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Perspectives on heritage languages

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In this position paper for the Leeuwenhorst Workshop on Heritage Languages, January 23-25th we want to sketch some of the issues confronting heritage language research, with the tentative aim of helping to focus the discussion and raise new issues.¹

1. **Definitions**

A large number of definitions have been given in the literature of 'heritage language' (HL) and 'HL speaker', and an even greater variation is present implicitly in authors who describe HLs and HL speakers but who do not define these terms. A shared component of most definitions of HL is that HLs are languages related to the cultural heritage of the speaker and that the languages are not the dominant language of the country. In this section we will provide an overview of proposed curtailments of this wide definition of cultural attachment to a non-dominant language – either an immigrant language or a minority indigenous language.

A well described difference in definitions of HL speakers is the distinction between HL learners proper and learners with a heritage motivation (Valdés 2000, Carreira 2004, Polinsky & Kagan 2007, Montrul 2008, Laleko & Polinsky forthcoming). Whereas heritage learners proper have at least heard the language and can understand a bit, learners with a heritage motivation might not speak a language yet, but want to learn it because of their ancestry. This paper limits itself to heritage speakers proper. The most widely cited narrow definition of HL speakers is the definition used by Valdés (2000: 1):

"The term "heritage speaker" is used to refer to a student who is raised in a home where a non-English language is spoken, who speaks or merely understands the HL, and who is to some degree bilingual in English and the heritage language."

Restrictions mentioned in this definition are that the language is spoken at the home and that children are raised in the HL. Not all languages that are referred to as HLs are spoken in the home, though, and if a language is spoken at home sometimes it is not always the case that that language is also used to raise children. For example, Ambon Malay is spoken by many first generation immigrants of the Moluccas in the Netherlands, but the language is not always spoken at home and certainly not always used to raise the children. Many Moluccans already knew (some) Dutch before they arrived in the Netherlands and they chose to raise their children in Dutch because they hoped to increase schooling opportunities for their children by

¹ An excellent bibliographical overview is given in Maria Polinski (2011), *Heritage Languages*. Oxford Bibliography Online.
speaking Dutch (Tahitu & Lasomer 2001: 162). The second and third generations learned Ambon Malay through domains outside the home such as in the church, musical events and in the streets. Language learning on the street was possible, because many Moluccans lived in special areas reserved for Moluccans, the so-called Wijken. The LSEM (Landelijke Stichting Educatie Molukkers: national foundation education Moluccans) and others provided courses in Moluccan Malay and acquisition of Malay in these courses sometimes led to the switch from Dutch to Malay in the communication with parents (personal interview Heritage Malay Corpus ERC). The question is whether we would call this second and third generation speakers who did not learn the language at home, but who have a cultural attachment to the language and use the language with speakers who share the same ancestry HL speakers.

Rothman (2009: 156) provides a very precise definition of HL speakers and he would include speakers who learned a language at a young age even if it was outside the home in his definition of HL speakers. He writes:

“A language qualifies as a heritage language if it is a language spoken at home or otherwise readily available to young children, and crucially this language is not a dominant language of the larger (national) society. Like the acquisition of a primary language in monolingual situations and the acquisition of two or more languages in situations of societal bilingualism/multilingualism, the heritage language is acquired on the basis of an interaction with naturalistic input and whatever in-born linguistic mechanisms are at play in any instance of child language acquisition. Differently, however, there is the possibility that quantitative and qualitative differences in heritage language input and the introduction, influence of the societal majority language, and differences in literacy and formal education can result in what on the surface seems to be arrested development of the heritage language or attrition in adult bilingual knowledge.”

What is interesting about Rothman’s definition is that cultural attachment to the language is not mentioned. Rothman rather focuses on the acquisition the language in a naturalistic setting at a young age in a language that is not dominant for the country. Acquiring a language via a course would not fit this definition of a HL, but learning the language in the streets at a young age would, even if that language is not part of the ancestry of the speaker. It seems that Rothmans definition expat children could be referred to as heritage speakers, whereas in many studies the heritage language is a language of a wider community, a community that has existed in the host country for many generations.

Note that Rothman is very precise about possible causes for the deviations between the speech of monolinguals and HL speakers. He explicitly mentions that input of the HL is different from input to monolinguals, quantitatively and qualitatively.

Another important issue in the study of the knowledge of heritage speakers is whether these speakers manifest incomplete acquisition or attrition of grammar. In other words, do heritage speakers fail to learn certain structures or do these structures get acquired and then undergo subsequent degradation due to lack of use of the HL or transfer from the dominant language? This question plays a central role in the work of Polinksy (2011). She argues, for example, that in the domain of relative clauses, adult heritage speakers undergo attrition. While heritage children perform like monolinguals, only heritage adults do not perform
native-like. The assumption is that these heritage adults were once like the heritage children and since the children perform native-like in this respect, the non-native behavior of the adults must be due to attrition. The difference in performance between adult heritage speakers and monolingual adults could thus be due to incomplete acquisition or due to attrition. Polinsky (2011) helps to distinguish the two as follows. In incomplete acquisition we can state that if a child and an adult deviate from the baseline in the same way, it can be assumed that the feature has not been acquired. In contrast, for attrition: If a child performs as his or her age-matched baseline control but the adult does not, the feature can be assumed to have been acquired, but it may have subsequently been lost or reanalyzed.

To summarize, the following defining parameters have been proposed to define HLs.
- language spoken at home
- not the dominant language of the country
- language acquired at an early age in a naturalistic setting (not necessarily home)
- language which has cultural value for the speaker/learner
- community language
- language with long history in the country of residence
- language used with people who share a common ancestry

2. Variation in the HL that emerges: the sociolinguistic perspective

While the linguistic and cognitive dimensions of HLs have come to be studied relatively recently, there is a long tradition of sociolinguistic research on them. The principal model of course comes from the work of Fishman (1972), who proposed the fundamental distinction between Language Maintenance and Language Shift; these notions provide the overall matrix for the HL discussion. Taking into account the individual language history of HL speakers and the network they are part of, their retention of the HL is embedded within shift or maintenance patterns of the community as a whole. These are often described in terms of the ethnolinguistic vitality of the community language involved.

However, the variation between heritage speakers is notoriously large. Part of the variation can be related to the fact that when people refer to heritage speakers, they do not always refer to the same kind of speaker, but even if it is clear what type of speaker is meant, variation between speakers remains enormous. This section discusses possible sources of variation in heritage speakers.

Age of Onset of Bilingualism. Within the group of early learners simultaneous bilinguals can be distinguished from sequential bilinguals. Research by Montrul (2008) shows that the age of onset of bilingualism affects the linguistic outcome. Researchers interested in linguistic output and input distinguishes between the age of onset of the dominant language. In order to compare groups of speakers it is therefore relevant to be explicit about the age of onset of bilingualism.

Language input versus language use. Bohman, Bedore, Peña, Mendez-Perez & Gillan (2010) show that although language input is important for the first steps in acquisition, actual use of the language is an important predictor for ultimate attainment. In order to make a neat
comparison between speakers it is therefore important to know about language use. Knowing about language use is not an easy task. In bilingualism research parents are asked to keep language diaries for their children, or their language use might be observed and described. These options are usually not available to heritage language researchers, but it is important to consider the effect of language use. Both the amount of exposure can affect the rate of acquisition (e.g., Gathercole & Thomas 2009; Jia & Aaronson 2003; Oller & Eilers 2002; Montrul & Potowski 2007; but Gutiérrez-Clellen & Kreiter 2003) and the type of exposure can affect the rate of acquisition and/or the ultimate level attained (e.g., Jia et al. 2002; Place & Hoff 2011; Scheele et al. 2010; LaMorgia 2011). Unsworth (2013) introduces the notion of cumulative length of exposure, a measure intended to capture the sum of bilingual children’s language exposure over time. She shows that for some domains of language both current amount of exposure and cumulative length of exposure were found to be significant predictors in predicting bilingual success.

**Parental native language.** One difference between heritage learners is the connection between the parents and the HL. Whereas some parents speak a language with their children that they also spoke with their own parents, this is by no means always the case. For example, Chinese parents who spoke a Wu-dialect with their parents might speak Cantonese with their partner and Mandarin (cf. Li & Hua 2010) with their children, and Moluccan parents who spoke “Bahasa Tanah” (language of the land, e.g indigenous language) with their own parents, they speak the Moluccan lingua franca Ambon Malay with their children because this is the language shared by members of the community. Akan has become the community language of Ghanaian migrants in the Netherlands. Even those who would not have spoken Akan in Ghana, as for example in the case of people from the north, will speak Akan in order to project Ghanaian identity (Van den Berg in prep). The fact that parents are not native speakers of the language they use at home, might affect the acquisition process of their children.

**Parental language strategy and modes of speech.** Parents have different strategies in language use as discussed for example in Lanza (1997 in Montrul (2008: 101)). Some parents for example refuse to answer their children if the heritage language is not spoken or they repeat an utterance made in the dominant language in the heritage languages. Strategies like this increase the chances of the child becoming an active bilingual rather than an overhearer of the language only. Active use has a positive effect on proficiency.

**Domains of use.** Some languages are used in the home only, whereas other HLs are community languages spoken in shops, at work, in school, in church /in the media (radio, TV, newspaper, Facebook) in streets and in clubs such as dragon boat rowing or karaoke bars. Many colonial languages in the US such as Norwegian of German were spoken in almost all domains of life and the speakers where most fluent in the HL rather than in the dominant language of the country, probably largely because the HL was also the language used in schools. In the immigrant context, speakers are usually dominant in the language of the country because this is the language used in school. A factor that might influence language attainment is the number of interlocutors the language is used with (Place & Hoff 2011). Moreover the quantity of language output can predict level of attainment to a large extent. If a language is used as a community language this might affect other behavior such as media
preferences and thus indirectly affect language input even more. Knowing speakers who only
know the heritage language (such as grandparents) also increases the change of speaking like
homeland speakers.

Schooling and literacy. Lack of schooling in a language can affect the acquisition process
in at least two ways in. Research by Tarone & Bigelow (2005) and Tarone, Bigelow &
Hansen (2009) has shown that language intake in illiterates is different than in alphabetically
literate speakers. Heritage speakers are usually literate in the dominant language and in that
sense unlike the participants in Tarone’s research but it is possible that no alphabetic script is
available for the heritage language or that the heritage speaker is not educated in the
alphabetic variant and that this causes a different kind of (meta) linguistic awareness when
compared to heritage speakers who are literate in their heritage language (cf. Oller & Eilers
2002; Benmamoun, Montrul & Polinsky 2010). Moreover, a school environment might
provide other types of language input than language restricted to informal domains as is
clearly illustrated by Jason & Rothman (2009).

Language prestige. Carreira (2004) shows a difference in output types between
communities with large numbers of Spanish speakers, a high density of foreign-born Latinos,
and where Spanish enjoys commercial, social, and professional sway such as in Miami
Florida versus the situation that holds in communities such as San Antonio, Texas where the
Latino population is predominantly U.S. born, and may have much lower proficiency. High
prestige might decrease barriers in using the heritage language and it might increase the
chance that there is support for the language in terms of available books, films etc. Higher use
and literacy support boost proficiency.

Settlement patterns and immigrant networks. Settlement arrangement can influence
language use and thereby the extent of language change. Whereas some immigrants live
together in special sections of large towns and have community shops, other immigrants
might be rather isolated. For example, Chinese migrants –who arrived before the 1990’s –in
the Netherlands show the highest rates of residence outside the large cities (Extra et al. 2002;
Geense & Tsui 2001). Almost every town in the Netherlands is inhibited by at least one
Chinese family who owns a family restaurant. Chao (2011) reports that her Dutch heritage
speakers of Cantonese in Amsterdam watched Cantonese soaps and listened to Cantopop
because they could share their experiences with their Cantonese speaking peers who lived in
the neighborhood. The Cantonese speakers in a smaller town –Venlo – did not have many
Chinese peers and preferred Dutch soaps and non-Chinese music. Their network thus
influenced their choices in media, which affected language input and language use which in
turn affects language proficiency. Li (1994: 182) shows that British born Chinese who are
members of the True Jesus Church have a higher competence in Chinese and they mix
Chinese and English more. Reports on language use in Ambon Malay immigrants report a
relation between living in “de wijken” (special neighborhoods for Moluccans only) and
migrants who lived in Dutch neighborhoods (Veenman & Martens 1991, Veenman 1994,

Caretaker background. Parents are not always the main source of language input for
children. Some Chinese heritage children for example, spent most of their waking hours in
Dutch guest families (Geense & Tsui 2001: 94). Children also go take day care centers, they
might grow up with their grandparents (in the heritage country or the country of the parents) and the parents might not share the same language background. Nannies and babysitters also affect the type of input children receive.

Sibling birth order. Proficiency in the heritage language can differ greatly between siblings. In many cases the oldest child speaks the HL most native like. Once the oldest child enters school, this usually implies the introduction of the dominant language at home. The higher the number of older sibling a child has, the larger the chance that (s)he will use the dominant language in daily speech rather than the heritage language. Sibling order thus affects language use and language input and therefore language proficiency.

Length of use. Montrul (2008) shows that length of use of the heritage language affects proficiency. For example, a language can be completely lost in adoptees if they stop speaking the language at a young age. Montrul (2008) claims that there is a critical period for language loss. If a speaker stops using the language before the end of the critical period, loss can be much more severe than when speakers stop using the language after the age of 13. The relation between stopping to use a language early and language proficiency is also described by Schmid (2002).

Style shift. Like other types of language use, HL speech may be subject to style shift. Speakers may speak differently in different registers. They may well show accommodation to the researcher, and command a more formal and an informal style of their HL, particularly if that HL has undergone stylization in the interplay between majority and minority ethnicities.

Super-diversity. The notion of super-diversity has been developed by Vertovec (2007, 2010) to refer to the fact that in many contemporary societies very many norms and systems of usage co-exist and interact. Within different HL communities, there may well be competing norms: those of the home country and of the community in the country of immigration, but also of other groups that share the same language. Chileans living outside of Chile are confronted with the original norms of Chilean Spanish, implicit norms in the expatriate community, norms of Spanish from Spain, and norms from other Spanish-speaking countries such as Argentina or Mexico. All of these norms may also be shifting over time.

Translanguaging. Li (2009: 1233) describes translanguaging as follows:

“For me, translanguaging is both going between different linguistic structures and systems, including different modalities (speaking, writing, signing, listening, reading, remembering) and going beyond them. It includes the full range of linguistic performances of multilingual language users for purposes that transcend the combination of structures, the alternation between systems, the transmission of information and the representation of values, identities and relationships. The act of translanguaging then is transformative in nature; it creates a social space for the multilingual language user by bringing together different dimensions of their personal history, experience and environment, their attitude, belief and ideology, their cognitive and physical capacity into one coordinated and meaningful performance, and making it into a lived experience. I call this space “translanguaging space”, a space for the act of translanguaging as well as a space created through translanguaging.”

Li (2009) describes many examples of translanguaging including the use of word play that requires bilingualism. For example, Li describes bilingual Chinese-English who use the word
cakes sellers as an interjection in their Chinese speech. In Chinese cake sellers 卖糕的 (mai gao de) sounds like English ‘o my god’. The kind of creativity that translanguaging follows from might affect the development of the heritage language on the long run.

3. Research questions: variation and change

We think it is clear that most or all researchers on HLs will accept that idea that their focus of study is some kind of variation within the cluster of language varieties that the HL belongs to, resulting from some kind of change. Note, however that in closely related field of early bilingualism claims on non-change are made by researchers like Meisel (2010). Matthews & Yip (2011) summarize the claims against language change in early bilingualism as follows:

“(i) It is claimed that the divergent features seen in bilingual children involve only the frequency of usage of options which are also attested in monolingual environments: thus the bilingual child’s grammar may be quantitatively, but not qualitatively different from that of monolinguals. There are indeed many cases where bilingual children use, for example, null subjects and objects with different frequencies from monolingual children. But these contrasts are accompanied by qualitative difference….

(ii) An appeal is made to “specificities of language processing in bilingual production” (p. 133) implying that cross-linguistic influence is a matter of performance. This line of explanation (spelt out in Nicoladis, 2006) may account for sporadic, but not for systematic cases of crosslinguistic influence.

Some of the arguments against change in early bilingualism literature are now also found in heritage language literature, but in general heritage language literature focuses on change. However, perspectives on the nature of the change differ widely. Below we discuss different modes of change.”

Reduction. A first possibility is that there is some kind of reduction or simplification. More ‘difficult’ parts or aspects of the original language are not acquired (incomplete acquisition) or get lost (attrition). These more complex parts of the language might just not be learned due to less input and/or less use or they might be lost when the school language becomes the dominant language. Examples of reduction are loss of case marking, for example in American heritage speakers of Korean (O’Grady 2011), in American heritage speakers of Russian (Polinsky 1997, 2006), but note that case seems quite stable in Dutch speakers of Turkish in Dutch (Demirçay 2012, Dogruöz 2009, Sevinc (2012) Sahin & Backus in prep. perhaps due to the agglutinative nature of the language. Other examples of reduction are the decrease in gender marking in American heritage speakers of Russian (Polinsky 2008a) and overgeneralization of the most frequent measure words in American and Dutch speakers of Cantonese and Mandarin (Chau 2011; Chen 2012; Nagy p.c.).

The most used explanations for reduction are dependency between features and opaque form meaning mapping. Researchers like Pinker (1996) assume that inflection is acquired in a piecemeal fashion. Not all inflectional distinctions are acquired at once. The acquisition of marked features would depend on the acquisition of more unmarked features first. For example, in the domain of person marking Harley & Ritter (2002) show that features like the
dual are dependent on more general plural marking. In the domain of case marking Neeleman & Weerman (1999) and Weerman & De Wit (1999) assume that the acquisition of genitive case depends on the acquisition of dative case (accusative > dative > genitive) (cf. Polinsky 1997, 2006). Montrul et al. (2012) relate the relative stability of the accusative and the instability of the genitive to the specific type of case marking: structural case marking is the most stable, followed by inherent case and lexical case is the most vulnerable. The distinction between inherent case and lexical case allows them to explain that dative case in subjects is more vulnerable than in indirect objects. Because heritage speakers have less input and use the language less they might just never have enough evidence in their input to assume marked features like the genitive or a dual. The regression hypothesis first formulated by Jakobson (1941) claims that “acquisition is the mirror image of attrition: structures that are acquired late in L1 acquisition will be the first to be affected in L1 attrition” (Montrul 2008: 69). If this hypothesis holds this implies that marked features might not only be prone to non-acquisition but also be sensitive to loss. O’Grady (2011) explains the loss of case marking in heritage Korean as the result of opaque form meaning mapping. The actual appearance of accusative case marking in Korean depends on many factors such as animacy. He claims that opaque features should be evidenced in the input with a very high frequency before they can be acquired and it is precisely this frequency of the input that heritage speakers lack. Idiosyncratic features like measure words and gender are also greatly depended on frequency and therefore it is no surprise that they are vulnerable in heritage speakers.

**Convergence.** A second line of research assumes convergence with some dominant model language, usually the national language of the country of residence. In case of optionality in structures the heritage speakers will prefer the structure that is also allowed in the dominant language (cf. Silva-Corvalán 2008; Montrul 2004). An example is the use of psych verb constructions in heritage Spanish in the Netherlands (see Irizarri van Suchtelen 2012). Spanish allows option (1) with a subject experiencer and option (2) with a dative experiencer. Whereas monolingual controls showed a preference for (2), bilinguals showed a tendency towards preferential use of (1), the only structure that is available in Dutch. Many cases of convergence are difficult to distinguish from simplification.

(1) olvidó su llave
   forget.PA.3SG 3SG.PO key
   ‘He forgot his key.’ (HiG2-J)

(2) se le olvidaron las llaves
   REFL DAT.3SG forget.PA.3PL DET.F.PL key.PL
   Lit.: ‘The keys stayed him behind.’ (HiG2-H)

**Leveling.** A third possible source of change in heritage languages is leveling with other varieties of the HL, as the result of migration. The process of leveling is very precisely researched in dialectology and sociolinguistics where new patterns in the language are related to the number of people speaking particular dialects and the associated variable of the relative
frequency of particular dialect variants and to social networks. Kerswill (2003) defines leveling as follows:

“……. mechanism is levelling, which implies “the reduction or attrition of marked variants” (Trudgill 1986a: 98; emphasis in original). ‘Marked’ here refers to forms that are “unusual or in a minority” (ibid.). Levelling, in this sense, is closely related to (indeed, results from) the social psychological mechanism of speech accommodation (Giles and Powesland 1997; Trudgill 1986a: 1–4), by which (provided mutual good will is present) interlocutors will tend to converge linguistically. In a situation (such as in a new town) where speakers of different, but mutually intelligible dialects come together, countless individual acts of short-term accommodation over a period of time lead to long-term accommodation in those same speakers (Trudgill 1986a: 1–8). Also, in such a situation, a form of non-accommodation behaviour may influence the outcome: this is the avoidance of forms which are negatively evaluated as highly local in favour of forms with a wider geographical currency (L. Milroy 2002). The outcome is the levelling of differences among what was at first a conglomeration of varieties, often leading to a new variety characterised by the absence of localised forms (see discussion in Kerswill 2002: 680–689).”

In leveling speakers tend to avoid forms that are marked dialectally/geographically, so that those found among many/most of the input dialects tend to win out. Frequency and markedness go hand-in-hand though as unmarked forms tend to also be numerically less frequent. It is therefore not always easy to differentiate between incompleteness/loss versus levelling, but it is to be expected that marked forms have a higher chance of being maintained if heritage speakers share the same social and geographical background.

Heritage speakers might also start to learn a new heritage language after moving. Li (1999) describes the use of Cantonese by non-Cantonese Chinese in the Netherlands as follows:

“In fact some Zhejiang interviewees commented that, because the only workers they could recruit were Hong Kong people, the Zhejiang restaurateurs had to learn the Hong Kong dialect (i.e. Cantonese) to communicate with their employees. Consequently the Hong Kong culture has since then dominated the Chinese community.”

Complexification. A fourth perspective assumes adding structures and complexification. This path is not often discussed in heritage language literature, but complexification is a possible outcome of early bilingualism. Trudgill (2011) following typological literature in complexification by – for example – Nichols (1992) and Aikhenvald & Dixon (1999) sees language contact as a possible source for complexification. Whereas adult second language acquisition would yield reduction of complexification, he names early bilingualism as the source of contact induced complexification of language. He relates the presence of linguistic areas to early bilingualism. Mixing languages is one way in which languages would become more complex. Whether mixing occurs is not related to competence but to sociolinguistic practices (Li 2010: 5). For a discussion on language mixing, social variables and language change also see Nagy et al. (submitted). In our data we found some examples of
complexification. For example, Chao (2011) describes a Dutch heritage speaker of Cantonese who uses Dutch inflection in her Cantonese as shown in (3).

(3) Keoi5 go3 snaar laan6 zo2-t
佢 個 snaar 破 吃-t
3SG CL string tear ASP-t
‘His (guitar) string is broken.’

Queen (2006) reports that Turkish-German bilinguals in Germany use German and Turkish intonational patterns in both their German and their Turkish and add a pragmatic load that is not there in the monolingual varieties of both languages. Yip & Matthews (2007) show transfer of grammatical elements of Cantonese Chinese in the English of their children that resemble features of Singapore English. Both in the variety of their children as well as in Singapore English the adverb already is used as the Chinese aspect particle le and the adverb ever is used as an experiential particle. Jeanine Treffers-Daller (p.c.) remarked that Turkish returnees use evidential marking in their German. She said that evidentiality became such an important part of conceptualization while using Turkish that the speakers retained the category evidentiality even when speaking German which does not encode evidentiality grammatically leading to utterances like where the German utterance includes the Turkish suffix –mis which indicates that the speaker wasn’t there when Michael sent the letter:

(4) Michael hat den Brief losgeschickt-mis
Michael has the letter sent-MIS
‘Michael sent the letter’

Heine & Kuteva (2003) describe many examples of contact induced grammaticalization and thus forms of complexification. They assume that many generations are needed to complete contact-induced grammaticalization. This might explain the relative low number of described cases of additive complexity.

Accelerated change and unpolluted speech. Heritage language speakers mainly have access to informal speech domains and the fact that use of the language is limited to these domains might affect change. Some features might be more frequent in informal settings than in formal settings. For example, the progressive in Spanish is used more in informal speech than in formal speech (Torres Cacoullos 2000). Because heritage speakers mainly use the language in informal settings, change might accelerate in these constructions in heritage language speakers. Moreover, conservative forces from schooling are not relevant in those cases where heritage speakers do not receive schooling. Pires & Rothman (2009) therefore calls heritage speakers ideal in testing diachronic claims; whereas speech from home country speakers is polluted by conservative effects of schooling heritage speakers show what the language looks like when it can develop freely and is therefore a better test ground for diachronic linguistics.

Finally, we may find autonomous changes in the HL, which cannot be reduced to any of the above. For example, Polinsky (2008b, 2011) observes that adult American heritage
speakers of Russian have trouble interpreting object relative clauses—indeed independent of word order—although object relative clauses are present in the dominant language English. The preference for subject relative clauses is in line with the accessibility hierarchy formulated by Keenan & Comrie (1977) as shown in (4).

(4) subject > direct object > indirect object > oblique object > possessor > standard of comparison

The preference for the universally most used construction independent of the L1 and the L2 is in line with ideas formulated by Bickerton (1984) who assume that learners have general acquisition strategies to fall back on in cases of reduced input. Klein & Perdue (1997) describe strategies shared by adult second language learners independent of the characteristics of the L1 and the L2 such as SEM1 “The NP-referent with highest control comes first”. It is possible that in some cases heritage speakers fall back in general acquisition principles independent of the characteristics of the dominant language and the heritage language such as a preference for SVO order. Preference for SVO order is assumed to be basic in Bickerton’s bioprogram hypothesis and it is associated with absence of case marking and agreement marking. Clahsen & Muysken (1986) describe the use of SVO order in Turkish speakers of Dutch. Use of SVO is remarkable in this case because in the context mentioned both Dutch and Turkish require SOV order. Preference for SV rather than VS is reported in the literature on heritage speakers (Montrul 2010; Song, O’Grady, Cho & Lee 1997), but not a change in the VO versus OV order. Note however that Chao (2011) reports transfer of OV order in subordinate clauses in Dutch Cantonese. Apart from universal principles in the absence of complete input, another possible source of independent change are processing strategies. HL speakers might have word finding problems and cover up for their hesitation by overusing certain auxiliary verbs or by fronting well known words to gain (compare linguistic time creating strategies in sport reporters in Van Bergen 2011).

4. Methodological issues

4.1 The base line

Since the study of HL hinges on finding some kind of change, a key issue is the question of the base line, the state of the language before the change took place.

Standard language grammar. One possibility is to simply depart from some notion of the standard language of the country of origin, as described e.g. by linguists. The risk is that the linguistic descriptions may not reflect the actual speech (any more), and that supposed departures from that standard are in fact fictitious.

Transnational research design. A second possibility is to adopt a transnational research design, in which data gathering takes place both in the country of origin and in that of current residence. Advantages of this design are that dialectal background is better matched with the heritage speakers than in a comparison based on a grammar of the standard language.
Additionally, HL speakers and homeland speakers might undergo the same tests, which enhances comparability.

This option is sound on the whole, but may be impracticable or very expensive. A second problem may be that migration took place some time ago and data gathered at present in the country of origin do not reflect the language at the point of departure. For example, the Cantonese spoken in Hong Kong today is much more influenced by English than the Cantonese from 60 years ago. When heritage speakers return to their country of ancestry they are sometimes told that they sound archaic. Differences between heritage speakers and home country speakers might therefore be the result of a lack of change in the heritage speaker rather than contact-induced change from the home country. Secondly, the standard language might have become more dominant in the homeland speakers thereby making the comparison less neat. Thirdly, differences in literacy level between the heritage speakers also make a neat comparison more challenging (cf. Pires & Rothman 2009). Fourthly, heritage speakers might have a longer history that sets them apart from homeland speakers. For example, many Moluccans lived in military barracks before they arrived in the Netherlands. These barracks were often situated on Java and contact with Javanese language changed the Malay language before arrival to the Netherlands (affecting for example pronoun use). The Malay spoken on the barracks is often referred to as Tangsi Malay (literally barracks Malay). Tangsi Malay is not documented and therefore a comparison between Ambon Malay here and in Ambon is more complicated because the effect of the barracks is not clear.

Exchange students. A cost-efficient and practical baseline –if available- is the use of exchange students of the home country as a baseline. Exchange students however, might not match the heritage speakers neatly, because they are different with regards to schooling in the language, they might have different regional backgrounds than the heritage speakers and it is possible that their language shows some effects of contact-induced change by the country of visit.

Vary subject populations. A fourth possibility is to only study language in the country of residence, but vary the subject population. Dimensions for the variation could be generation (first/second/third), proficiency (high proficiency/low proficiency), and length of residence (long term residents/recent arrivals) or ethic orientation (cf. Nagy et al. 2011). Relating variables might give an indication of the role of age of acquisition of both languages and changes per variation. Questions asked can be: to what extent does score on one variable predict the other? Do low proficient speakers have low word per minute rate? Is a low word per minute rate predicting aspects of grammar? And are scores on one aspect of grammar predicting other grammatical features? For example, do speakers who overuse the progressive also underuse dative clitics? To make this approach work many respondents are needed and much information on the respondents is required.

Family research. A fifth possibility is to compare differences within and between families. Chen & Shirai (2010) and Chen (2012) show that families have certain aspect marking styles. The amount of aspect markers children use, for example, can to a large extent be predicted by aspect use in the parents. If both family style and generation affect language output, the comparison between and within families can show on what levels speakers from the same generation line up and on what level speakers from the same families line up. Social and
geographical background of the speakers will also be more neatly matched when they are tested within families. Lastly, Laleko (2010: 249) more generally describes the type of input received by heritage speakers from their parents (and more generally from the heritage community) is not exactly analogous to the type of input available to monolingual language learners. Testing the output of the parents of heritage speakers will enable the researcher to tease apart incomplete acquisition and attrition on the one hand and changes induced by the first generation on the other hand (cf. Rothman & Pires 2009). Problems with this approach are practical. Members of the family might be scattered over the country or even over the world, (grand) parents might have returned to the home country and not all members might want to participate in the research.

Multiple baselines. Since so many factors play a role in the output of heritage language speakers, it is also possible to compare them with many different groups and see on what domains they match with those certain groups. Jason & Rothman (2009), for example, compare heritage speakers with adult and child home land speakers and with speakers with low and high educational backgrounds. They find that in the domain of inflected infinitives heritage speakers of Brazilian Portuguese group with Brazilian Portuguese children under the age of twelve and adults with a lower educational background. All three groups of speakers do not know how to interpret and use inflected infinitives whereas the educated adults do. Comparing heritage speakers to educated adults only, would have incorrectly suggested incomplete acquisition for what was in fact the result of a different kind of input domain. Jason & Rothman (2009) also compare heritage speakers of European Portuguese with speakers of Brazilian Portuguese. The European Portuguese heritage speakers actually do use inflected infinitives which support their case that inflected infinitives can be acquired by heritage speakers if attested in the informal input.

4.2 Collecting data

A second cluster of methodological issues concerns data gathering. A range of techniques have been employed, all with specific strong and weak points.

Spontaneous speech in informal multi-party conversations has the great strength of naturalness, but requires very large data sets for morpho-syntactic analyses and often is difficult to record and costly to transcribe.

On-line video descriptions have the merit that they are on-line performances, with little time to reflect for the speakers, and can focus on specific scenes, which may trigger particular constructions (e.g. scenes of giving may trigger verbs of transfer and three realized arguments). The potential drawback is that the rate of speech is much influenced by the speed at which the action unfolds.

Video retelling tasks do not have this latter disadvantage, but allow for more off-line reflection. Also, the range of aspects that subjects will focus on in their retelling will be larger than in a direct descriptive task.

Picture book descriptions, such as the Frog Story, are intermediate between these two in these respects.
Grammaticality judgments target very specific linguistic structures or patterns, including complex ones that would be infrequent in ordinary speech. This is an advantage in itself, but leads to doubts concerning the actual competence being tested with this method. Polinsky (2006: 196-197) offers an excerpt of an interview with an American Russian speaker that illustrates the tendency of heritage speakers to accept many utterances as grammatical. Orfitelli & Polinsky (2012) criticize Grammaticality Judgement Tests (GJT) for measuring performance rather than competence and they suggest truth value judgement test (TVJ)-TVJT in Ionin & Montrul (2012)- and sentence picture matching test (SPM), -PSMT in Ionin & Montrul (2012)- for those researchers interested in interpretation based methods. Ionin & Montrul (2012) also use Sentence-picture acceptability judgement (SPAT).

Comprehension tests such as picture selection tasks are quite interesting since they allow for more or different information than production tasks only. If we find, for example, that a heritage speaker does not use a certain construction, we do not know what this absence means. It is possible that a heritage learner does not use a structure but can understand it or it can mean that the speaker just really does not have the structure in his or her repertoire. Comprehension tests will be able to differentiate between these two options. Moreover, language use patterns might not always reveal how speakers intended certain structures. Comprehension tests will reveal more about the meaning HLs attach to the structure.

Eye-tracking might give more detailed information on speaker preference. It might be the case that speakers produce the same utterances as homeland speakers and that they interpret utterances in the same way, but that eye tracking patterns reveal differences in first preferences in interpretation (cf. Sekerina & Trueswell 2011).

4.3 Field worker characteristics

Li (1994: 78) describes the role of the identity of the fieldworker in the elicitation of language data. Friendly relations with the respondents will affect the type of language that the respondents produce. Native speaker competence will make the field worker more aware of linguistic details. Matching languages of the fieldworker and the respondents is not always easy, because respondents have different language profiles. One option is working with teams of researchers. The data elicited by Chau (2011) show heavy influence of Dutch on Dutch Cantonese as compared to the data elicited by other researchers in our team. It is possible that the fact that Chau herself is a heritage speaker and had long term relations with her respondents affected the outcome of the elicitation. Moreover, Chau heard Dutch inflection in the spoken Cantonese that was not heard by the other transcribers (monolingual Cantonese) but that was visible in PRAAT.

5. Language based factors and hypotheses

To explain the robustness, or alternatively, the vulnerability of certain items, patterns, or structures in HLs, a number of linguistic and processing hypotheses have been formulated.
5.1 Linguistic hypotheses

A very influential idea has been the **Interface Hypothesis** (cf. Sorace 2004, 2011, 2012; Tsimpili et al. 2004; and Tsimpili & Sorace 2006), which assumes that HLs are vulnerable at the interface between different components of language, such as syntax and pragmatics. The hypothesis originally was developed in the field of L2 development. Montrul & Polinsky (2011), Laleko (2010) and Tsimpili (2012) show the relevance of the interface hypothesis for heritage language acquisition. Critics of the Interface Hypothesis have pointed to the fact that the notion of ‘component of language’ is not clearly defined and hence, that it is not easy to test the hypothesis in a non-circular manner. Montrul (2011: 592) asks: “How do we decide whether a given grammatical property involves a specific interface or the other? How do we conclude that difficulty on some grammatical property is because of the alleged interface involved and not other?” She shows that boundaries between interfaces are fuzzy and that many linguistic features can be positioned in more than one interface. In any case, the observation that pragmatic uses of grammatical patterns are subject to cross-linguistic influence has received support in much literature (Prince 1998; Laleko 2010; Muntendam 2013). Often the notion of pragmatic bleaching is linked to this, the loss of pragmatic force of a particular construction.

The **Smaller Domain Principle** may be a more precise instantiation of the Interface Hypothesis. It has been applied to HLs in Polinsky (2012). The Smaller Domain Principle predicts that comprehension related to smaller domains is easier, since there is economy in the encoding of construal, leading to the following implicational scale (Reuland 2011; Kornneef et al. 2011).

(5) Narrow Syntax < logical syntax (C-I interface) < discourse.

If we follow the ideas advanced by Reuland (2011) and Koornneef et al. (2011), linguistic encodings formed in components farther to the left on the hierarchy in (1) are “less costly” in terms of processing and construal than those towards the right. These predictions have been formulated for competent speakers, who have fully acquired a given language. For the purposes of this paper, such a conception suggests that we should expect heritage speakers to show different degrees of difficulty with elements that belong in the different components of the hierarchy in (1). In particular, we expect that phenomena which involve semantic and discourse computation will be more difficult than phenomena governed primarily by structural syntactic constraints. Within the semantic and discourse components, we expect a further difference: semantic computation should be easier than the computation of discourse-related elements. Polinsky & Laleko (forthcoming) cite a number of earlier researchers (Givon 1979; Langacker 2000; Reinhart 1983, 2006; Grodzinsky and Reinhart 1993; Frazier and Clifton 1996) leading in the same direction.

Possibly the Smaller Domain Principle can be subsumed under a general notion of **ECONOMY** (as in Optimality Theory or Minimalism) that would also yield a further range of predictions regarding HL production.
Schoenmakers-Klein Gunnewiek (1989, 1997, 1998) hypothesizes that heritage language speakers are affected by conceptualization strategies in the dominant language. Even when they retain the lexicon of the heritage language, the concepts attached to the words follow the dominant language and are in this sense unstable. For example, the Dutch verb pakken (‘take’) implies intention from the subject and control over the situation. So saying that someone pakt de trein (‘takes the train’) is fine, but een ziekte pakken (‘taking the illness’) is ungrammatical. Schoenmakers-Klein Gunnewiek (1997) reports that HL speakers of Dutch in Brazil use the expression een ziekte pakken under influence of Brazilian-Portuguese pegar, which is not sensitive to the features intention and control. Flecken (2009) shows that conceptualization does not only affect the lexicon, but also grammatical features. Grammatical aspect marking, for example, affects conceptualization and perception of reality. The CONCEPTUALIZATION HYPOTHESIS then predicts that those structures will be maintained by HL speakers that are the same as in the dominant language.

In a similar vein, the EXPLICITNESS HYPOTHESIS predicts that HL speakers will tend to select structures from the HL in their production which convey the intended meaning explicitly. The heritage speakers might lack confidence that the message will be understood properly, and therefore introduces more overt elements that are supposed to guide the hearer in the processing than monolinguals would do (cf. Polinsky 2006). Laleko & Polinsky (forthcoming) refer to the “silent problem” and note that heritage speakers have most trouble with linguistic segments that are covert, not spelled out and represented by some kind of silent exponent, be that at the level of morphological encoding (null morphemes), or silent pronouns, or contextual deletion such as ellipsis.

In the literature we find numerous references to various properties of language that may help preserve a certain pattern in a HL. The principle of ACOUSTIC SALIENCY would predict that those features of the HL that are acoustically salient and clearly noticeable will be retained more frequently in HL production. In the semantic domain we find FUNCTIONAL LOAD and LINGUISTIC DISTINCTIVENESS, which relate to the number of meaning distinctions that are marked by a certain phoneme opposition (e.g. p/b as in pear/bear, peach/beach, etc.) or pattern (e.g. position of a modifier in a clause: I am very grateful for this little present/I am grateful for this very little present).

Another set of properties relates to TRANSPARENCY in mapping meaning and form, often also referred to with notions such as REGULARITY and ISOMORPHY. Transparent mappings are assumed to have a stronger chance of surviving, opaque mappings a weaker chance. A typical example would be the originally allomorphic expressions of ergative case in HL Dyirbal (Schmidt 1985).

5.2 Processing based issues and concepts

There are also some notions from the processing literature that may be mentioned here, often proposed in the context of the study of attrition. A useful overview is given in Lambert and Moore (1986: 180).

The RECENTY EFFECT concerns the observation that a particular element or pattern may be used or comprehended more easily by a HL speaker if it occurred recently in the previous
discourse. As such, it is part of the phenomenon of \textit{activation}. More generally, \textit{frequency} will play a role, as has been noted by many researchers. A more frequent element or pattern has a greater chance of being retained in the HL.

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