	*dør*	*dør-**a***	***ho***
	a.F	door(F)	door(F)-DEF.F	PRON.F
Neuter	***eit***	*flagg*	*flagg-**et***	***det***
	a.N	flag(N)	flag(N)-DEF.N	PRON.N

Table 21: The gender agreeing forms characteristic of group 1.

However, as pointed out in section 7.1, there are differences as to how native-like the speakers of this group are. The four participants who score below the comparison group for *both* of the agreeing elements are more *non-native-like* than the rest, and make up group 1b. The difference between group 1a and 1b illustrates the heterogeneity of the heritage speakers: "While some speakers have a fairly stable grammar, others display a more variable grammar, **not applying rules consistently**" (Lohndal and Westergaard 2016: 4). The speakers in group 1a generally seem to have a much more stable grammar than the speakers in group 1b; the latter do display traces of all gender forms, but these are not used consistently.

7.3.1 The indefinite article

The lowest score obtained by the Gausdal subjects for indefinite article was 92% (gausdal03). The average target-like score reached by the speakers of group 1 is presented in table 22 below. Only two of the native-like speakers (harmony02 and harmony04) score below the Gausdal score.

Target-like use of indefinite article, group 1	
coonvalley06	100%
coonvalley07	100%
westby02	100%
westby01	98%
westby11	97%
sunburg07	97%
sunburg03	96%
sunburg12	94%
sunburg09	92%
harmony02	90%
harmony04	78%
sunburg17	74%
sunburg06	55%
westby06	45%
sunburg11	37%

Table 22: Average target-like production of indefinite article, group 1. Group 1b is indicated with grey cells. The line underneath sunburg09 marks the lowest score produced by the comparison group, namely 92%.

A closer look at the score for each gender in group 1b reveals that the masculine article is also used with non-masculine nouns (cf. figure 10 below) to such an extent that sunburg11 only produces one single non-masculine article, and westby06 only four. The pattern of overgeneralizing the masculine form is found in harmony04's data as well, but to a lesser extent.

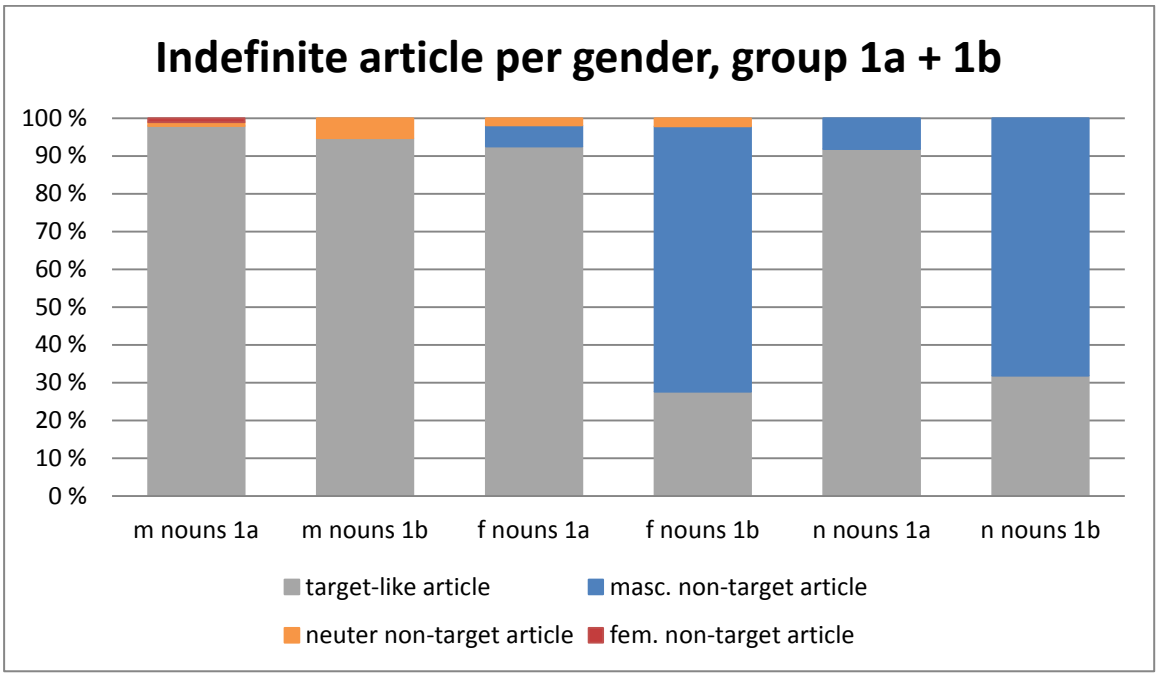

Figure 10: Overview of the use of indefinite article according to gender on sub-group level (1a vs. 1b).

7.3.2 PPI

When it comes to the use of PPI, two native-like speakers (coon_valley06 and sunburg12) have a lower score than the lowest Gausdal score (75% - gausdal01), see table 23 below.

Average score PPI, group 1	
westby01	97%
coon_valley07	90%
sunburg07	89%
sunburg09	88%
westby02	87%
harmony04	82%
sunburg03	82%
harmony02	80%
westby11	78%
coon_valley06	73%
sunburg12	61%
sunburg11	53%
sunburg17	53%
westby06	44%
sunburg06	36%

Table 23: The average target-like use of PPI by all speakers in group 1. The line underneath westby11 indicates the lowest score for the comparison group (75%). Speakers in group 1b are indicated with grey cells.

Similarly to what was found for the comparison group, the deviations found within the more native-like speakers (group 1a) do not follow one clear pattern. Specifically, the neuter PPI is used more often than the masculine PPI in reference to feminines, and the feminine PPI is used with non-feminine nouns (cf. Table 15 in section 6.3.1). This is not seen for the non-native-like speakers (group 1b).

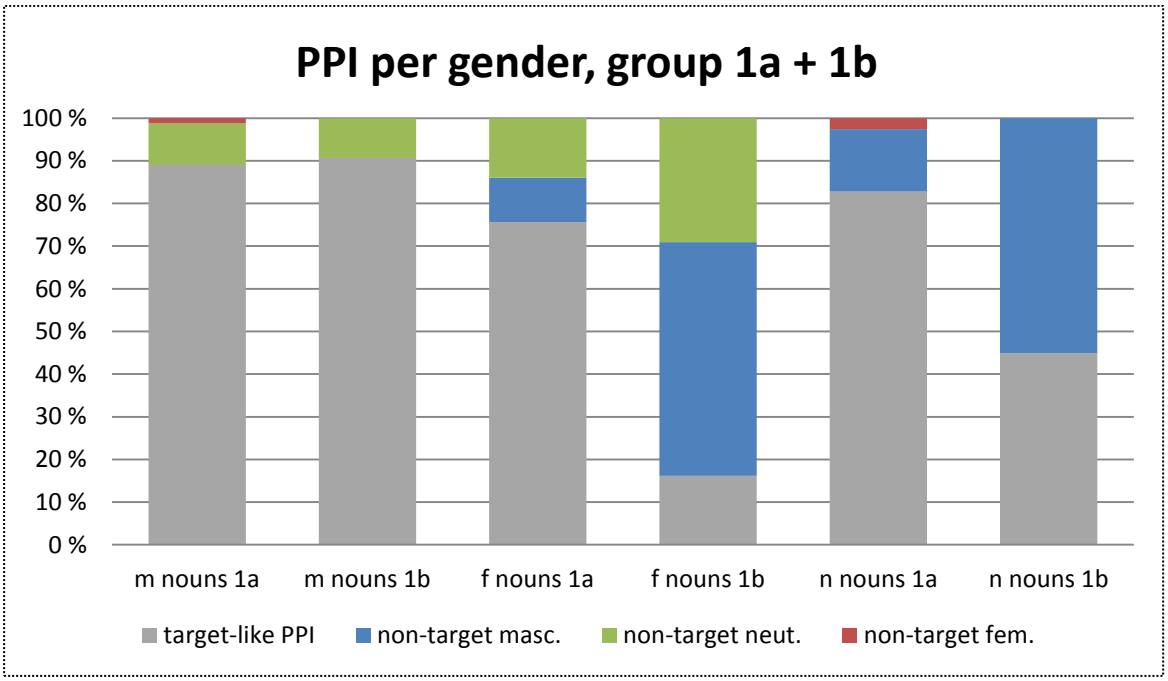

Figure 11: The use of PPI according to gender, group 1a and group 1b.

For group 1b, the pattern that was seen with the indefinite article (cf. Figure 10) is also present in the PPI, namely overgeneralization of the masculine form to both non-masculine genders. However, the feminine gender seems even more vulnerable than the neuter. Additionally, the feminine PPI is never used for non-feminine nouns. The feminine PPI seems somewhat restricted or inaccessible, a tendency which is further strengthened in group 2 and 3. Reference to feminine nouns seems to be somewhat more difficult than reference to the other genders for speakers in group 1a as well. We return to this in section 8.2.1.

7.3.3 A note on the deviations in group 1b

Also *within* group 1b, there are speakers with more and less deviations, and with different patterns of deviations. Sunburg17 is generally closer to the comparison group than the rest of the speakers in 1b. Mainly, the deviations in his data consist of overgeneralization of the masculine form to both non-masculine genders. For westby06 and sunburg11, this tendency is

even stronger, as they produce definite masculine forms for non-masculine nouns, cf. (32) and (33) below. For these two speakers, the neuter nouns are especially affected by this overgeneralization. Possibly, many neuter nouns are reassigned to the masculine gender.

(32)	⟨**n**	potræt⟩	– ⟨potrætt-**n**⟩	– ⟨**n**⟩
(westby06)	a.M	picture(N)	– picture(N)-DEF.M	– PRON.M
(33)	⟨**ein**	billed⟩	– ⟨billd-**n**⟩	– ⟨**hann**⟩
(sunburg11)	a.M	picture(N)	– picture(N)-DEF.M	– PRON.M

The overgeneralization of masculine forms is seen within the indefinite article for sunburg06. Turning to the PPI, sunburg06 scores extremely low. In fact, there is only one of the twenty-three speakers[80] who has a lower score for PPI altogether than sunburg06.[81] Sunburg06's average score is listed in table 23 above, and in table 24 below the score according to each gender is shown for the speakers in group 1b.

	Target-like use of PPI, group 1b		
	masc. nouns	**fem. nouns**	**neuter nouns**
sunburg11	100%	14%	45%
sunburg17	77%	13%	68%
westby06	100%	22%	8%
sunburg06	50%	14%	43%

Table 24: Target-like use of PPI according to gender for all speakers in group 1b.

An important questions is what causes this low score. It should be noted that sunburg06 is one of very few of the heritage speakers who can read and write Norwegian. He seems to have more metalinguistic awareness than most heritage speakers, which is seen from his informing the other heritage speakers of the differences between American Norwegian and European Norwegian. He also has the highest education of all in this group, as he holds a Ph.D. As the rest of these speakers, he speaks a dialect which is associated with Eastern Norway. However, he once stayed eleven weeks in Bergen, only speaking Norwegian himself, and only hearing the Bergen dialect. After this stay, he was told: "You don't speak Norwegian, you speak Bergen dialect." As mentioned in section 2.3.2, the dialect of Bergen has a two-gender system

[80] Disregarding the two speakers with a new, semantic pronoun system.
[81] Keep in mind that eight speakers lack a feminine PPI altogether and thus scores 0% for feminine.

instead of a three-gender system. It could be the case that intense exposure to a different gender system influences and weakens an already vulnerable gender system. Additionally, the gender system in the most used written standard, Bokmål, is different from the traditional dialectal gender system (cf. footnote 4). Johannessen and Larsson (2015: 18) hypothesize that close encounters with European Norwegian could lead to deviations in the heritage speakers' production, since they get exposed to a substantially different variant than the home language. Thus, the low target-like score for sunburg06 could be due to different gender systems competing.

Sunburg06 scores just above chance level (36%),[82] and the question arises whether PPI is based on lexical gender at all. However, evidence from the comprehension task introduced in section 4.3.3 indicate that PPI *is* based on lexical gender for sunburg06. The comprehension task consisted of screens with two inanimate objects that differed in grammatical gender in Norwegian. As pointed out in section 5.1.2, the task did not work out very well since most heritage speakers – and some Norwegian speakers as well – did not perceive that the personal pronoun gave a hint as to identify the correct object. Sunburg06, on the other hand, showed enough metalinguistic awareness to focus on the form of the pronoun. Although he did not always choose the expected item, the pattern for correct and incorrect answers seems clear. Screens consisting of a combination of masculine and feminine nouns were difficult, whereas the correct object was identified whenever one of the objects was neuter. This is an indication that sunburg06 treats masculine and feminine nouns as belonging to the same category, only distinguished from neuter. However, he was able to distinguish one single feminine noun (*mjølk*$_{(F)}$ 'milk') from masculine in the comprehension task. Interestingly, this particular noun, *mjølk*, was also the only feminine inanimate noun which he referred to using the feminine pronoun *ho* during the elicitation tasks. The feminine nouns appearing with a masculine noun in the comprehension task are listed in table 25 below. This table also shows which PPI(s) sunburg06 provided for each of these nouns in the elicitation tasks.

[82] Giving the same importance to all genders (cf. section 6.3.2**Error! Reference source not found.**), chance evel would be 33%, since there are three genders.

Comprehension task		**Elicitation task**
F nouns appearing with M nouns	**Able to distinguish from masculine**	**PPI**
mjølk	yes	*ho*$_F$
bok	no	*han*$_M$/*det*$_N$
flaske	no	han$_M$
klokke	no	han$_M$

Table 25: Overview of feminine nouns appearing with masculine nouns in the comprehension task. Sunburg06's ability to distinguish these from masculine nouns in the comprehension task is correlated with how sunburg06 referred to these feminines in the elicitation tasks.

There seems to be a correlation between sunburg06's ability to distinguish feminine from masculine in the comprehension task and his PPI-production on the elicitation tasks. A possible explanation is that most feminine nouns have been reassigned to the masculine gender for sunburg06, and he is therefore not able to distinguish between feminine and masculine. *Mjølk*, on the other hand, has remained feminine, and could therefore be identified as different from masculine. However, the data are admittedly very scarce, and more investigation is needed in order to draw a conclusion. However, I will take the evidence from the perception task to indicate that grammatical gender is still the basis for PPI for sunburg06.

7.4 Group 2

The hallmark of group 2 is that there is no distinct PPI referring to the feminine gender. The three original genders are distinguished in the indefinite article, albeit not always consistently; no speakers in this group reach native-like scores for the indefinite article. The gender forms that are characteristic of group 2 are shown in table 26 below.

	Indefinite article		Definite form	PPI
Masculine	***ein***	*bil*	*bil-**en***	***han***
	a.M	car(M)	car(M)-DEF.M	PRON.M
Feminine	***ei/ein***	*dør*	*dør-**a***	***han***
	a.F/ a.M	door(F)	door(F)-DEF.F	PRON.F
Neuter	***eit/ein***	*flagg*	*flagg-**et***	***det/han***
	a.N/a.M	flag(N)	flag(N)-DEF.N	PRON.N/PRON.M

Table 26: The gender agreeing forms characteristic of group 2. The most important traits are indicated in grey.

7.4.1 The indefinite article

Similar to group 1b, the overall pattern in this group is overgeneralization of the masculine article to non-masculine nouns (cf. figure 12 below). In fact, spring_grove07 only produces one single feminine and one neuter article. It is not uncommon for one noun to appear with different articles, an indication that the system as a whole is unstable. For instance, harmony01 produces both ⟨ett_N $tre_{(N)}$⟩ and ⟨en_M $tre_{(N)}$⟩ 'a tree.' While this example indicates that the masculine article is perhaps "genderless," meaning that it could be used with all nouns, there is also the possibility that nouns have been reassigned to the masculine gender. Either way there is a weakening of the original system.

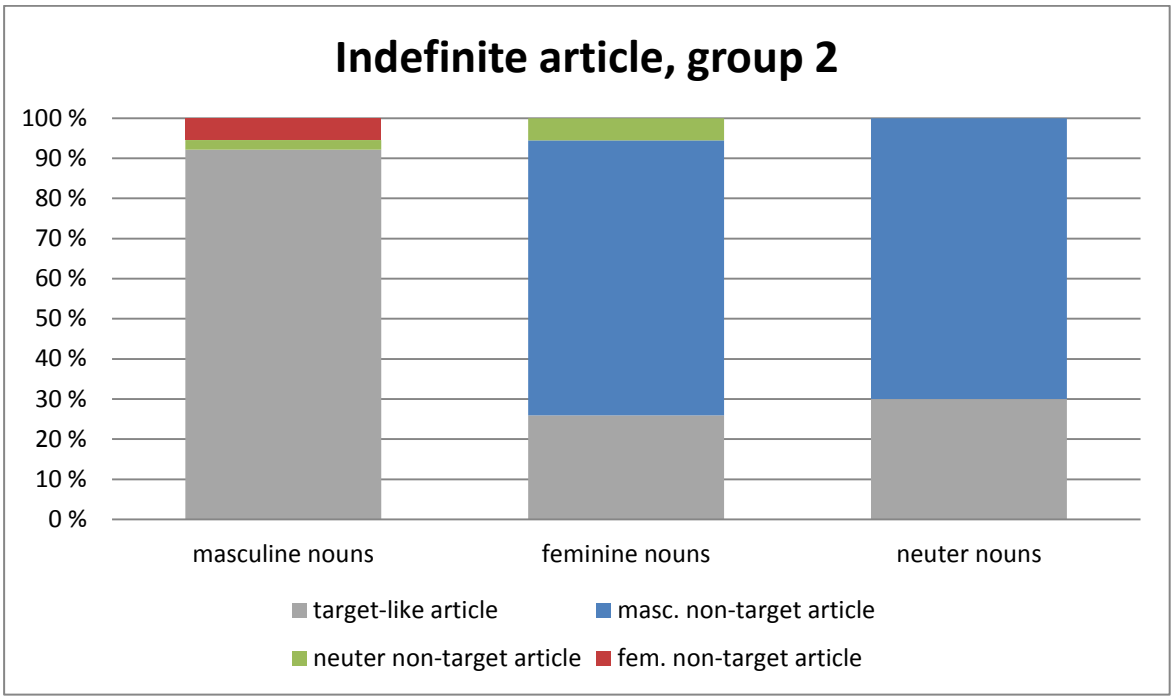

Figure 12: The distribution of indefinite articles according to gender, group 2.

The informants form a continuum when it comes to how target-consistent they are in their use of indefinite article, cf. table 27 below.

	Target-like use of indefinite article, group 2		
	masc.nouns	**fem. nouns**	**neuter nouns**
sunburg04	85%	50%	75%
harmony01	91%	20%	71%
sunburg14	97%	40%	31%
sunburg15	88%	27%	24%
spring_grove07	97%	6%	5%

Table 27: Target-like use of indefinite article according to the gender of the noun, group 2

Since transcriptions of these participants are available in CANS (cf. section 3.2.2) or in files yet to be included in the corpus, the use of indefinite article was also checked here. [83] The additional data confirm the pattern already seen here: some non-masculine nouns occur with the expected article, but often the masculine article accompanies the non-masculine nouns instead.

[83] No additional data were available for sunburg_MN_15gm.

7.4.2 PPI

All AmN speakers participating in this project have a feminine personal pronoun, *ho*, in their vocabulary. For all participants except those in group 1, *ho* is only used when referring to female animates, that is, female humans and animals with a clear biological gender, like *ku* 'cow' and *høne* 'hen.'[84] This is also the case for the speakers in group 2. The main pattern is that feminine, inanimate nouns are referred to with a masculine PPI, cf. figure 13 below.

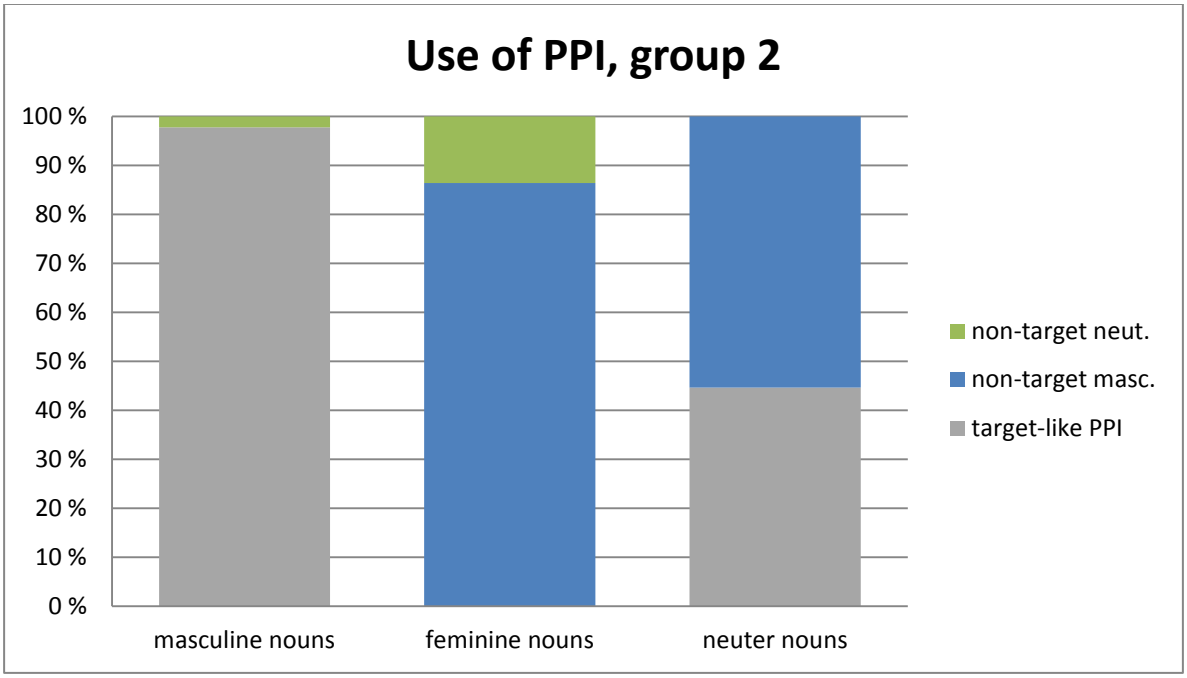

Figure 13: The distribution of PPIs according to gender, group 2.

Also with reference to neuter nouns, the masculine PPI is overgeneralized. It should be mentioned that harmony01 is completely according to the baseline in her use of PPI for masculine and neuter nouns. If her data is removed, then, the target-like score for neuter nouns drops more than 10%.

Despite the loss of a feminine PPI, there seems to be a correspondence between grammatical gender and PPI. Each participant is more prone to using the neuter PPI when referring to a neuter noun than when referring to a masculine noun, cf. table 28 below. However, due to the lack of a distinct feminine PPI, the neuter PPI could also be used for reference to feminine. Table 28 below shows how often each gender was referred to with the neuter PPI.

[84] This specialized function of the feminine pronoun is found in the Scandinavian varieties that have developed a two-gender system, cf. section 2.3.2.

	Use of neuter PPI, group 2		
	neuter nouns	**fem. nouns**	**masc. nouns**
harmony01	100%	50%	0%
sunburg04	38%	15%	8%
sunburg14	33%	0%	0%
spring_grove07	31%	25%	0%
sunburg15	29%	0%	0%

Table 28: Use of neuter PPI compared to all uses of PPI according to each gender, group 2.

Altogether, these five speakers produced 32 neuter PPIs. Of those, 1 referred to a masculine noun, 6 referred to feminine nouns, and 25 referred to neuter nouns. This means that the neuter PPIs referred to neuter nouns 78% of the time. Disregarding harmony01, the score is 48%. Still, this is higher than what we would expect if grammatical gender and PPI were disconnected. If that were the case, the percentage of neuter PPIs referring to neuter nouns should be approximately 33%[85] (chance level). This is an indication that the use of neuter PPI is based on lexical gender.

Table 28 also shows that nearly all speakers perform at ceiling for reference to masculine nouns. One further observation to me made from this table is that masculine and feminine seems to be kept distinct by at least harmony01 and spring_grove07. In the dialect of Bergen, *han* came to be used of previously feminine nouns as well as masculine nouns because the two had come indistinguishable. For these two speakers, however, *han* is the only PPI used for masculine nouns, but not the only choice for feminine nouns. This indicates a certain correlation between grammatical gender and choice of PPI; the masculine PPI could always be used, irrespective of gender, but for neuter nouns, and perhaps also feminines, *det* is an option as well. However, more data is needed to conclude on this matter, as some speakers only have two or three occurrences of PPIs referring to a given gender.

7.5 Group 3

This group, including three participants, is characterized by not showing signs of three distinct genders in any of the two main agreeing elements, indefinite article and PPI, cf. table 29 below.

[85] The score would probably be even lower, given that there are more masculine than neuter nouns.

	Indefinite article		Definite form	PPI
masculine	***ein***	*bil*	*bil-**en***	***han***
	a	car(M)	car(M)-DEF.M	PRON.M
feminine	***ein***	*dør*	*dør-**a***	***det***
	a	door(F)	door(F)-DEF.F	PRON.N
neuter	***ein***	*flagg*	*flagg-**et***	***det***
	a	flag(N)	flag(N)-DEF.N	PRON.N

Table 29: The gender agreeing forms characteristic of group 3. The most important traits are indicated in grey.

7.5.1 The indefinite article

The main tendency in this group is that the masculine article *ein* is used across the board, and it is virtually the only available article, cf. table 30 below.

	masculine	Feminine	neuter
coon_valley12	*ein gut*$_{(M)}$ 'a boy'	*ein bok*$_{(F)}$ 'a book'	*ein brev*$_{(N)}$ 'a letter'
sunburg08	*ein gris*$_{(M)}$ 'a pig'	*ein klokke*$_{(F)}$ 'a clock'	*ein hus*$_{(N)}$ 'a house'
sunburg18	*ein bil*$_{(M)}$ 'a car'	*ein dør*$_{(F)}$ 'a door'	*ein tre*$_{(N)}$ 'a tree'

Table 30: Examples of the indefinite article *ein* used with nouns of all three genders, group 3.

The only exception is one presumably neuter indefinite article in the data of both sunburg08 and coon_valley12:

(34) ⟨e tre⟩[86]
a.N tree(N)
(coon_valley12)

(35) ⟨i kvinnførk⟩
a.N woman(N)
(sunburg08)

Additionally, an older transcription from a personal interview with sunburg08 revealed two further instances of the non-masculine article *ei* occurring with indefinite nouns. These nouns were the English word *teacher* and the Norwegian word *brød*$_{(N)}$ 'bread.' Consequently, there is no evidence of the *feminine* indefinite article. Additionally, in all the available data on these

[86] An alternative transcription is ⟨ett tre⟩, as it is impossible to determine whether /t/ is part of both items or just the noun (*tre*). According to the baseline outlined in section 6.2.3, both realizations are indicative of the neuter gender, and the main point here is that neither form is a version of the masculine article.

informants, no other feminine agreeing forms (e.g. possessives, *lita*$_{F}$ 'little') were found either. This could be an indication that the feminine gender is particularly vulnerable for these speakers.

The use of the masculine article across the board could lead to reassignment of non-masculine nouns to the masculine gender. A look at the definite suffix seems to support this. The deviations in definite suffix exclusively consist of using the masculine definite suffix with non-masculine nouns, e.g. *field*$_{(F)}$-*en*$_{M}$ 'the field,' *gras*$_{(N)}$-*en*$_{M}$ 'the grass' (sunburg08), and *bok*$_{(F)}$-*en*$_{M}$ 'the book,' *bord*$_{(N)}$-*en*$_{M}$ 'the table' (sunburg18). However, as we saw in Table 18 in section 7.2, coon_valley12 is 100% target-like when it comes to definite forms.

7.5.2 PPI

When it comes to the PPI, coon_valley12 and sunburg18 show a very similar pattern, whereas sunburg08 does not conform to this pattern, cf. figure 14 below. Sunburg08 will therefore be discussed separately below, before the data from coon_valley12 and sunburg18 are presented.

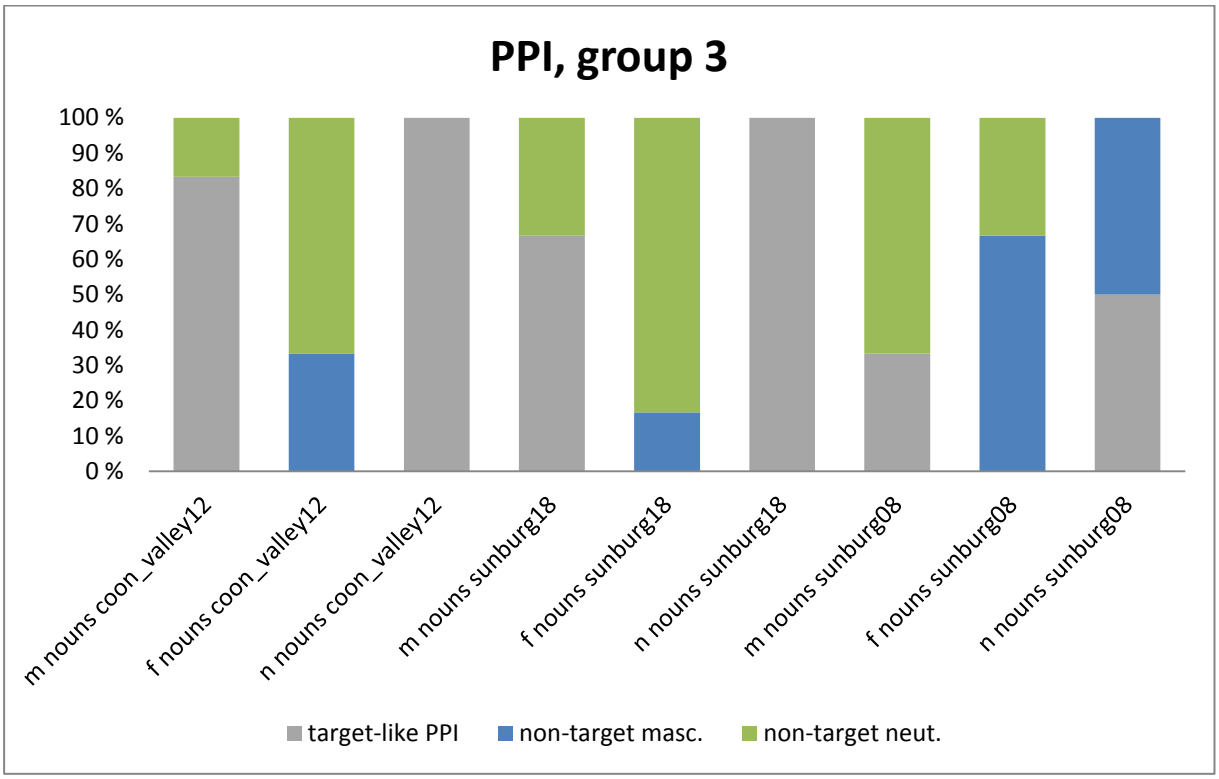

Figure 14: Use of PPI according to gender for each of the three speakers in group 3.

Sunburg08

In contrast to the other two, sunburg08 uses the masculine PPI when referring to non-masculine nouns to a certain extent. However, reference to masculine nouns seems to be problematic for her. In general, it is hard to find any system to sunburg08's data; the distribution of the two PPIs seems arbitrary. This is further supported by the fact that three out of twelve nouns are referred to with both PPIs, e.g. ⟨tre$_{(N)}$-e$_N$ – de$_N$/hann$_M$⟩ 'the three – it.' In comparison, the other two speakers do not vacillate between different PPIs for any noun. In conclusion, there is no evidence that PPI is linked to grammatical gender for sunburg08. It could be noted that she shows great difficulties with retrieving (American) Norwegian words, and she therefore used many English nouns, e.g. *bottle* instead of *flaske*$_F$ and *letter* instead of *brev*$_N$.

Coon_valley12 and sunburg18

Both coon_valley12 and sunburg18 are 100% accurate in reference to neuter nouns, as well as having a relatively high score for masculine nouns. Reference to feminine nouns is done mostly with neuter PPI. This is a different pattern from what was found for group 2, since overgeneralization is rather with the neuter than the masculine PPI in group 3. It should be noted that the data are scarce, with only three references to feminine nouns for coon_valley12, and three references to masculine nouns for sunburg18. Still, I would like to discuss the distribution of the PPIs, focusing on sunburg18. She produces 16 PPIs altogether, and only three of them have masculine form, which is indicated in bold in Table 31 below.

PPIs – sunburg18		
M	bil ‘car’	***han***
M	road	***han***
M	kniv ‘knife’	*det*
F	dør ‘door’	*det*
F	kirke ‘church’	*det* (x2)
F	bok ‘book’	*det* (x2)
F	klokke ‘clock’	***han***
N	brev ‘letter’	*det*
N	flagg ‘flag’	*det*
N	tre ‘tree’	*det*
N	eple ’apple’	*det*
N	portrett ‘picture’	*det* (x3)

Table 31: Overview of all PPIs provided by sunburg18, group 3.

The masculine PPIs refer to masculine (n=2) or feminine (n=1) nouns. The relevant question is whether it is a coincidence that the masculine PPI is not used for reference to neuter nouns. For group 2, we saw a clear tendency for using the masculine PPI, irrespective of the grammatical gender of the noun. For speakers of group 2, the neuter PPI is much more likely to be used when the noun in question is neuter. This indicates that there is a default-like PPI that always could be used, whereas the more specialized PPI should only be used for a specific gender. This could be the case for sunburg18, too, only that for her, the neuter PPI has this default-like status. If this is the case, the genders still have to be represented separately in the speaker’s grammar.

Coon_valley12 is slightly more target-like than sunburg18 when referring to both masculine and neuter nouns. He uses a neuter PPI for a masculine noun only once, with a noun that clearly seems to be unfamiliar to him, namely *havre*$_{(M)}$ ‘oats.’ Thus, this noun might not have been assigned to the masculine gender for him.

The apparent distinction of the genders in the PPI is quite surprising, given that no gender distinctions are made in the indefinite article.[87] According to Howe (1996: 63), pronouns

[87] Note, however, that this is not contradictory to the Agreement Hierarchy (section 2.3.1) (AH), since AH is only applicable to situations where there is a choice between different types of agreement (lexical vs. referential).

seem to be incapable of maintaining on their own, for any length of time, distinctions that are purely grammatical, i.e. that are not based on 'real-world entities' (Howe 1996: 61). This means that the gender system as it is represented in group 3 should not be very viable. However, the three-gender system – more specifically, the distinction between masculine and feminine – was apparently for some time expressed only in the personal pronoun in the Bergen dialect: a three-gender system where feminine and masculine gender is expressed explicitly only in pronouns is found in the diary of Absalon Pedersøn Beyer, written 1552–1572 (Nesse 2005: 142). Also in the history of English we find that the grammatical gender was retained longest in anaphoric pronouns (Stenroos 2008: 459). This shows that it is theoretically possible to maintain the correlation between PPI and grammatical gender without gender being reflected in any other agreeing elements. However, English did lose grammatical gender altogether, whereas the Bergen dialect maintained the category, albeit with a reduced number of genders. An important difference between these two variants is that English also lost its inflexional endings, whereas these were maintained in the Bergen dialect. In fact, the loss of grammatical gender in English is generally assumed to be related to the loss inflexional endings (Stenroos 2008: 445).

If the definite suffix is accepted as a gender marker, it easier to understand how the distinction in PPI could be maintained for the AmN speakers. An indication that the definite suffix *is* indeed used as a reference to gender is that coon_valley12, who only produces target-like definite suffixes, seems to be more target-like for PPI than sunburg18. A difficult question still pertains to whether there are *three* separate genders, as a distinct feminine form is only seen for the indefinite suffix. For sunburg18, this is sometimes even replaced by the masculine form (see section 7.5.1). The situation found here might be similar to what has been stated earlier for European Norwegian dialects: "Forskjellen mellom et tre- og et togenussystem er ikke absolutt. [I]nnafor genuskongruensen fins [det] grader av hvor distinkt og omfattende genusforskjellene kan være"[88] (Conzett, Johansen, and Sollid 2011: 38–39).

7.6 Group 4

The gender forms identified within the different agreeing elements for group 4 are represented in table 32 below.

[88] "The difference between a three- and a two-gender system is not absolute. Within gender agreement there are degrees to how distinct and pervasive gender differences are" (my translation).

	Indefinite article		Definite form	PPI
masculine	***ein***	*bil*	*bil-**en***	***det***
	a.M	car(M)	car(M)-DEF.M	PRON.INANIMATE
feminine	***ei***	*dør*	*dør-**a***	***det***
	a.F	door(F)	door(F)-DEF.F	PRON.INANIMATE
neuter	***eit***	*flagg*	*flagg-**et***	***det***
	a.N	flag(N)	flag(N)-DEF.N	PRON.INANIMATE

Table 32: The gender agreeing forms characteristic of group 4. The most important traits are indicated in grey.

7.6.1 The indefinite article

In the indefinite article there is a three-way distinction that corresponds to the original grammatical genders.[89] A familiar trend from what we have seen so far is the overgeneralization of the masculine article to both non-masculine genders, cf. figure 15 below.

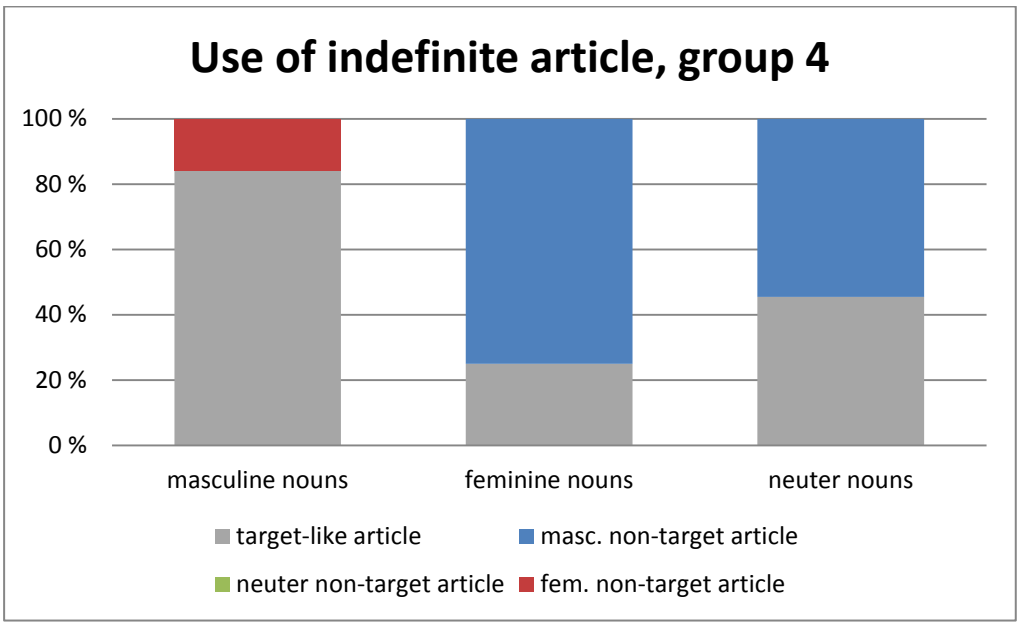

Figure 15: Distribution of the various gender forms of the indefinite article according to gender, group 4.

[89] Due to very few occurrences of the indefinite article for sacred_heart01, the numbers presented in this section includes forms from a personal interview carried out at the same time as the elicitation tasks.

7.6.2 A new pronoun system

In section 7.5.2, we saw that the anaphoric pronouns could be quite conservative in the sense that they could maintain grammatical distinctions longer than other formal elements. However, personal pronouns are also "the major initiator of changes in the balance between syntactic and semantic gender" (Corbett 1991: 242). This property of the pronoun is observed in this group, as the pronoun system is dramatically reorganized. The only PPI occurring in the data is the neuter *det*. Sacred_heart01 also uses *det* in reference to animals like *ku* 'cow' and *gris* 'pig', alternating with han_{M} or ho_{F}[90]depending on biological gender. Here we see the contours of a referentially based pronoun system: *det* is used for inanimates (or non-humans), while *han* and *ho* is only used for gendered animate beings (or humans). This new pronoun system emphasizes the characteristics of the Norwegian genders: "The neuter is the inanimate gender par excellence in Norwegian, while masculine and feminine are the genders primarily associated with animacy" (Enger 2004b: 26). As mentioned in section 4.1.1, this change from pronominal reference being based on lexical gender to referential gender is not uncommon in the history of Germanic languages. Examples from the pronoun system in group 4 are presented in table 33 below, and we clearly see the similarity with the English pronominal system.

	***det* 'it'**		***han* 'he'**		***ho/hun* 'she'**	
M	⟨kniv$_{(M)}$⟩	'a knife'	⟨en$_{M}$ gutt$_{(M)}$⟩	'a boy'		
F	⟨ei$_{F}$ kloke$_{(F)}$⟩	'a watch'			⟨ei$_{F}$ dame$_{(F)}$⟩	'a woman'
N	⟨ett$_{N}$ tre$_{(N)}$⟩	'a tree'	⟨troll$_{(N)}$⟩	'troll'		

Table 33: Examples from sacred_heart01 and westby10 illustrating the new, referential pronoun system.

For these two speakers, the PPI is completely detached from lexical gender, which means that there is one element less to reflect and reinforce the gender system as compared to the original system.

It is interesting to note that the two participants in group 4 are the only ones who are *not* 3rd or 4th generation immigrants. Sacred_heart01 is 2nd generation immigrant and westby10 is 5th

[90] A trait that sets sacred_heart01 apart from the rest is that she uses the feminine pronoun form *hun* instead of *ho*. This is probably due to influence from the written standard Bokmål, as she has received some formal schooling in Norwegian. However, *ho* will be used throughout this chapter to refer to all feminine pronoun forms.

generation immigrant. Sacred_heart01 is also the only informant who has studied Norwegian, which she did at St. Olaf College in her youth. Therefore, she is one of the few speakers who knows how to read and write Norwegian and thus knows a standard variety. She has not been part of the same Norwegian-speaking community as the other informants and has therefore not had the same linguistic variety as input.[91] Westby10 is the daughter of coon_valley06 and coon_valley07 in group1a, and we therefore know a great deal about the input she has received. However, since she is only 58 years old, she has not had peers with whom she could talk Norwegian.

Even if the language biographies of sacred_heart01 and westby10 are very different from each other, the resulting pronoun system is the same: a referentially based system. I suspect this is possible since the resulting system is similar to the English system, which is the dominant language of both. Additionally, it seems to be the case that pronouns are much more likely to be used in reference to animates than inanimates (cf. section 5.2.3), and for animates the pronoun is most likely to agree semantically rather than syntactically. This pattern has then been further extended to all pronominal reference.

7.7 Summary

7.7.1 A graphic illustration of the results

For several of the groups it has been noted that there is a continuum from the less to the more proficient speakers. The continuum consisting of all speakers is illustrated in figure 16 below, showing all 25 speakers.

[91] However, her ancestors also came from the Eastern part of Norway, from Gudbrandsdalen and Toten.

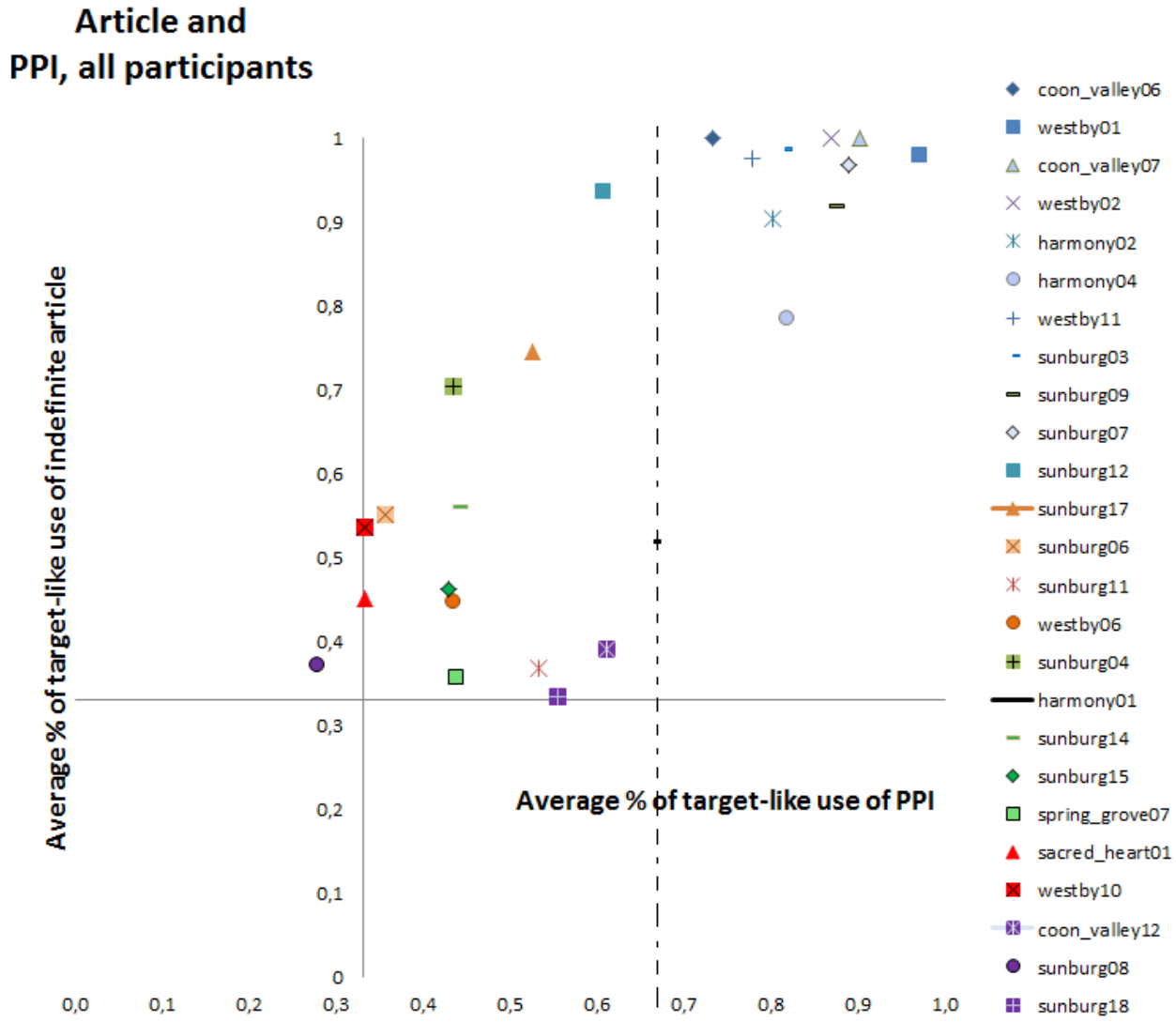

Figure 16: Total average target-like score for use of PPI (x-axis) and the indefinite article (y-axis), all speakers. The dotted line indicates the maximum score (0,67) for PPI for speakers who lacks a feminine PPI.

For each participant, the percentage of target-like responses of both article and PPI has been found in the way that was described in section 6.3.2. The speakers are placed on the chart according to their average target-like score for PPI (the x-axis) and the indefinite article (the y-axis). If we assume that there are three possibilities for both the indefinite article and PPI for a given noun, corresponding to the three genders, a score of 33% or lower would indicate that the person performed at random.[92] This could then indicate that the system has been altered or has broken down. Therefore, 0,33 is chosen as the origin in this figure. Speakers performing at chance for both agreeing elements are expected to be located in the section

[92] Remember that the calculation used gives equal importance to all three genders, irrespective of number of nouns belonging to a given gender.

down to the left of the chart. None of the AmN speakers are found there, which indicates that even the speakers with lowest proficiency has an awareness of gender. However, a few speakers apparently perform at random for one of the agreeing elements. As expected, the group with only one PPI (group 4) performs at random for PPI, confirming that the PPI is not governed by grammatical gender. Additionally, sunburg08 perform at chance for PPI, which is what was indicated in section 7.5.2. As was discussed in section 7.3.3, sunburg06 performs very poorly for PPI. When it comes to the indefinite article, sunburg18 performs at random since she produced no non-masculine articles. The speakers with one or two occurrences of non-masculine articles are also close to the x-axis. Group 1a (all in blue color) is the only group that is clearly gathered at one end of the figure. Otherwise, it is clear that the speakers spread out on a continuum centered around the diagonal, rather than being randomly scattered all over the figure. This is an indication that the different parts of the gender system, i.e. the PPI and the indefinite article, are closely connected. No speaker performs at ceiling on one of the agreeing elements at the same time as performing at random for the other agreeing element. There is thus a quite systematic correlation between the two agreeing elements on the level of the individual.

7.7.2 Answering research questions 1 and 2

Based on what we have seen in this chapter, the overarching question of whether the three-gender system is retained in American Norwegian seems to be: yes, to a greater or lesser extent, with the possible exception of one speaker (sunburg08). However, the instability of the system is obvious, since there are clear differences from the original system, in addition to overgeneralization of the masculine forms. The instability could be illustrated with these examples from sunburg17 and sunburg04 respectively: ⟨**ett**$_{\mathbf{N}}$ dør$_{(F)}$ – dør**a**$_{\mathbf{F}}$ – **n**$_{\mathbf{M}}$⟩ ‘a door – the door – it.’ ⟨**ett**$_{\mathbf{N}}$ tre$_{(N)}$ – tre**en**$_{\mathbf{M}}$ – **hann**$_{\mathbf{M}}$⟩ ‘a tree – the tree – it.’ Yet it is fascinating to see that *no one* is using one single article and one single PPI. This is probably linked to the fact that the evidence for the gender system is pervasive in the Norwegian language (cf. section 5.3.3)

As a summary of the present chapter, the empirical research questions 1 and 2 will be repeated and answered on sub-group level.[93]

[93] The remaining two research questions will be discussed in the subsequent chapter.

1. How many genders could be identified on the agreeing elements indefinite article and personal pronouns referring to inanimates for 3SG for each individual speaker?
    - The speakers were found to form four groups based on the answer to this question:
        - Group 1 has retained three genders in both agreeing elements.
        - Group 2 has retained three genders in the article, but has only two distinct PPIs; the feminine form is lost.
        - Group 3 has a pronominal pattern similar to that of group 2 (i.e. no feminine PPI), and additionally does not distinguish between three genders in the article. Virtually only the masculine indefinite article is used.
        - Group 4 has retained three genders in the article, but only one form is found for personal pronouns referring to inanimates.
2. To what extent are the different genders identified on the pronouns exponents of lexical gender?
    - The pronoun system is clearly based on lexical gender for group 1, where the original system is generally retained. Lexical gender seems to be relevant for choice of PPI in group 2 and 3 as well, since a distinct patterns in the use of pronominal forms is found for all three genders. Group 4, however, has developed a new, referential pronominal system.

When it comes to the pattern of deviations, the masculine is generally expanding its territory at the expense of both feminine and neuter forms. The tendency is strongest for indefinite article and PPI, but it is also found for the definite suffix. However, the pattern is slightly different for group 3 and westby10. Westby10 – as the only one – is overgeneralizing the typically neuter suffix *–e* rather than the masculine suffix. In group 3, the masculine and neuter are expanding their territory in different areas of the gender system: whereas only the masculine form is used for indefinite articles, the neuter form is most widely used in the PPI.[94] Moreover, there are no indications of distinct marking of the feminine gender in the data of group 3 except for in the definite suffix. For one speaker (sunburg08), there is no evidence of grammatical gender in neither the indefinite article nor the PPI.

[94] This has also been observed in the Swedish varieties spoken in Finno-Swedish areas: the common gender indefinite article is used with all nouns, whereas the definite form of all nouns stems from the neuter gender (Ahlbäck 1946: 22).

It is important to note (again) that the changes found in the pronoun systems in group 2 and 3 do not consist in a total loss of the form *ho*. This form still exist for all speakers, but the domain for this pronoun has decreased for these specific speakers, so that it now can only refer to animates. This type of change, i.e. change in the domain of a given variant, as opposed to loss of forms, is frequently observed within the pronoun system in Germanic languages (Howe 1996: 60). In addition, there seems to have been an increase in the domain of the masculine pronoun *han* for the majority of the speakers. In this respect, westby10 and sacred_heart01 stand out from all of the other participants in this thesis: both *han* and *ho* have a decreased domain in comparison to the original system.

7.8 A note on language biographies

7.8.1 Age of becoming a bilingual

A question that presents itself while going through the different sub-groups is what determines the degree of retention of the original system. Whereas a full account of this is beyond the scope of the present thesis, some tendencies can be observed. When it comes to the native-like traits of group 1a vs. the more non-native-like status of the other groups, there is one point in the language biography that seems to be relevant: whether or not English was learned before starting school. Generally, the 1a speakers knew only Norwegian until they started school, whereas the remaining participants knew English in addition to Norwegian before school age (six). In table 34 below, we see the four participant groups, focusing on the age of acquisition of English. Colored cells indicate that the participant learned English at school, whereas the white cells indicate that the participant learned English *before* starting school.

Group 1a	Group 1b	Group 2	Group 3	Group 4
coon_valley06	sunburg11	sunburg04	sacred_heart01	sunburg18
harmony02	westby06	harmony01	westby10	coon_valley12
harmony04	sunburg06	spring_grove07		sunburg08
sunburg03	sunburg17	sunburg14		
sunburg07		sunburg15		
sunburg09				
westby01				
westby02				
westby11				
coon_valley07				
sunburg12				

Table 34: The four participant groups, focusing on the age of acquisition of English. Colored cells indicate that the participant learned English at school, whereas the white cells indicate that the participant learned English before school age.

This is in line with Benmamoun, Montrul, and Polinsky (2013: 134), who point out that several studies have shown that speaking the majority language before age five puts heritage speakers at a risk for poorer heritage language skills during adolescence. However, the exceptions in the table clearly show that there are other factors at work as well. Without trying to identify all of these, the case of sunburg18 will be briefly mentioned, since she is the least native-like speaker among those who were monolingual in Norwegian until the age of six.

Right after starting school, Norwegian ceased to be the primary means of communication in the home of sunburg18. Moreover, after she got married, she had a period of more than 60 years of disuse of the Norwegian language. She only started speaking it again two years before this project was carried out. Research on migrants who have stopped using their mother tongue generally shows that decline in language proficiency is the normal consequence of disuse (De Bot and Makoni 2005: 10), and it is thus not surprising that sunburg18 displays non-native-like traits.

7.8.2 A note on siblings

A typical situation among heritage speaking siblings is that the older sibling is generally monolingual until school age, whereas the younger siblings learn the majority language from their older siblings before they start school. As we saw in section 2.2.1, the proficiency of L1 correlates with the age of aqcuistion of L2. Following e.g. Montrul (2013), we expect the older siblings to be more proficient, and thus having retained more of the grammatical system than the younger ones. This is exactly what is seen for three of the four pairs of siblings in the current project: the younger siblings (harmony01, spring_grove07 and sunburg17) do not reach the comparison group scores for the agreeing elements, whereas the older ones (harmony02, harmony04 and sunburg07 respectively) do.

There are two informants who do not conform to this pattern, viz. sunburg08 and sunburg14. In fact, the weaker participant, sunburg08, is six years older than sunburg14. Sunburg14 sounds more fluent than sunburg08 in the sense that he has a higher speaking rate, a greater AmN vocabulary, and uses more grammatical elements like indefinite article and definite suffix. Their language biography reveals that they have very different patterns of language use in adulthood. Sunburg08 has lived outside of Sunburg for 40 years, both inside and outside of the U.S, and has not had the opportunity to use the Norwegian language. Sunburg14, on the other hand, has never lived outside of Sunburg, a community of several Norwegian-speaking people.

8 Discussion: the status of the definite suffix and the feminine gender

In order to answer research question 3 and 4 (abbreviated RQ3 and RQ4), the status of the definite suffix in relation to gender and the status of the feminine gender as such have to be discussed. Section 8.1 investigates the correlation between the definite suffix and the other agreeing elements in Heritage Norwegian in some detail. Since the conclusion is that the definite suffix *should* be taken to indicate gender, a theoretical explanation of how this could be understood is given utilizing the usage-based model (cf. section 2.3.1). The status of the different genders is discussed in section 8.2. Finally, answers to RQ3 and RQ4 are offered in section 8.3

8.1 Definite suffixes as exponents of gender

The distinction between gender and declension class was first introduced in section 2.3.1. Historically, the definite suffix has developed from a gender-agreeing clitic (Faarlund 2009). Thus, it could seem rather arbitrary to decide at which point in history this element stopped being a gender agreeing element.[95] However, Corbett (1991: 147) clearly states that gender is only evident in words other than the nouns itself. Importantly however, most speakers probably do not know the historical origin of linguistic items, nor do they necessarily know the linguistic definition of a given grammatical phenomenon. The main question is whether there is a connection between the gender category and the definite suffix in the speakers' mental grammar. How this question is answered could determine the view on the status of gender in a given variety. As pointed out in section 3.2.4, this question is answered differently by Lohndal and Westergaard (2016) and Johannessen and Larsson (2015) for American Norwegian. Therefore, it is important to discuss this matter in detail here. In section 2.3.1, a theoretically founded reason for not wanting to treat definite suffixes as exponents of gender was presented, namely the distinction between morphology and syntax. However, we saw that all theories in principle could encompass definite suffixes as gender agreeing elements if the

[95] Some scholars argue that the singular, definite marker in contemporary Norwegian is still a clitic, see Svenonius (2016) for a discussion of this issue. This matter will not be discussed in the present thesis, since the arguments presented in this chapter do not hinge on the suffix status of the definite marker.

data show that this is necessary. In this section, empirical arguments for and against treating the definite suffix as a gender agreeing element are presented.

8.1.1 Distinctions between the definite suffix and gender exponents

One argument for keeping the definite suffix separate from gender agreeing elements comes from research on urban, Norwegian dialects (Oslo, Lødrup 2011; Tromsø, Westergaard and Rodina 2017), and on dialects in areas of language contact in the Northern part of Norway (Conzett, Johansen, and Sollid 2011). In these varieties, the definite suffixes (and the post-nominal possessive to a certain degree) still correspond to each of the three traditional genders. However, the indefinite article and the pre-nominal possessive only show a distinction between neuter on the one hand and masculine/feminine on the other hand, as the masculine form is used with feminine nouns as well. Thus we get ***en*****M** *bok*(F) 'a book' and ***min*****M** *bok*(F) 'my book,' but *bok****a*****F** (***mi****F*) 'the (/my) book.' Since the three-way distinction is only seen in the definite suffix, there is no longer a one-to-one correspondence between the suffix and the other agreeing elements. Therefore, both could not be taken to indicate gender. The conclusion reached by Lødrup (2011) and Westergaard and Rodina (2017) is that only word-external agreement expresses gender, and the post-nominal possessive (*mi*) should be regarded a declensional suffix rather than an accompanying word.[96]

Another argument comes from the research on acquisition of gender and of the definite suffix, and will subsequently be referred to as *the acquisition argument*. The Norwegian definite suffix is acquired around the age of 2 (see Rodina and Westergaard 2013 and references there), while Westergaard and Rodina (2017: 178) conclude that gender is not in place before the age 7. They take this as an indication that the definite suffix is completely detached from gender (Westergaard and Rodina 2017: 178):

> *Studien vår gir dermed støtte til en analyse som skiller klart mellom genusformer og deklinasjonsklassemarkører: genus er en kategori som tilegnes sent, mens deklinasjonsendelser er på plass allerede fra et tidlig stadium i språkutviklingen.*[97]

[96] Conzett, Johansen, and Sollid (2011: 37), however, do not want to put too much emphasis on the distinction between agreement and declension: "Uansett […] har disse elementene [-a og -mi/-di/-si] alltid vært tett knytta til kategorien genus. Etter vårt syn er det derfor ikke spesielt fruktbart å legge for mye vekt på forskjellen mellom kongruens og bøying."

[97] "Our study thus supports an analysis where there is a clear distinction between gender forms and declension class markers: gender is a category that is acquired late, whereas declension class markers are acquired at an early stage of language development" (my translation).

8.1.2 Correlations between the definite suffix and gender exponents

Those who take the definite suffix to be an exponent of grammatical gender focus on the great degree of correlation between declension (here: the definite form) and gender in Norwegian (and Swedish, as we will see). Dahl (2000b: 583–84) considers this correlation to be so important that the definition of gender accordingly should be changed:

> *Andersson (1980), in his discussion of Swedish gender, suggests to treat the choice of endings as a case of agreement, and if we substitute "morphemes" for "words" in Hockett's definition there seems to be no obstacle to treating some inflectional distinctions as gender.*

In their extensive description of Norwegian grammar, Faarlund, Lie, and Vannebo (1997: 173) claim that the gender of the noun determines the choice of singular definite suffix:[98] "I entall er bestemthetssuffiksets form dessuten gjennomgående bestemt av substantivets genus."[99] Enger (2004c: 125–26) makes it clear that we should only consider the definite suffix as gender exponents as long as the same properties are found on other agreeing elements: "[V]i antar at også bestemthetssuffiksene i ental kan regnes som eksponenter for genus, men bare så lenge disse suffiksene korrelerer med kongruensegenskaper."[100] On this view, then, the definite suffix could be a gender exponent in some Norwegian dialects, while it is not in others. For instance, it might not be controversial to say that the definite suffix in the Oslo dialect as described in section 8.1.1 to some extent is detached from grammatical gender. Such a claim seems however unfruitful for the Rana dialect, of which I am a native speaker. Here, the correlation between declension and grammatical gender is nearly one-to-one,[101] which can be seen in table 35 below.[102]

[98] This is largely supported in Enger (2004a). Note that this runs counter to Corbett (1991: 49), who says that "gender should be predicted on the basis of declension whenever a language has both and there is a relation between them."
[99] "In the singular, the form of the definite suffix is consistently determined by the gender of the noun" (my translation).
[100] "We assume that the singular, definite suffixes could be counted as exponents of gender too, but only as long as these suffixes correlate with agreement properties" (my translation).
[101] It has even been argued that the plural declension in this dialect has been changed on the basis of gender, so that the declension now corresponds to what is typically associated with a given gender (Enger 2004a: 60).
[102] The forms in table 35 are orthography-like, hence the use of italics. However, there is no standard for writing the Rana dialect, and the spelling here is meant to indicate pronunciation. The Oslo dialect is represented through the use of the Bokmål standard, only excluding the final *-t* in the neuter singular, definite form since it is not pronounced.

	SG.INDEF	SG.DEF - PRON	PL.INDEF	PL.DEF
Rana, M	***en*** *vase*	*vase**n*** **– *han***	*vas**a***	*vas<u>an</u>*
Rana, F	***ei*** *flask**a***	*flask**a*** **– *ho***	*flask**e***	*flask**en***
Rana, N	***et*** *laken*	*laken**e*** **– *de***	*lak**en***	*laken<u>an</u>*
Oslo, M	***en*** *vase*	*vas**en*** **-** *<u>den</u>*	*vas<u>er</u>*	*vas<u>ene</u>*
Oslo, M/F	***en*** *flaske*	*flask**a*** - *<u>den</u>*	*flask<u>er</u>*	*flask<u>ene</u>*
Oslo, N	***et*** *laken*	*laken**e*** **– *de***	*laken<u>er</u>*	*laken<u>ene</u>*

Table 35: Overview of the noun paradigm – including the personal pronoun – in two dialects, the Rana dialect and the Oslo dialect. The forms that indicate gender in a one-two-one fashion are marked in bold font, whereas the forms that are syncretic among genders are underlined.

In the Rana dialect, there is a clear correspondence between the definite suffix and other agreeing elements in the sense that there is a one-to-one relation between grammatical gender and the form of both the definite noun and other elements. Even the ending of the singular indefinite feminine noun correlates with gender. All feminine nouns that have *-e* in written Norwegian have *-a* in the Rana dialect: *skol**a***$_{\text{F}}$ 'school', not *skol**e***. *-e*, on the other hand, is associated with other genders: *pos**e***$_{\text{M}}$ 'plastic bag', *tepp**e***$_{\text{N}}$ 'rug/blanket.' For the Rana dialect, it thus seems inappropriate to discard the definite suffix as an exponent of grammatical gender.

In my opinion, this illustrates the need to study the gender system of the variety in question closely before deciding whether the definite suffix should be considered a gender exponent or not. This is in line with Enger (2004a: 65), who says that "it seems perverse to deny that the definite singular suffix is an exponent of gender, when there is one and only one definite singular suffix associated with each gender." The question that needs to be answered, then, is whether there is such a correlation between the definite singular suffix and gender in AmN that these suffixes should be considered exponents of gender. This will be investigated in the following section, after a note on the argument of acquisition.

New perspectives on the acquisition argument

When it comes to the issue of acquisition, some perspectives could be added to the debate. Studies of gender acquisition in Swedish (see e.g. Plunkett and Strömqvist 1992: 526–29) conclude that Swedish children acquire gender earlier than what is seen in other languages. Andersson (1994) attributes the relative ease of acquisition of grammatical gender in Swedish

to the definite suffix; in spite of low phonological and semantic transparency of the gender categories, gender is acquired early and with ease. This is facilitated by the correspondence between declension class and the gender. Johannessen and Larsson (2015: 18) hypothesize that the American Norwegian situation of gender acquisition could be more similar to that found for Swedish than what is reported for gender acquisition in Norwegian (cf. section 8.1.1). While the American Norwegian speakers only know their own dialect, and for the most part do not know how to read and write, they are not exposed to the same conflicting input regarding the gender system as Norwegian children are. After all, the few studies on the acquisition of gender in Norwegian that exist have focused on one or a few children in areas where the two gender-system is found (Oslo West and Tromsø) (Westergaard and Rodina 2017: 164–65). It is uncertain whether these findings could shed any light on the acquisition process of the American Norwegian speakers.

8.1.3 The gender status of the definite suffix in Heritage Norwegian

Table 18 in section 7.2 showed that on the individual level, there could be up to three suffixes corresponding to a given gender. Still, the definite suffixes seemed to form three different classes, which are correlated with gender. Masculine nouns are clearly correlated with suffixes in *-n*. There is also a clear tendency for feminines to be associated with *-a*, and neuters with *-e*. Even for the three speakers who use *-e* frequently for feminines as well as neuters (cf. table 19, section 7.2), the genders are distinguished by the fact that only feminines take the suffix *-a*. Thus, it seems that all speakers, regardless which of sub-group they belong to, divide the nouns into declensional classes that correspond to the genders in the original three-gender system.

For group 1, 2 and 3, the use of the indefinite article also divide the nouns into classes that correspond to the genders in the original three-gender system. In group 1, these classes are even further strengthened by the use of three different personal pronouns. For group 2, it was argued that the three grammatical genders *are* relevant for the choice of PPI, despite the three-way formal distinction being reduced to two (cf. section 7.4.2). The speakers of group 3 do not show a three-way distinction in any agreeing element outside the noun itself. Still, the correlation between masculine and neuter gender and choice of PPI is much higher than chance for two participants, and even for feminine nouns there is a distinct pattern of PPI (cf. figure 14, section 7.5.2). This is hard to explain unless the choice of pronoun is made with

reference to the declension classes, which correspond to the original three genders. For group 4 too it is easier to understand the retention of the three-way distinction in the indefinite article if we assume a connection between this and the classes based on definite suffix. Another indication of a link between definite forms and other agreeing elements is that the definite suffix to some extent also suffers from overgeneralization of the masculine form. The non-masculine nouns that occur with *-en* also occur with the masculine article and/or are referred to with the masculine PPI, e.g. ⟨**en$_{M}$** eppele$_{(N)}$ – epple-**n$_{M}$**⟩ 'an apple – the apple' (harmony01), ⟨**ein$_{M}$** potritt$_{(N)}$ – potritt-**n$_{(M)}$** – **enn$_{M}$**⟩ 'a picture – the picture – it' (spring_grove07gm).

Based on the data, then, there seems to be a link between the definite suffix and other agreeing elements for the great majority of the AmN speakers – with the possible exception of sunburg08 – and this is the position advocated in this project. In fact, this could be the reason that the gender system has remained relatively unchanged for at least four generations. In the history of English, the loss of grammatical gender is generally assumed to be related to the loss of inflexional endings (Stenroos 2008: 445). The declension classes in American Norwegian are remarkably robust, and accepting a link between these and other agreeing elements – i.e. accepting the definite suffix as an exponent of gender – makes it easier to understand that the three-way system has been retained for so long.

8.1.4 Theoretical explanation of the definite suffix as a gender exponent

If the definite suffix corresponds to gender, how could we explain that the target-like score for other agreeing elements is much lower than what is found for the definite suffix? Lohndal and Westergaard (2016: 11) propose that this could be explained by frequency and chunking: "highly frequent nouns (such as the ones typically used by our heritage speakers in the corpus) may be stored in memory as units together with the suffix." Examples in my data where the definite form is used with the indefinite article could support this analysis: ⟨ein dass**'n**⟩ 'a **the** toilet' (spring_grove07). Johannessen and Larsson (2015: 16) argue that storing the definite form as a chunk could not explain all target-like uses of the definite form.[103] One argument is that speakers produce both definite and indefinite forms, indicating that they

[103] Johannessen and Larsson (2015) relate the target-like production of the definite forms to their lack of complexity. Less complex noun phrases are easier to process than complex ones, and will therefore result in higher target-like production. cf. section 3.2.2.

distinguish between the two. It seems that Johannessen and Larsson assume that rote learning necessarily means that the form remains unanalyzed, which in this context would mean that the speakers do not treat the form as expressing definiteness. Another argument of Johannessen and Larsson (2015: 16) is that the definite form is used productively with new (mainly English) words, e.g. *river-**en*** '**the** river.' Therefore, the definite form cannot be stored as a chunk.

A usage-based approach

The arguments of Johannessen and Larsson (2015) are only valid within certain understandings of grammar and language. However, these arguments are not valid within usage-based approaches to grammar, which is proposed by many linguists working within the cognitive linguistics paradigm, cf. section 2.3.1 (Croft and Cruse 2004: 291). Within such approaches, it is assumed that all word forms are in some sense initially "rote-learned." Words are extracted from the specific utterances heard by the child. However, these word forms do not remain unanalyzed. Gradually, the child "find analogical patterns across utterances […] and thereby abstract meaningful grammatical constructions" (Tomasello 2009: 75). According to Langacker (1987: 82), a construction is a complex combination of semantic and phonological structures (cf. section on Cognitive Linguistics in 2.3.1), where complex means that there are two or more form-meaning associations. Thus, *hest-en* 'the horse' counts as a construction, since it has two components: one designating a horse (*hest*), and the other component expressing definiteness (and singularity) (*-en*). When uttered, "hesten" is a *specific* construction, and specific constructions make up the input children get. However, Tomasello states that the child gradually develops *abstract* or *schematic* constructions, based on the pattern found in the specific constructions. Constructions could be more or less schematic. For instance, there could be one schematic representation for all instances of *hesten*, and an even more schematic construction for all masculine, definite nouns in Norwegian, i.e. those characterized by *-en*. In this section, the most specific constructions (i.e. utterances) are indicated with italics. More schematic constructions will be indicated with capitals, and [ ] are used for abstract notions that are not linked to specific phonological content, e.g., [NOUN].[104] HESTEN is thus the schematic construction for all instances of *hesten*, whereas [NOUN]-EN is the more schematic construction for all definite nouns formed

[104] Note that this notation is developed for this specific context and is therefore a bit idiosyncratic. It is not a conventional notation within Cognitive Linguistics.

with *-en* in Norwegian.[105] These schematic constructions could be used for creating new definite forms, and this could explain *river-en* above.[106] Definite nouns with high token frequency would be retrieved from the more specific schematic construction, i.e. BILEN for *bilen* 'the car,' whereas less frequent definite forms (i.e. *overfølsomheten* 'the hypersensitivity') would be created through a constructional schema like [NOUN]-EN (cf. Croft and Cruse 2004: 292–93).

The construction of grammatical categories like e.g. inflection class is on this view an inductive process of abstraction (cf. Croft and Cruse 2004: 4). The pattern for different nouns appearing with different indefinite articles is captured the same way. Gradually, if there is an overlap of the nouns occurring with a specific definite form, a specific indefinite article and e.g. a specific possessive, the more abstract category of gender emerges. Within such a framework, gender could comprise different agreeing elements for different speakers, depending on input and use. For group 3, for instance, there seems to be no link between the indefinite article and e.g. the definite suffix. I therefore argue that for these speakers, the indefinite article is not indicative of or dependent on gender. For sunburg08, there is even indication that no link exists between the definite suffix and the other forms investigated here.

Relative ease of activation as explanation

Lohndal and Westergaard (2016: 12) assume that if the definite suffix "has a gender feature,"[107] and the AmN speakers know the definite form, "it should be easy to produce the target-consistent indefinite forms." However, even having assigned the nouns to the target-like gender, I argue that it could be difficult for the heritage speakers to produce target-consistent forms. According to the Activation Threshold Hypothesis (ATH) (see Paradis 2004: 28–30 and references there), all linguistic items – be it a word, a syntactic construction or a subsystem of the language – are activated "when sufficient amount of positive neural impulses have reached its neural substrate. The amount of impulses necessary to activate the item constitutes its activation threshold" (Paradis 2004: 28). If linguistic items are not

[105] ⟨ein dass**'n**⟩ might seem like a counter-example to the argument that the definite meaning is part of the definite suffix. However, the participant who utters this generally uses the definite and the indefinite form target-like, indicating that the argument is still valid. An explanation for this particular deviation is provided in the following section.

[106] Even if the general observation is valid – that the definite suffix is used with new words – this particular example is not a good illustration: *river* is cited as an AmN word by Haugen (1969: 591).

[107] Note that this is the exact formulation of Lohndal and Westergaard (2016). Notions like *grammatical feature* are not compatible with Cognitive Linguistics, since they do not consist of phonological nor semantic content.

stimulated, i.e. used, their activation threshold becomes higher (see also De Bot and Makoni 2005: 10). As a result, frequently recalled items are easier to activate while infrequently used items are more difficult to access. In the terms of Cognitive Linguistics, the more often an item is activated, the more *entrenched* it is (Langacker 1987: 59). In addition, the activation levels of competing items have to be inhibited (Green 1986: 214). This neurologic and psycholinguistic explanation is fully compatible with the usage-based approach outlined above, and taken together these models could explain two of the findings in this thesis: the discrepancy between target-like production of definite suffix and other agreeing elements, and the overgeneralization of the masculine.

Within the usage-based model, the indefinite article and the noun are assumed to be treated as a chunk initially, e.g. *ein-hest* 'a-horse.' However, the article does not always occur adjacent to the noun, since elements such as e.g. an adjective could appear between the article and the noun: *ein **fin** hest* 'a **beautiful** horse.' Utterances like this contribute to segmentation of the initial representation into two elements: *ein hest* 'a horse.' These elements would then become more entrenched separately, i.e. EIN and HEST. At the same time, such utterances lead to the emergence of a schematic construction like EIN … HEST, as an abstraction over all constructions of the article and the noun, with or without an intervening element. This schematic construction would subsume *ein fin hest, ein annan hest, ein hest* etc. However, this construction is not so easily entrenched, due to its degree of schematicity cf. Croft and Cruse (2004: 308):

> *In the usage-based model, processing involves activation of the entrenched construction(s) whose structure(s) most closely matches those of the utterance. Since more specific constructions match utterances more closely than more schematic constructions, the former are more activated than the latter*

The indefinite form could also be used with other determiners than the indefinite article, such as possessives, e.g. ***min** hest* 'my horse.' All these various constructions would lead to higher entrenchment of the more specific EIN and HEST as separate items. Conversely, there is never an intervening element between the noun stem and the definite suffix. The definite form of a given noun (e.g. *hest-en*) will therefore always activate the definite construction (e.g. HEST-EN). Additionally, the definite forms are acquired early (cf. Anderssen 2007) and are "the most frequent DP form in the language, perhaps especially in the input to children" (Rodina and Westergaard 2013: 61). For these reasons, the definite construction will be

strongly entrenched. Assumingly, the construction for the definite form is easier to retrieve than the construction with indefinite article. This could explain the discrepancy between the scores of definite forms and indefinite article in this study.

The occurrences of modified noun phrases like *ein **fin** hest* 'a **beautiful** horse' would lead to stronger entrenchment of the separate schematic representations of the indefinite article EIN 'A' on the one hand, and the representation of HEST 'HORSE' on the other (rather than EIN HEST). Since masculine nouns have a much higher token frequency than non-masculine nouns, the masculine article will be more entrenched than the non-masculine article. When producing an indefinite noun phrase then, the masculine article EIN is easier to activate and retrieve than the corresponding non-masculine forms. The same mechanisms could explain the previously cited example ⟨ein dass**'n**⟩; for this particular speaker, the definite form of this specific noun is more entrenched, and thus easier to access, than the correct indefinite form.

A factor that might contribute to the use of the most easily retrievable form instead of the target-like form, is that speaking American Norwegian is cognitively demanding; in general, bilinguals experience online processing problems, probably since their two languages "compete for memory and processing resources" (Yilmaz and Schmid 2012). Additionally, AmN is not their dominant language, making production even more demanding. Therefore, non-target-like production could to some extent be the result of processing difficulties. This is not to say that the deviations should be disregarded. On the contrary, the pattern of deviations must be explainable through the theories of language processing and how the grammar is organized in the mind. This section has shown that the deviations could easily be explained within a usage-based approach to grammar. This framework also allows us to state that there might be different agreeing elements that make up the category of gender in different individuals.

8.2 On the status of the different genders

The loss of a distinct feminine gender is seen in many Scandinavian varieties, e.g. Danish, Swedish, the Bergen dialect, the Oslo dialect and some Northern Norwegian dialects. Simplification of the gender system is often the consequence of prolonged language contact in an area (cf. Nesse 2002). The feminine gender is lost due to syncretism in the paradigm of masculine and feminine gender (e.g. same form of adjectives, demonstratives and personal

pronoun referring to inanimates) (Conzett, Johansen, and Sollid 2011: 33), combined with the fact that there are far more masculine than feminine nouns "both with respect to type and token frequency" (Johannessen and Larsson 2015: 4). It seems reasonable that the same change could be found in American Norwegian. However, a particular vulnerability of the feminine and thus a reduction to a two-gender system is not found by either Johannessen and Larsson (2015: 13) or Lohndal and Westergaard (2016: 11). The overall results for indefinite article and definite suffix in this project (cf. section 5.4) indicate the same: the feminine and neuter gender are equally vulnerable. However, the data from PPI tells a slightly different story.

8.2.1 The vulnerability of the feminine PPI

If we regard the loss of distinct marking in an agreeing element as a sign of vulnerability, the conclusion is that the feminine is vulnerable in AmN; eight informants (group 2 and 3) have lost a distinct feminine form for the PPI. Furthermore, two speakers of group 1 (both non-native-like) perform significantly (here: >30%) weaker for feminine PPI than the two remaining genders, cf. table 36 below.

Correct use of PPI	masculine nouns	feminine nouns	neuter nouns
sunburg 17	77%	13%	68%
sunburg11	100%	14%	45%

Table 36: Speakers with a significantly (here >30%) lower score for reference to feminine nouns than non-feminine nouns.

In comparison, the same participants do not have significantly lower score for feminine in the indefinite article.[108] We thus see a vulnerability of the feminine gender when it comes to the PPI, and also that there is an ongoing change in the pronoun system, from three to two PPIs. This change is seen synchronically: there is a continuum from the more proficient speakers who perform equally well on reference to feminine and non-feminine nouns, to the speakers who rarely use the feminine PPI in reference to feminine nouns, and finally, to the speakers who have no distinct feminine PPI, cf. figure 17 below.

[108] Only one participant, harmony01, has a significantly lower score for the feminine indefinite article than the two other genders, cf. Table 27, section 7.4.1.

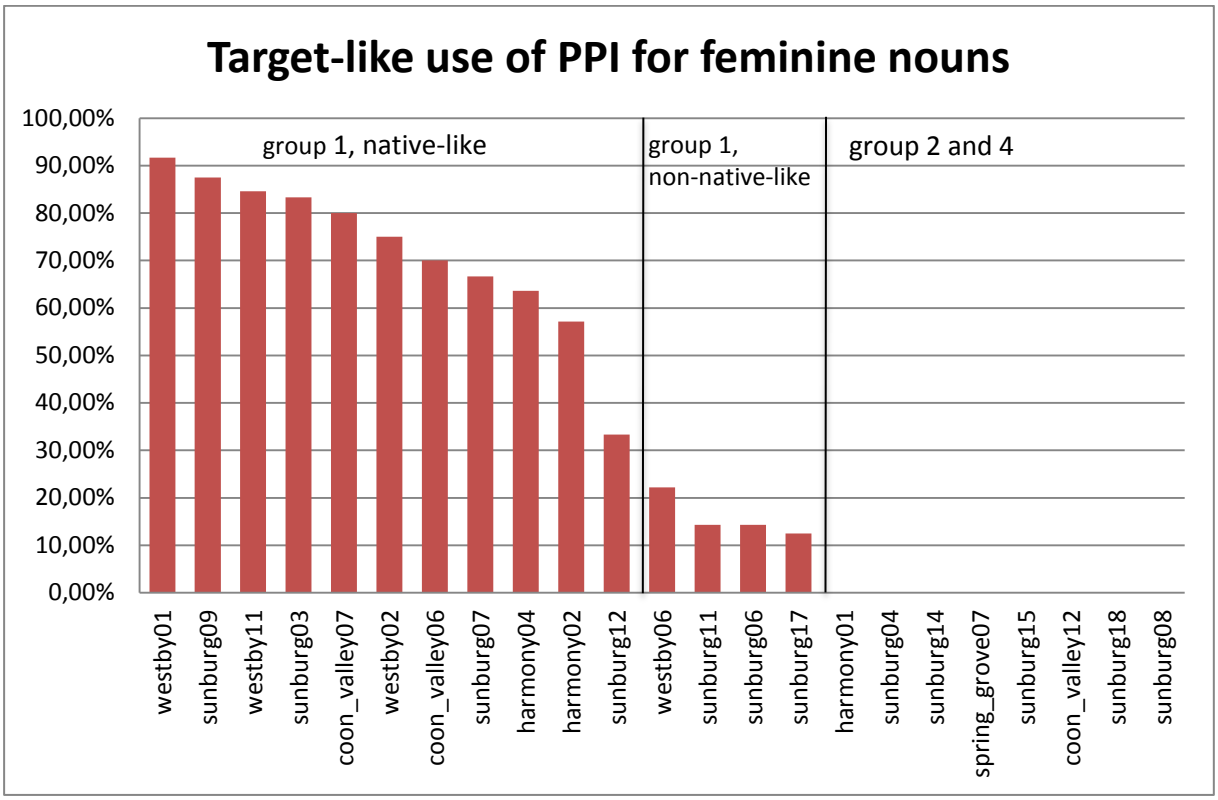

Figure 17: Target-like use of PPI referring to feminine nouns. The different groups are indicated in the figure.

Since the feminine is being distinguished in one agreeing element less, there is a greater chance for feminine to be merged with another gender. As already mentioned, there is a great degree of syncretism between masculine and feminine, and in AmN, there is also a great deal of syncretism between feminine and neuter in the indefinite article and in the definite form. In group 1b and 2, syncretism between masculine and feminine has increased since the masculine PPI is generally used for reference to feminines as well as masculines. In group 3, on the other hand, the feminine is rather referred to with the neuter PPI, and thus the syncretism with the neuter has increased. In fact, no distinct feminine forms other than the definite suffix were found in group 3. However, there is no evidence that the feminine gender has totally merged with any of the two other genders for any of the speakers.

Generally, it is hard to determine whether the loss of a distinct feminine PPI *causes* a future vulnerability of the feminine, or if it is *caused* by the vulnerability of the feminine. Since all groups with a grammatically based pronoun system seem to distinguish the three genders with a set of only two PPIs, I am inclined to say that the feminine gender *could become* vulnerable from lack of a distinct PPI. The reason for the domain change of *ho* was probably not a loss of a distinct feminine category. Rather, I suspect that the reason why the domain changed for this particular pronoun form was that it already had the most restricted areas of use. The two

other pronouns, *han* and *det*, both had a wide range of use in addition to referring to entities from the corresponding grammatical gender. The use of *det* was discussed in section 6.2.4. In some dialects, the masculine has been used with reference to the weather (e.g ***han*****M** *blæs* '**it**'s windy'), to unspecified humans and animals, especially when modified by a relative clause (***han*** **M** *som vil gjere dette…* '**anyone** who wants to do this…'), and as a generic pronoun (*ja,* ***han*** **M** *kunna tru dæ* 'yes, **one** should think so'). Beito (1954: 11) specifically states that the masculine pronoun is used in far more contexts than the feminine one. Therefore, I hypothesize, it is easier for the feminine pronoun than the other two to be even further delimited when it comes to possible referents.

8.2.2 Explanations for the strengthening of the masculine

The American Norwegian language has been developed in an area of extensive language contact, and is today only spoken by bilinguals. As is typical for such areas, the masculine gender is being overgeneralized (CF. Conzett, Johansen, and Sollid 2011: 12)). We have already seen that masculine is the most frequent gender in Norwegian as well as in the present AmN material, which could help explain its spreading. Another interesting point which could contribute to the understanding of the direction of change concerns the formal marking of gender, and is noted by Enger (2004c: 137–38). According to Clark (1998: 381), genders that are "marked consistently with the same affix, for example, on the noun and any adjective modifying that noun" seem to be easier for children to acquire. Enger (2004c) points out that in Norwegian, the masculine marking is the most consistent, as it always marked by *-en*. Neuter, he says, is not that consistent, but is to a large degree marked by *-e* and *-t*. Feminine is even less consistent: *ei* and *-a.* In American Norwegian, there is a range of different vowels that could mark both feminine and neuter gender, and the consistency is thus even further reduced, cf. table 37 below, where we see the different variants of the three gender agreeing elements considered in this thesis.

masculine			feminine			neuter		
article	***definite suffix***	***pronoun***	***article***	***definite suffix***	***pronoun***	***article***	***definite suffix***	***pronoun***
⟨e(i)**n**⟩	⟨-(e)**n**⟩	⟨(h)a**nn**⟩	⟨ei⟩	⟨-a⟩	⟨(h)o⟩	⟨i⟩	⟨-**e**⟩	⟨d**e**⟩
⟨i**n**⟩	⟨-i**n**⟩	⟨(h)æ**nn**⟩	⟨i⟩	⟨-e⟩	⟨(h)u⟩	⟨ei⟩	⟨-a⟩	⟨dæ⟩
⟨**n**⟩	⟨-a**n**⟩	⟨hø**nn**⟩	⟨e⟩	⟨-i⟩	⟨hø⟩	⟨**e**⟩	⟨-o⟩	⟨r**e**⟩
		⟨(h)e**nn**⟩		⟨-u⟩	⟨a⟩	⟨e(i)**t**⟩		⟨**e**⟩
		⟨**n**⟩		⟨-o⟩	⟨å⟩	⟨i**t**⟩		
		⟨**n**e⟩		⟨-æ⟩	⟨ei⟩			
		den		⟨-å⟩	*den*			
		⟨ha⟩						

Table 37: The different agreeing forms corresponding to each gender, disregarding dative forms. Underlining indicates the most common form in this data, whereas formal elements that are indicative of a certain gender is given in bold.

In the table, the most frequent form for each agreeing element is underlined, and the forms typically associated with the gender in question are indicated with bold font. It is clear that the masculine gender is most consistently marked, as it is with one exception characterized by a nasal. The very same form, ⟨en⟩, is found as an article, a suffix and a pronoun. The neuter gender has some correlation with *-e*, as it is both a possible article (though not the most frequent one), a suffix and (the ending of) a pronoun. The element *-t* is also a hallmark of neuter, found in the adjectival ending (e.g. *stor**t***$_{N}$ 'big') and the possessive (e.g. *mi**tt***$_{N}$ 'my') as well as in the article. For the feminine gender, however, there is no one element found in all gender agreeing form. The most frequent forms show no formal similarity to each other, except for ending in a vowel. What we would predict then, is that the most consistently marked gender, which is masculine in AmN, is the most robust one.

8.3 Summary: RQ 3 and 4

Based on the discussion in section 8.1 and 8.2, research question 3 and 4 could be answered.

3. To what extent is there a correspondence between the definite suffix and the other gender agreeing elements?
    - For speakers of group 1, both the form of the definite suffix and the form of the two other agreeing elements are decided on the same grounds, namely with respect to gender. In group 2 and 4, this correspondence could be seen between the definite suffix and the indefinite article. However, the correspondence between the definite suffix and PPI in group 2 is not that obvious, since there

are only two distinct PPIs. It is still argued that the choice of PPI is decided on the same grounds as the definite suffix, namely with respect to gender. In group 3, there is only a correspondence between the definite suffix and the personal pronoun, a correspondence with is similar to what was described for group 2. However, one speaker shows no indication of having a correlation between the declension classes and other agreeing elements. In group 4, there is no correlation between the definite suffix and the personal pronoun.

- Overall, the correspondence between the definite suffix and the other agreeing elements is taken as an explanation for the retention of the original system. The reason for the discrepancy between target-like production of the definite suffix vs. the other agreeing elements could be that the definite forms are easier to retrieve. Assuming that the definite suffix is a gender exponent, the Norwegian gender system is not as non-transparent as often suggested (cf. *alliterative concord* in section 2.3.2).

4. Is the feminine gender particularly vulnerable?
    - Not in particular, at least not on group-level. Both the neuter and the feminine gender suffer from overgeneralization of masculine forms. However, the feminine gender would be expected to become vulnerable, since it is no longer expressed as a purely lexical gender in the pronoun system of 8 speakers. Additionally, the three speakers in group 3 show no evidence of feminine gender outside of the noun itself (i.e. on the definite suffix).

9 Conclusion

9.1 Research questions and main findings

This study has investigated the gender system of 25 American Norwegian speakers by looking at the indefinite article and the personal pronoun, in addition to the definite suffix. It is the first time the personal pronoun has been investigated in AmN with respect to gender. In the original, Norwegian dialectal system, the pronoun reflects lexical gender. However, the personal pronoun could also reflect referential gender, i.e. agree with some semantic property of the referent. Therefore, it was important to look at the data from the personal pronoun along with data from the indefinite article and the definite suffix. However, the definite suffix is not an unproblematic source when looking at gender, since there is an ongoing debate as to whether or not the definite suffix should be considered an exponent of gender (cf. section 2.3.1 and 8.1).

The material was collected during fieldwork in the Midwest, using methods that were devised for illiterate speakers (cf. section 4.3.2). The overarching goal with this project was to investigate to what extent the original three-gender system is retained in American Norwegian, on the level of the individual. In the original system, three genders are distinguished in the indefinite article and the personal pronoun, as well as in the definite suffix. The empirical research questions (abbreviated RQ) guiding the work have been the following:

1. How many genders can be identified on the indefinite article and the personal pronoun for 3SG for each individual speaker?
2. To what extent are the different genders identified on the pronouns exponents of lexical gender?
3. To what extent is there a correspondence between the definite suffix on the one hand and the indefinite article and the personal pronoun on the other hand?
4. Is the feminine gender particularly vulnerable?

In order to answer these questions, a baseline was developed specifically for this speaker group, based on earlier descriptions of Heritage Norwegian (Haugen 1969; Hjelde 1992), as well as descriptions of especially relevant dialects in Norway (see appendix). A careful

analysis of the different gender agreeing forms was carried out, and proved to uncover the individual gender systems and capture generalizations. Ultimately, all speakers (except maybe one) have retained at least relicts of the original, three-gender system. Still, there is great variation between the speakers, but this variation is restricted in systematic ways. Four different versions of the gender system was attested (cf. RQ1):

1) retention of the original system, i.e., expression of three genders in each of the agreeing elements (15 speakers).
2) expression of three genders in the indefinite article, but loss of a distinct feminine pronoun referring to inanimates (PPI) (8 speakers).
3) loss of a feminine PPI, and virtually only the masculine article is used, which is then taken not to indicate gender (3 speakers).
4) retention of all three genders in the indefinite article, but the pronoun system is based on referential gender, similar to the English pronoun system, rather than lexical gender (2 speakers).

Feminine inanimate nouns are mostly referred to with the masculine PPI in group 2, whereas the neuter PPI is largely serving the same purpose in group 3. However, there are slightly different patterns for referring to each of the three genders on the individual level (see section 7.4.2 and 7.5.2). This is taken as an indication that the use of PPI is based on grammatical gender for all speakers except for the two speakers in group 4 (cf. RQ2). Apart from the variations of the gender system outlined above, the main deviations consist in overgeneralization of the masculine form.

Common for *all* speakers is that the definite suffix is largely used in a target-like manner. Thus, as in the original system, there is a three-way distinction expressed in the definite suffix which corresponds to the original three genders. The same pattern of deviations is found here: overgeneralization of the masculine form. The detailed analysis carried out in this thesis contributes to the understanding of the relationship between declension classes and gender in Heritage Norwegian. The conclusion arrived at in section 8.1.3 is that the speakers (except maybe one) *do* treat the definite suffix as an expression of grammatical gender in American Norwegian, and this could explain why the gender system as such remains unchanged (cf. RQ3). The reason why the definite forms are used more target-consistently than the other agreeing elements is assumed to be that the definite forms are easier to retrieve due to higher degree of entrenchment (cf. section 8.1.4). By implementing the definite suffix as part of the

overall gender system, the transparency of the system becomes more evident (cf. section 2.3.2). Even though section 2.3.1 demonstrated that all theoretical frameworks could encompass the definite suffix as a gender agreeing element, section 8.1.4 demonstrated how a usage-based approach to language additionally could explain important findings like the discrepancy between retention of the definite suffix and other agreeing forms, and the overgeneralization of masculine forms.

The answer to the overall question is that the three-gender system is retained for nearly all speakers, since there is no reduction to e.g. a two-gender system or a total breakdown of gender. However, this project has shown that the gender system is weakened in the sense that gender is expressed in one agreeing element less than earlier in group 3 and 4. Vacillation on the individual level between gender agreeing forms also points to the instability of the system. Additionally, the three-way gender distinction is lost in the pronoun system for many of the speakers, due to the loss of a distinct feminine PPI. However, the feminine gender is not in itself found to be particularly vulnerable. Rather, both the feminine and the neuter gender are vulnerable, as the use of masculine is expanding (cf. RQ4).

9.2 Suggestions for future research

Since American Norwegian is a heritage language, all investigations of grammatical properties would yield important contributions to the field of research on heritage language. I would however like to point to a few areas of research that have been touched upon in the present work that should be studied in closer detail.

When it comes to further research on the gender system, more investigation is needed on the remaining gender agreeing elements, such as the adjective and the possessive. Ideally, the participants consulted for this project should be part of such a study, so that the whole gender system could be analyzed at the level of the individual. It would be especially interesting to test the hypothesis on complexity set forth by Johannessen and Larsson (2015) (cf. section 3.2.2) in a study on gender agreeing elements.

Since *den* is found as a personal pronoun in the AmN data, but with such low frequency, it could be that there are specific restrictions for using *den*. A closer examination of the use of *den* vs. the other personal pronouns in this material as well as in CANS (Johannessen 2015b) could perhaps reveal some of these restrictions.

As pointed out in section 2.2.1, the parts of heritage grammars presented in this thesis could be seen in light of the processes of incomplete acquisition and attrition.

In section 5.2.3 we saw that American Norwegian seems to allow for the use of null-subjects. In which constructions and in which pragmatic contexts this is found are questions that could be raised. Additionally, the same could be investigated for both English and Norwegian, in order to see whether these patterns are confined to Heritage Norwegian.

Another intriguing research area could be exploring the effect of animacy on how an argument is linguistically encoded. Section 5.2.3 pointed out that pronouns are much more likely to be used of animates than inanimates.

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Appendix A – *items in the elicitation tasks*

Overview of the depicted items (i.e. the target nouns) in the elicitation tasks, cf. section 4.3.2.

Gender	**Inanimate**		**Animate**	
masculine	*bil*	'car'	*fisk*	'fish'
	kniv	'knife'	*gris*	'pig'
	mais	'corn'	*gut*	'boy'
	road	'road'	*hest*	'horse'
	stein	'stone'	*hund*	'dog'
			mann	'man'
feminine	*bok*	'book'	*dame*	'woman'
	dør	'door'	*høne*	'hen'
	flaske	'bottle'	*jente*	'girl'
	klokke	'clock'	*ku*	'cow'
	kyrkje	'church'		
	mjølk	'milk'		
neuter	*brev*	'letter	*troll*	'troll'
	brød	'bread'		
	eple	'apple'		
	flagg	'flag		
	hus	'house'		
	korn	'grain'		
	portrett	'picture'		
	tre	'tree'		

Appendix B – *dialect monographs*

Overview over the dialect descriptions that have been consulted for categorizing the gender agreeing forms, cf. section 6.2.

County	Place name	Author
Oppland	Toten	Faarlund (2000)
Oppland	Fåberg, southern Gudbrandsdal	Fyksen, Skogstad, and Fåberg (1997)
Oppland	Heidal, northern Gudbrandsdal	Heringstad, Fjerdingren, and Nesse (1979)
Buskerud	Numedal	Hoff (1949)
Buskerud	Ringerike	Lyse, Frøyset, and Lyse (1976)
Buskerud	Hallingdal	Venås (1977: 133)

Appendix C – *loanwords*

Overview over all loanwords found in the material, cf. section 6.1.

Loanword	Gender	Mentioned by Flom (1926), Haugen (1969) or Hjelde (1992)	Loanword	Gender	Mentioned by Flom (1926), Haugen (1969) or Hjelde (1992)
road	m	yes	museum	m	no
basket	m	yes	gnome	m	no
ball	m	yes	age	m	no
corncob	m	yes	trout	m	no
park	m	yes	stick	m	no
box	m	yes	vindu-sill	m	no
barn	m	yes	straw	m	no
creek	m	yes	color	m	no
couch	m	yes	television	m	no
lake	m	yes	sheet	m	no
stove	m	yes	ledge	m	no
bull	m	yes	table	m	no
blanket	m	yes	evergreen	m	no
brush	m	yes	lawn	m	no
track	m	yes	comb	m	no
stable	m	yes	door	m	no
garden	m	yes	stone	m	no
rug	m	yes	bottle	m	no
pen	m	yes	rest	m	no
dictionary	m	yes	shirt	m	no
computer	m	yes	walleye	m	no
river	m	yes	field	f	yes
carpet	m	yes	pipe	f	yes
porch	m	yes	portrait	n	yes
grade school	m	yes	fence	n	yes
bicycle	m	no	pasture	n	yes
toilet	m	no	loaf (brødloff)	n	yes
pickup	m	no	corn	n	yes
bench	m	no	ship	n	yes
grill	m	no	grain	n	yes
drawer	m	no	nest	n	no
counter	m	no	stall	n	no
stairway	m	no	truck	m/f	yes
dør-knocker	m	no	sidewalk	m/f	yes
cover	m	no	cake	m/f	yes
salmon	m	no	pitcher	m/n	yes
pole	m	no	shed	m/n	yes

level	m	no	apartment	m/n	yes
lilac	m	no	shelf	m/n	no
cemetery	m	no	story (‘floor’)	inconclusive	no
dummy	m	no	step	inconclusive	no
button	m	no	steeple	inconclusive	no
doorknob	m	no	hill	inconclusive	no
figure	m	no	letter	inconclusive	no

Appendix D – *information letter to participants*

The next two pages show the information letter that was given to all participants.

"Some morphological aspects of the Norwegian American language"

The goal and background of the project
In my research I want to look at specific parts of the Norwegian language spoken by descendants of Norwegians in the United States. The product of his project will be a master's thesis in linguistics, at the Department of Linguistics and Scandinavian Studies. My data will come from elicitation tests based on pictures and short videos. The performance of these tests will be recorded both on video and audibly. All the informants must also answer a questionnaire concerning their and their parents' and grandparents' dialect background and upbringing.

This research project is partly linked to the Norwegian American Dialect Syntax, which in turn is closely linked to Nordic research network Scandinavian Dialect Syntax, where linguists study various aspects of dialects in Scandinavia. Under the auspices of ScanDiaSyn new speech material from the Nordic countries is collected, and under NorAmDiaSyn the speech of Norwegian Americans is collected. NorAmDiaSyn is the responsibility of the University of Oslo and has been funded by The Norwegian Research Council.

In NorAmDiaSyn, and thus also in my project, we select people who have contacted us after having seen adverts that we have placed in Norwegian-American journals or who we have been informed about via other contact persons. One recording tour was carried out by the University of Oslo in March 2010, in Illinois, Wisconsin, Minnesota, and South and North Dakota. Another recording tour was carried out in September in connection with a workshop held at the University of Wisconsin, Madison September 2010. A third trip is arranged in the Midwest in June 2011.

We do not have specific requirements regarding age or gender, it turns out that all relevant informants are well over fifty, in most cases well over eighty. The requirement that we do have is that they should be descendants of immigrants: "The relevant immigrant cohorts will have arrived in America before 1920. It is important that the descendants should have learnt their Norwegian through continuous contact within their families. All dialect backgrounds and age groups are equally interesting to us."

What will the speech material used for?
First and foremost will this speech material serve as the data to be used in my master's thesis, which will be finished by June 2017. At the end of my master's project, however, the material can be used within the NorAmDiaSyn project. The material collected in NorAmDiaSyn, will primarily be used for research and development (R & D), for example, in academic areas such as syntax, dialectology, sociolinguistics and language technology. It is also desirable that the material can be used for educational and communication purposes.

The collected material will be stored in a database that can be accessed by researchers via the Internet. This database will be access controlled so that the individual researcher must apply for a password from the University of Oslo. We hope to get additional funding so that we can do transcriptions of the speech and include it in the database like we do with the Nordic Dialect Corpus (one output of the ScanDiaSyn project).

Privacy Policy
Names will be replaced with codes when stored in the database. Individuals will not be directly identifiable, apart from the obvious that individuals can be recognised by voice (audio) or image (video). Audiovisual material will be stored along with transcriptions to be performed later, and it will be possible to see them in combination.

After the collection period is over, a link key that shows the relationship between the codes and names will be kept confidential by the Norwegian Social Science Data Services NSD (see below). The link key will make it possible to contact and / or identify those participating in the survey, which may be desirable by the following two reasons:

1) conduct follow-up studies
2) ask for permission for other use of the material that he or she participates in

3) identify the participants afterwards wish to withdraw their participation in the survey

Consent Statement
All informants must sign a consent statement.

The Personal Data Act sets strict requirements for researchers obtaining and using personal data. Privacy in ScanDiaSyn and NorAmDiaSyn is maintained in cooperation with the Privacy Ombudsman for Research, the Norwegian Social Science Data Services (NSD) in Bergen. The project is also registered to the Data Inspectorate.

Responsible person for the master's project:

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Responsible person for the ScanDiaSyn and NorAmDiaSyn project:

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Appendix E – *consent form*

The following consent form was given to, and signed by, all participants prior to carrying out the elicitation tasks.

Informant Number:

Statement of Consent for participation in "Some morphological aspects of the Norwegian American language" project

I have read the information about the project "**Some morphological aspects of the Norwegian American language" I** and understand the information given there. I give my consent to the use of the audio and video recordings of me being used for: research, language technology development, teaching, tasks. These recordings will be stored permanently. I also agree that the recordings can be used in teaching and in research dissemination, such as conferences, and in the press, radio and television. I also accept that information about me (age, childhood place of residence, education and occupation) can be used for the same purposes.

(Location)_____(Date)_____

(Signature)_____

By providing the contact details below (optional) I also give my consent for the researchers to contact me for any follow-up questions / surveys later.

Address: _____

Phone: _____

E-mail: _____