

# STABLE AND VULNERABLE DOMAINS IN GERMANIC HERITAGE LANGUAGES

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## ABSTRACT

This paper provides an overview of Germanic languages as heritage languages, i.e. languages acquired naturalistically by children in parts of the world where these languages are not the majority language. Summarizing research on different types of heritage speakers of Danish, German, Icelandic, Norwegian, and Swedish, we identify certain stable and vulnerable domains. We focus on the so far best studied areas, word order and grammatical gender, adding evidence from other lesser studied domains, such as definiteness and phonology. We propose that in addition to the linguistic make-up of the phenomena in question, the size of the heritage community and, relatedly, opportunities to use the language need to be taken into account. The latter may explain, for example, why moribund varieties of German and the Scandinavian languages in North America appear to be less stable than the language of second-generation heritage speakers in Europe.

## [1] INTRODUCTION

This paper provides an overview of empirical studies on minority or heritage speakers (henceforth HSs) of a Germanic language, specifically Danish, German, Icelandic, Norwegian, and Swedish, which are the languages that have been most extensively studied so far. Outside of Northern Europe, the Scandinavian languages are spoken by small minorities in Central Europe (e.g. Danish in Germany), Eastern Europe (e.g. Swedish in Estonia), Canada and the US, as well as in South America (e.g. Danish in Argentina). Heritage German is mostly spoken in central Europe, but there are also German-speaking minorities in Africa, Asia, Australia, as well as North and South America. Given space limitations, our overview will necessarily be selective and non-comprehensive. Our aim is to identify which linguistic properties are stable or vulnerable in situations where

input and use of the language are reduced. As such, our paper takes an approach that is similar to the work of Benmamoun, Montrul & Polinsky (2013) and Polinsky (2018), who attempt to do this for heritage languages more generally. Our focus is more narrow, as we offer a closer look at one language family and a few central properties of the languages involved.

We note that research on bilingualism tends to focus on linguistic phenomena that “stick out” because speakers produce them in a way that is different from what one would expect in the non-heritage variety of the language. However, it is also interesting to investigate which domains are comparatively robust, i.e. resistant to language change in contact situations. According to contemporary definitions, HSs are bilinguals who acquire a minority language in the home context, either from one or both of their parents or grandparents (see e.g. Rothman 2009, Polinsky 2018).

The studies reviewed in this paper include three different types of HSs: (i) simultaneous bilinguals (2L1s) with exposure to two languages within the first three years (typically both languages are spoken at home, but not necessarily); (ii) sequential bilinguals who have acquired a heritage language (HL) from birth (typically at home) and another language subsequently (outside the home), (iii) sequential bilinguals of the type in (ii) whose HL is moribund. An example of (i) would be an Italian-German bilingual child growing up in Italy with an Italian mother and a German father; (ii) could be a child growing up in Canada with two German-speaking parents, while an example of (iii) could be a speaker of Texas-German in the US – a variety spoken by about 5000 elderly speakers who are descendants of German immigrants. It is important to note that these populations have been studied from different dimensions, either during development or at a stable (or linguistically mature) state. For instance, studies on (i) have tended to focus on development, studies on (iii) have tended to focus on endstate grammars, while studies on (ii) have been of both types (for overviews, see Kupisch & Rothman 2016, Kupisch 2019, Putnam, Kupisch & Pascual y Cabo 2018).

An important notion in the context of HL is that of language dominance. HSs typically become dominant in the language of the larger national society once they start attending kindergarten or school. Definitions and descriptions of language dominance differ in the literature (see Silva-Corvalán & Treffers-Daller 2015). Here, we take the dominant language to be the language that speakers are generally more proficient in, because this is the most common understanding of the term. Of course, higher proficiency often goes along with more input and use (see Unsworth 2013, Kupisch & van de Weijer 2015 and Kupisch 2019), which means that definitions of dominance that are based on amount of language use often lead to similar conclusions as proficiency-based ones. Typically, when the

term “dominant” is used in the HL literature, it is meant in terms of global competence, including several linguistic domains (phonology, syntax, etc.) and different types of skills (listening, speaking, reading, etc.). Ultimate proficiency in the HL may be related to the size of the community, i.e. the number of speakers that share the minority language and provide each other with occasions to use it. It goes without saying that differences between language communities constitute a caveat when comparing across studies, because generalizations about the relative vulnerability of a linguistic domain need to be seen in the context of the vitality of a language in a particular community.

Another important notion is that of crosslinguistic influence (CLI) – a term that has been used in various ways in the literature. Its original meaning was as cover term for various types of influence (including acceleration and delay in development, see Sharwood Smith 1983), but it is sometimes used as a synonym of transfer and sometimes to distinguish performance-based phenomena (i.e. CLI) from competence-based phenomena (changes in representation). We will use CLI as a neutral term, i.e. without implying any specific ideas about the competence-performance distinction. We further note that language contact that leads to changes in the HL or deviance from the monolingual norm does not always result in assimilation to or even merger with the other system. Instead, contact may also have the effect that speakers overstress contrasts between their two languages – a phenomenon that has been referred to as cross-linguistic overcorrection (CLO, Kupisch 2014; Anderssen, Lundquist & Westergaard 2018).

In the following sections, we provide data on a number of properties of Germanic languages in HL contexts, focusing on word order, grammatical gender, definiteness and other DP phenomena, and finally, phonological properties. Throughout, we discuss these HL findings with respect to stability vs. vulnerability, comparing acquisition and potential attrition.

## [2] LINGUISTIC PROPERTIES OF GERMANIC LANGUAGES

### [2.1] *Verb movement and V2 word order*

Verb-second (V2) word order is a signature property of all Germanic languages except English. Although there is considerable variation across Germanic languages and dialects (e.g. Westergaard 2008, 2009a), V2 can be characterized as a general requirement that the finite verb appear in second position in (subject- and non-subject-initial) declaratives and questions. In monolingual acquisition, V2 word order is typically attested from the earliest relevant utterances, and there are only occasional examples of non-target-consistent non-V2 at early stages of development (e.g. Poeppel & Wexler 1993 for German, Westergaard

2009b for Norwegian, and Waldmann 2008 for Swedish). Furthermore, the variation that is attested in the child data seems to be rule-based: Westergaard (2009b) shows that V2 appears first with the verb *be* and informationally new/focused subjects in Norwegian child language, while the non-target-consistent examples almost invariably appear with informationally given subjects, illustrated in (1)–(2). Waldmann (2012) has also attested a rule-based delay in one Swedish-speaking child, who produced V2 virtually only with the verb *be* (and non-V2 with all other verbs) until around the age of three; see the examples in (3)–(4).

- (1) der er stor stor Ole Brumm. (Ann, 1;8.20)  
 there be.PRES big big Ole Brumm  
 'There is (a) big big Winnie the Pooh.'
- (2) der Ann har et. (Ann, 2;1.28)  
 there Ann have.PRES one  
 'There Ann has one.' Target form: Der har Ann et.
- (3) hä ä min bostä. (Tea, 2;3.26)  
 here is my brush  
 'Here is my brush.'
- (4) då ja ska inte gråta. (Tea, 2;10.21)  
 then I will not cry  
 'Then I won't cry.' Target form: Då ska jag inte gråta.

Bilingual children growing up with a Germanic V2 language as a HL have not been extensively studied. Döpke (1998) has investigated three English-German children growing up in Australia from the age of approximately two. As commonly attested in bilingual studies, Döpke (1998) finds that the three children separate their two languages from early on, and their development is in many ways similar to that of monolingual children. Nevertheless, there is also influence from the dominant language (English) on the German word order at an early stage, sometimes resulting in structures where the finite verb is in third position. This is illustrated in (5), showing that the finite verb has not moved across negation, as would be required in adult German.

- (5) you nicht hast Motor inne Boot (CW-G 2;10)  
 you not have engine in the boat (Döpke 1998, p. 571)  
 'You haven't got an engine in your boat.'

Some non-V2 word order has also been observed in adult HLs, e.g. Heritage

Norwegian (Eide & Hjelde 2015; Westergaard & Lohndal 2019), Heritage Icelandic (Arnbjörnsdóttir, Thráinsson & Nowenstein 2018), and Heritage Danish (Kühl & Petersen 2018), all spoken in the US or Canada, i.e. in bilingual situations with English as the majority language. Examples of non-V2 word order from Norwegian, Icelandic and Danish HLs are provided in (6)–(8).

- (6) det er rart ... i Norge **de ville** aldri møttes  
 it is strange ... in Norway they would never meet  
 ‘It is strange ... in Norway they would never have met.’
- (7) þá **strákurinn er** á ee the head  
 then boy.DEF is on  
 ‘Then the boy is on the head.’
- (8) Og part af tiden **jeg boede** i den østlige part (ID 1282)  
 And part of time.DEF I lived in the eastern part  
 ‘And part of the time I lived in the eastern part.’

Nevertheless, all these studies find that V2 is still attested or accepted in the majority of contexts where this word order would be required in the non-heritage variety, thus generally concluding that the V2 property is quite robust.

Furthermore, noting that there are relatively few non-V2 examples in the Norwegian HL data, even in third-generation populations that have experienced a severe reduction in input and use, Westergaard & Lohndal (2019) show that the majority of HSs in the CANS corpus (Johannessen 2015) produce very few contexts for V2 word order, i.e. non-subject-initial declaratives. Non-subject-initial declaratives are quite common in Germanic V2 languages, accounting for 30–40% of all declaratives in spontaneous speech (e.g. Lightfoot 1999; Westergaard 2009b), while this is an infrequent structure in spoken English (less than 10%), where the initial position of the clause is typically occupied by the subject (Yang 2000). This means that not only the syntax of V2, but also the pragmatic structure of declaratives may be affected in a HL situation, presumably as a result of CLI from English.

Eide & Hjelde (2015) point out a clear difference between V2 in non-subject-initial declaratives (assumed to be derived by verb movement across the subject) and subject-initial declaratives (verb movement across an adverb or negation). The speaker that they investigated never violated V2 in the latter clause type, cf. example (9), while frequently producing non-V2 the former clause type (cf. example (6) above). This discrepancy is also attested in Arnbjörnsdóttir et al.’s (2018) study of Heritage Icelandic, where the speakers often accept both V2 and

non-V2 in non-subject-initial declaratives, such as (10), while they clearly prefer the V2 alternative in subject-initial declaratives, such as (11).

- (9) Nei, je **visste itte** henner.  
no I knew not her  
'No, I didn't know her.'
- (10) Á morgun **sjáum við/við sjáum** það  
tomorrow see we/we see it  
'Tomorrow we see it.'
- (11) Kristín **talar stundum/stundum talar** ...  
Kristin speaks sometimes/sometimes speaks ...  
'Kristin sometimes speaks ..'

An obvious explanation of the findings, discussed in all the studies mentioned here, is the influence of the dominant (non-V2) language on the V2 grammar of the HSs. A number of studies have shown that the two languages of a bilingual are always active and that in monolingual contexts, the language not in use must be inhibited (e.g. Hartsuiker, Pickering & Veltkamp 2004; Martin, Dering, Thomas & Thierry 2009). Inhibiting a dominant language will be much harder than inhibiting a weaker language, and this is therefore especially relevant in a HL situation, since HSs are typically unbalanced bilinguals. Köhl & Petersen (2018) show that when the initial element is provided in English or contains an English element, there is a much higher likelihood that the word order will be non-V2. Westergaard & Lohndal (2019) conclude that the syntax of V2 is (more or less) intact in the grammar of the HSs in CANS, and the non-V2 that appears in production is argued to be the result of (non-representational) CLI from English. This may eventually lead to a representational change in the HL grammar, and it is possible that the speakers of Heritage Icelandic studied by Arnbjörnsdóttir et al. (2018) have developed further in that direction, since they do not only produce non-V2, but also to some extent accept it in acceptability judgement tasks.

Not all studies on word order in bilinguals have reported deviance from the patterns of the target language. For example, investigating five early bilingual Swedish speakers in the US and France (second-generation speakers), Håkansson (1995) reports that they had a completely intact V2 grammar. Furthermore, research on adult bilinguals with German as their HL and either Italian or French as the majority language seems to confirm that the V2 property is generally stable (Kupisch et al. in prep.). The proportion of non-subject-initial declaratives

ranged between 30 and 40% in the HL, showing that the contexts for V2 were not avoided and that the pragmatic structure of declaratives seemed to be intact. Only one speaker (out of 18) occasionally produced non-V2, and the percentage of non-target-like word order remained very low (below 5%). It is unlikely that the difference between these findings and results from the studies on Scandinavian HSs are due to properties of the contact language, as French and Italian differ from German in the same way that English differs from the Scandinavian languages. We consider it more likely that the divergent findings are due to different amounts of input and use, in the sense that third-generation speakers of a moribund variety use the language more rarely than second-generation adult HSs whose HL is more widely accessible.

### [2.2] *Embedded word order*

Most Germanic languages are asymmetric V2 languages, meaning that there is typically no verb movement in embedded clauses (although there is some micro-variation dependent on a number of factors; see e.g. Wiklund, Bentzen, Hrafnbjargarson & Hroarsdóttir 2009). This is illustrated for Norwegian in (12).

- (12) Hun **spiser ikke** fisk / Vi vet at [hun **ikke spiser** fisk]  
 she eats not fish / we know that she not eats fish  
 ‘She doesn’t eat fish. We know that she doesn’t eat fish.’

Embedded word order has been found to be vulnerable in many populations, including adult L2 learners (e.g. Clahsen & Muysken 1986) and monolingual children (e.g. Waldmann 2008, 2014 for Swedish, Westergaard & Bentzen 2007 for Norwegian, Schönenberger 2001 for Swiss German, and Heycock, Sorace, Hansson & Wilson 2013 for Faroese). Children are found to produce embedded structures with main clause word order for an extended period of time, often until school age. Recently, this has also been attested in Scandinavian and German HLs (Larsson & Johannessen 2015, Hopp & Putnam 2015); see examples from Heritage Swedish and Moundridge Schweitzer German (MSG) in (13)–(14).

- (13) jag visste att han **skulle inte** leva mycket långs  
 I knew that he would not live much longer  
 ‘I knew that he wouldn’t live much longer.’  
 (Swedish, Konrad, mn11\_m013)  
 (from Larsson & Johannessen, 2015, p. 247)

- (14) ... dass **da lieber Gott hot** uns auch net alles genomm ...  
 that the dear God has us also not everything taken ...  
 ‘..that the dear God hasn’t taken everything away from us ...’  
 (MSG Participant102)  
 (from Hopp & Putnam 2015, p. 195)

Comparing their findings to monolingual acquisition, Larsson & Johannessen (2015) argue that main clause word order in embedded clauses in Norwegian and Swedish HL is due to incomplete acquisition, as a result of the language shift (to the majority language) that the HSs undergo around the age that word order in embedded clauses is usually acquired. Hopp & Putnam (2015) show that the MSG grammar generally keeps the asymmetric German word order, and that verb movement in embedded structures almost exclusively appears in particular contexts, viz. embedded clauses introduced by *dass* ‘that’ or *weil* ‘because’. Thus, they argue that extensive contact with English does not lead the HSs to adopt English word order; rather, the HL word order is restructured within the constraints of German syntax, and Heritage German “may thus foreshadow tendencies that will potentially apply to other varieties of German” (Hopp & Putnam 2015, p. 209).

### [2.3] *Grammatical gender*

Grammatical gender is another property of (non-heritage) Germanic languages, except present-day English. While German, Icelandic, and most dialects of Norwegian have a three-gender system (masculine, feminine and neuter), this has been reduced to two genders (common and neuter) in Dutch, Swedish, Danish, and some dialects of Norwegian. In fact, this reduction seems currently to be an ongoing process in several Norwegian dialects, in that the feminine noun class is increasingly used with masculine forms (Rodina & Westergaard 2015a; Busterud, Lohndal, Rodina & Westergaard 2019). Compared to most Slavic and Romance languages, gender assignment in Germanic is more opaque, but to varying degrees. There are some assignment regularities in German, both morphophonological and semantic, and comparatively fewer in the Scandinavian languages and Dutch. These different degrees of transparency seem to be mirrored in the speed at which the systems are acquired by children. In German, errors in gender assignment drop to below 10% by the age of three, and children show sensitivity to phonological regularities as well as semantic cues (e.g. Mills 1986; Szagun, Stumper, Sondag & Franik 2007). In contrast, children acquiring Dutch or Norwegian often struggle with gender until the age of six or seven, due to the less transparent nature of gender assignment (Rodina & Westergaard 2015a; Unsworth 2013).

The most common non-target-consistent production found in Scandinavian child data is the overgeneralization of masculine or common gender forms. This is illustrated for Norwegian in (15a), showing that the masculine indefinite article is used for a neuter noun. Other gender forms such as possessives and adjectives are also affected, although to a somewhat lesser extent. Interestingly, the definite form in Norwegian, which is realized as a suffix, is virtually never overgeneralized (see 15b) and is target-consistent from around the age of two (examples from Rodina & Westergaard 2013, p. 59). This generally also applies to the plural suffixes.

- (15) a. **en** fly (Ole 2;8.5)  
 a.M.SG plane.N.SG  
 ‘a plane’ Target form: et fly
- b. **inni** flyet (Ole 2;8.5)  
 in plane.DEF.N.SG  
 ‘in the plane’

According to the traditional definition of gender as agreement between the noun and other targets, suffixes are not considered to be exponents of gender, but declension class markers (Hockett 1958; Corbett 1991). The definite suffix in Norwegian has nevertheless often been considered a gender marker, e.g. by Faarlund, Lie & Vannebo (1997). Whether one considers the suffix as a gender marker or not will make different predictions for acquisition and change: If the suffixes are not exponents of gender, then the indefinite article and the definite suffix do not share a gender feature, and the two should be learned separately and possibly also behave differently in language change. The findings in child language indicate that suffixes and gender agreement forms are learned at very different ages (around two and six/seven), and Rodina & Westergaard (2013, 2015a) interpret this as support for the traditional definition of gender. The ongoing change in the feminine class mentioned above also generally affects only the indefinite article, not the definite suffix, adding further support for the idea that the two forms are not linked by a shared gender feature.

Grammatical gender has been argued to be a vulnerable category in many HLs (e.g. Polinsky 2008; Montrul 2008). Polinsky (2008) shows that low-proficiency HSs of American Russian have developed a reduced gender system (from three to two genders). Investigating Norwegian-Russian heritage children in Norway, Rodina & Westergaard (2015b) find that gender may be even more reduced, in that the children with the least amount of input do not seem to have grammatical gender at all (producing exclusively masculine forms). It is therefore to be expected that gender should also be problematic for Germanic HSs, given the

relative non-transparency of gender assignment. Indeed, Håkansson (1995) has found gender to be vulnerable in HSs of Swedish in the US and France, in that they failed to provide DP-internal agreement between the adjective and noun (e.g. *ett rik land* ‘a rich country’, where the noun (as well as the indefinite article) is neuter, but the adjective is marked with the masculine zero ending (instead of the neuter *-t*).

Johannessen & Larsson (2016) have investigated a selection of forms in the CANS corpus, more specifically all complex noun phrases (containing a determiner and an adjective) and the total production of two speakers. They find considerable overgeneralization of masculine gender forms in agreement (determiners and adjectives), while the definite suffix is generally intact. Including the latter in the gender category (cf. above), they thus argue that grammatical gender is stable in Heritage Norwegian, and that the overgeneralization in complex noun phrases is due to processing difficulties. Investigating the total production of all 50 speakers in CANS (including DPs with determiners but no adjectives), Lohndal & Westergaard (2016) find that the HSs’ production generally mirrors that of monolingual children: Feminine and neuter indefinite articles and other gender agreement forms are often produced with masculine forms, while the definite suffix is retained; see examples (16a, b).

- (16) a. en datter - dattera  
       a.M daughter<sub>F</sub> - daughter-F.DEF  
       b. en år - året  
       a.M year<sub>N</sub> - year-N.DEF

Taking the traditional approach to grammatical gender as agreement, Lohndal & Westergaard (2016) thus argue that gender is a vulnerable category in Norwegian, while the declension system is more stable. They also find considerable variation across speakers, and with the caveat that there is limited data per speaker, they identify three different groups: One group producing gender agreement fully corresponding to non-heritage Norwegian, one group where masculine gender assignment is massively overgeneralized but all gender categories are nevertheless present, and one group that only produces masculine forms. Thus, there is no evidence of a two-gender system, which might have been expected given the historical and current development in Germanic. Lohndal & Westergaard (2016) argue that the three groups are on a cline of gender attrition. Thus, they argue that the gender reduction seen historically in Germanic should be due to changes occurring in the acquisition process, as it leads to a rule-based system (from three to two genders), while the development in HL is presumably due to attrition, i.e. general erosion of the system eventually leading to complete loss of grammatical gender.

It is difficult to distinguish between arrested development and attrition in HL, among other reasons since longitudinal studies across the lifespan are virtually non-existent. However, some evidence of attrition comes from a study of gender in American Icelandic. Björnsdóttir, Lohndal & Westergaard (forthcoming) have studied a corpus of 152 letters written by one first-generation speaker over a period of 70 years (1908–1980). While gender agreement is target-like during more than half of the studied period, the letters from the last 30 years display considerable variation, mainly involving overgeneralization of the masculine. Nevertheless, all three genders are still produced, and there is no indication that the speaker is developing a two-gender system. Comparing these findings to the Norwegian data in Lohndal & Westergaard (2016), one could argue that this speaker's development represents the first two stages of the attrition cline.

Recent findings from Danish HL spoken in Argentina point in the same direction. Investigating a corpus of 81 speakers, Petersen & Kühl (2017) find considerable overgeneralization of masculine forms in gender agreement, while the suffixes are stable. They propose the following stability hierarchy for gender: Indefinite preposed article > preposed possessive pronouns > preposed demonstrative pronouns > affixal definite article. This hierarchy generally corresponds to what was attested for Norwegian child language by Rodina & Westergaard (2013).

While there are a number of studies on the acquisition of gender in bilingual children acquiring German as a majority language (Müller 1990, 2000; Ruberg 2013; Lemmerth & Hopp 2017), comparatively little is known about how robust the German gender system is when German is acquired as a HL. A study by Stöhr et al. (2012), investigating eight adult HSs of German in Italy, shows that the three-gender system is mostly intact. However, speakers with a lower proficiency fail to provide the correct gender, on average around 80% of the time, especially with less frequent words and when the associated gender contradicts general assignment rules. For example, disyllabic words ending in schwa are typically associated with feminine gender, but there are exceptions (e.g. *Junge* 'boy' and *Hase* 'rabbit' are masculine). Furthermore, while gender assignment was vulnerable in the aforementioned study, the agreement system was found to be somewhat less problematic: Even if speakers assign the wrong gender to a noun, agreement on the adjective is often consistent with the determiner (e.g. *eine<sub>F</sub> leckere<sub>F</sub> Käse<sub>M</sub>* 'a tasty cheese' is target-like in terms of agreement between article and noun, although feminine gender has been assigned to a masculine noun. Similarly, a case study of a German child growing up in Alberta, Canada has shown monolingual-like patterns in gender assignment both during development as well as in primary school (Kupisch in prep).

[2.4] *Definiteness and other DP phenomena*

Most Germanic languages have an article system with an indefinite and a definite article (except Icelandic, which has no indefinite article). The Scandinavian languages differ from other Germanic languages in that the definite article is realized as a suffix on the noun. There is comparatively little work on article syntax in Germanic HLs. In what follows, we summarize data from three different domains: definite article use, double definiteness, and possessive placement.

The first study reported here looks at HSs of German in a French or Italian-speaking context. The Germanic languages differ from the Romance languages with respect to definite article use in generic DPs, especially in subject position. Generic DPs abstract away from specific individuals, instead making statements about classes of individuals, as for example in ‘Cats sleep a lot.’ Unlike in English and most other Germanic languages, the equivalent sentences in most Romance languages require a definite article, e.g. French *Les chats dorment beaucoup*. Using a definite plural article in the Germanic language results in a specific reading (‘The cats sleep a lot’ can only refer to a specific group of cats), while omitting the article in Romance leads to ungrammaticality. Given that there is considerable overlap in article use between Germanic and Romance otherwise, this property has been identified as a potentially vulnerable domain for CLI (see Kupisch & Pierantozzi 2010; Kupisch & Barton 2013; Barton 2016). For both monolingual and bilingual children with German as their dominant language, it has been shown that it is not until the age of 9-10 that children systematically pay attention to the article when interpreting such sentences (Kupisch & Pierantozzi 2010). Kupisch & Barton (2013) have tested acceptance and preferred interpretations of definite marked plural DPs in HSs of German in Italy and France. Depending on proficiency level, speakers were inclined to interpret the definite article as generic more often than monolingual German speakers or German-dominant bilinguals. When asked for acceptability judgments with contextualized sentences, some speakers were shown to overaccept definite plural subjects in sentences that were biased to a generic reading by means of context (17a). For example, HSs in France and Italy accepted sentences such as (17b) more often than speakers in Germany.

- (17) a. In der Schule habe ich gelernt: (Context)  
       ‘At school I learned.’  
       b. Die Äpfel enthalten viel Vitamin C.  
           the apples contain a lot of Vitamin C (Test Sentence)  
           ‘Apples contain a lot of vitamin C.’

Another DP-related phenomenon that has been studied in HSs is the variable

word order found in the Norwegian DP, where possessives may appear either preceding or following the head noun (POSS-N or N-POSS), as illustrated in (18).

- (18) mitt hus / huset mitt  
 my house / house.DEF my  
 'my house'

Although the postnominal possessor construction is by far the more frequent one in the input (approximately 75%), Anderssen & Westergaard (2010) have found that monolingual and bilingual Norwegian-English children have an early preference for the prenominal word order. However, Norwegian HSs in the USA behave differently: Investigating 50 speakers in the CANS corpus, Westergaard & Anderssen (2015) find that the majority of the speakers generally have a preference for the postnominal possessor construction, while a small group of speakers have a preference for the prenominal possessors. They argue that the HSs can be divided into two groups based on general proficiency in the HL: The less proficient ones are affected by CLI and thus have a preference for the word order that is similar to English (POSS-N), while the more proficient ones are affected by what is referred to as cross-linguistic overcorrection (CLO, Kupisch, 2014), with a preference for the word order that is different from English (N-POSS). Anderssen, Lundquist & Westergaard (2018) explain CLO as the result of inhibition of the word order in the dominant language (POSS-N), also affecting the similar structure in the HL.

These concepts have also been used to explain findings on HSs' production of double definiteness marking in modified DPs in Norwegian. This phenomenon is illustrated in (19), showing that an unmodified definite DP is marked by the definite suffix only, while a modified DP requires both the suffix and a prenominal determiner.

- (19) huset..... / **det** store huset  
 house.DEF / the big house.DEF  
 'The house / the big house'

Modified DPs are thus relatively complex, and Norwegian HSs have been found to simplify them by producing only one exponent of definiteness, either the suffix or the prenominal determiner (Anderssen, Lundquist & Westergaard 2018). Examples of this are shown in (20)-(21). Interestingly, the speakers who have a preference for the prenominal determiner, i.e. the structure that is similar to English, are the same speakers who overuse the possessive construction that is identical to the English one (POSS-N), while the speakers who have a tendency to only produce the suffix, i.e. the structure that is different from English, are

the same as the ones who have a preference for postnominal possessives. These findings provide further support for the concepts CLI and CLO.

- (20) **den** andre bror.Ø (Harmony\_MN\_01gk)  
 the other brother  
 ‘The other brother’ Target: den andre broren  
 (Heritage Norwegian)
- (21) Ø norske ordboka (Westby\_WI\_05gm)  
 Norwegian dictionary.DEF  
 ‘The Norwegian dictionary’ Target: den norske ordboka  
 (Heritage Norwegian)

### [2.5] *Phonology*

In their overview of Germanic HLs in North America, Johannessen & Putnam (2020) summarize relevant research into phonological aspects of heritage Germanic grammars. They conclude that the available evidence demonstrates “that these systems are highly resistant to (significant) change and attrition over the course of the lifespan” (p. 786), echoing similar claims made in Benmamoun et al. (2013, p. 153), who consider “phonology the best-preserved area” in HLs. Johannessen & Putnam’s (2020) overview includes examples from the American heritage Norwegian dialect of Trøndsk (Hjelde 1992), including rounding in the realisation of /y/ and production of the vibrant /r/. The data suggest that despite some interference from English, phonological systems remain stable. Another example is Voice Onset Time (VOT) in the Kölsch dialect spoken in Wisconsin (Geiger & Salmons 2006). The data do not only show evidence of the retention of a native-like contrast, but also effects of the heritage L1 onto the dominant L2 English, as the VOTs in Wisconsin English have become shorter over time (between 1946 and 2011), compared to Standard German and Standard English VOTs, likely due to CLI from the Kölsch dialect. Investigating both VOT and final obstruent neutralization in Wisconsin German (and English) varieties, Litty (2017) also shows that these properties are different both from Standard German and General American English. Déhé (2018) has studied the intonation of polar questions (PQs) in Heritage Icelandic spoken in Manitoba, Canada, comparing it to the intonation of PQs in non-heritage Icelandic and in the English spoken in Manitoba. She shows that Heritage Icelandic displays features of both English and non-heritage Icelandic, i.e. evidence of (bidirectional) CLI between moribund Heritage Icelandic and English.

Kupisch et al. (2014) have assessed the global accent of adult HSs of German in Europe. In separate studies, they compared groups of German-Italian

bilinguals in Italy (n=8) and German-French bilinguals in France (n=10) to early bilinguals with German as a majority language, late L2 learners of German, and monolingual German speakers. On a par with late L2ers of German, all HSs were perceived to be foreign when speaking German. In two subsequent studies, a subset of the same two speaker groups was compared to monolinguals and bilinguals with German as a majority language with respect to their VOTs when producing the velar stop /k/ (Kupisch & Lleó 2016 for German-Italian, van de Weijer & Kupisch 2016 for German-French). The velar stop /k/ is produced with short lag (30–50 ms) in French and Italian, and with long lag (60–100 ms) in German. Although the speakers in both studies produced different VOTs in German and their respective Romance language, thus maintaining the relevant phonological distinctions between their two languages, their German VOTs were significantly shorter than those of monolinguals, suggesting CLI on the phonetic level.

In summary, studies on specific phenomena seem to suggest that phonological distinctions are relatively resilient to change despite some influence on the phonetic level. In general terms, however, HSs are often perceived to be foreign speakers of their language. These observations are not contradictory, because the make-up of phonological systems is complex, including sounds and their phonetic realizations, syllables and intonation, stress, tones, and phonological rules. Acquiring and maintaining a native-like accent entails mastery of all those components.

### [3] CONCLUDING REMARKS

In this paper, we have discussed research on HSs of different types, simultaneous and sequential bilinguals, and speakers of moribund languages, taking into account child development and adult speakers at a (relatively) stable state. The linguistic domains that we have focused on are word order and grammatical gender as well as some DP-related properties and phonology.

We have focused on how vulnerable these properties are to change or loss. For example, main clause (V2) word order has been shown to be relatively robust, although it may be problematic for certain speakers. A clear discrepancy has been attested between subject- and non-subject-initial declaratives in Norwegian and Icelandic HL, in that word order in the latter construction is more vulnerable. Embedded clause word order seems to be less resilient, as main clause word order has been attested in embedded contexts in German, Swedish, and Norwegian HLs. With respect to grammatical gender, findings in Scandinavian HLs (in North America) show that, while indefinite articles (and other gender forms) may be marked with a gender that is different from that of

the non-heritage variety, declensional suffixes tend to be intact (especially the definite article). German HL (in Italy) has been found to have a relatively intact gender system, although a distinction is attested between assignment and agreement: While gender assignment is vulnerable in speakers with a relatively low proficiency, gender agreement is typically more stable.

One major difference seems to arise between speakers of moribund languages of the third or fourth generation, for whom input and use are presumably even more reduced than for second-generation HSs, as opportunities to use the HL will typically be quite limited. This difference might further coincide with the relative size of the community in which the HL is spoken. The role of quantity of exposure and use (which often goes along with quality, because more occasions tend to imply more variation) is supported by comparisons of the acquisition of the HL and a bilingual's majority language, for which input is also reduced compared to monolinguals, but less so. Phenomena in the majority language are often acquired akin to monolinguals (see e.g. Meisel 1986, 1990) for the acquisition of word order in bilinguals with German as the majority language). Furthermore, another factor that may play a role in third- and fourth-generation HSs is that the input may also be somewhat different from the input to second-generation speakers, as certain changes in the HL may have already taken place in previous generations.

Obviously, the main factor explaining different acquisitional paths and outcomes is the reduction in input and use of the language in HL situations, possibly leading to divergent acquisition (or 'incomplete acquisition' in Montrul's 2008 terms). Since bilingualism is a dynamic process throughout the lifespan, with often one (and possibly more) shift(s) in language dominance, a HS is also at risk of language attrition. Our results do not generally show such changes, except possibly in third- or fourth-generation speakers. Finally, the properties of the contact languages appear to play a role: For example, if the majority language has a transparent gender marking system (e.g. Italian), this may boost early acquisition in the HL and prevent restructuring or loss in this language. On the other hand, dominant language influence can also slow down the acquisition of the HL, as was illustrated for German word order in the context of child bilingualism (Döpke 1998). Finally, recent studies have documented differences between CLI on the one hand and CLO on the other, suggesting different strategies used by different types of HSs, presumably linked to their general proficiency in the HL.

A final question is whether deviance from the monolingual (expected) standard can be found in equal measure in production and processing, because most of the available evidence so far comes from production studies, and it is unclear

whether the discrepancies are due to transitional influence from the dominant language or more stable representational differences. The study of HSs is only in its infancy, and this and many other questions related to HL acquisition and attrition will surely be addressed in future research.

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