Stability in Chinese and Malay heritage languages as a source of divergence

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This article discusses Malay and Chinese heritage languages as spoken in the Netherlands. Heritage speakers are dominant in another language and use their heritage language less. Moreover, they have qualitatively and quantitatively different input from monolinguals. Heritage languages are often described in terms of change. This article focuses on three types of stability in heritage speakers: stability in form, based on two case studies on progressive and definite marking, stability in function, based on a study on classifiers in Mandarin and Cantonese Chinese, and stability in form and function based on a study on the non-completion of the grammaticalization process of punya. We relate (non)-change to the influence of the dominant language as well as to more general effects of bilingualism.

1. Introduction

This article compares two heritage languages spoken in the Netherlands to their respective counterparts in the homeland with a focus on stability in the heritage language. In all cases the outcome of the patterns described yields divergence (cf. Harnisch 2010) between the heritage variety and the homeland variety, either because the stability is only partial or because the heritage language shows more stability than the homeland variety.

Heritage speakers speak a language at home that is not the dominant language of the country. In our case Malay and Chinese are spoken at home while the dominant language is Dutch (at least in the second and third generation). If a linguistic feature is characteristic of both varieties (heritage and homeland varieties) and if it is retained in the heritage variety, we consider this feature to be stable from the heritage perspective because of the fact that it is retained. We focus on those domains where stability leads to divergence between the two varieties.
We follow Muysken (2013) who advocates a scenario approach to the study of language contact. Muysken (2013: 710) formulates the language contact scenario approach as follows:

Languages do not interact in a single way, but rather in many different ways, depending on the social setting of the contact. This important insight had been lingering in various publications previously, but was most clearly articulated in work that appeared towards the late 1980s, notably Thomason and Kaufman (1988) and Van Coetsem (1988). In other words, it does not suffice to say: when two languages A and B come into contact, X happens, but we need to specify the circumstances....

The circumstances relevant to the heritage language contact scenario are: early bilingualism (either sequential or simultaneous), limited access to the heritage language especially after starting school as its use is restricted to informal family settings (and perhaps church, clubs, et cetera), limited or absent literacy in the heritage language and dominance in the language of the country.

These aspects of the heritage language contact scenario, namely quality and quantity of the input, language use and language dominance in another language are usually taken into account to explain change/instability in heritage speakers. For example, limited access to the heritage language at an early age is the main cause of incomplete knowledge of differential object marking in Spanish heritage speakers in the U.S. (Montrul and Bowels 2009; see also Polinsky 2008 on incomplete acquisition of aspectual distinctions in American Russian, and O’Grady et al. 2001 on difficulties in the construction and interpretation of relative clauses by heritage speakers of Korean in the U.S.).

Pires and Rothman (2009) and Torres Cacoullos (2000) illustrate that some changes occur faster in heritage speakers due to the fact that the input of heritage speakers is restricted to informal registers. For example, Brazilian heritage speakers do not use inflected infinitives because inflected infinitives are part of a more formal register to which heritage speakers usually do not have access (Pires and Rothman 2009).

Effects of cross-linguistic influence on heritage languages involve lexical/conceptual transfer. For example, Schoenmakers-Klein Gunnewiek (1997) describes changes in the use of the word pakken, ‘to take’, in Dutch spoken as a heritage language in Brazil. More specifically, the Dutch verb pakken, ‘to take’, implies intention of the subject and his control over the situation. So saying that someone pakt de trein, ‘takes the train’, is fine, but een ziekte pakken, ‘taking an illness’, is ungrammatical. Schoenmakers-Klein Gunnewiek (1997) reports that heritage speakers of Dutch in Brazil use the expression een ziekte pakken under influence of Brazilian-Portuguese pegar, ‘to take’, which is not sensitive to the features intention and control. The new use of the word pakken would be the effect of transfer from the dominant language Portuguese.
In short we have seen that heritage speakers might either be directly influenced by language contact showing cross-linguistic influence or indirectly showing effects from limited input. Whereas many studies on heritage languages focus on change, this article discusses three case studies where the heritage contact scenario is related to stability.

This article discusses three case studies regarding stability that can be attested in heritage languages: (i) stability in form: the phonological form remains stable in the heritage language, though its function(s) change (Section 2), (ii) stability in function: the phonological form or forms devoted to expressing the function change, whereas the grammatical system remains stable (Section 3), (iii) stability in form and function: the mapping between the phonological form and the function expressed by the form remains stable unexpectedly (Section 4). Section 5 concludes the article. All case studies are based on primary data collected in heritage communities in the Netherlands and in the respective baseline communities in the homeland. The data were elicited through the use of video clips depicting actions of various kinds, which constitute the standard elicitation kit for the Traces of Contact Project (ERC project #230310).¹ The video clips were selected from Levinson and Enfield’s Field Manual 2001, Language and Cognition Group, Max Planck Institute for Psycholinguistics.

The elicitation procedure included two different tasks: a simultaneous video description task in which the informants were asked to describe the video clips while watching them and a video retelling task in which the informants described the video clips after watching them.

2. Stability in form: Contact-induced hyperextension of form

As shown in the introduction some parts of the language are lost in heritage languages. In this section, however, we discuss the other possible outcome, namely retention of phonological forms. In some cases, the retention of forms results in an

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¹. The ERC-project Traces of Contact aims to establish criteria by which results from language contact studies can be used to strengthen the field of historical linguistics. It does so by applying the scenario model for language contact studies to a number of concrete settings, which differ widely in their level of aggregation and time depth: the languages of the Amazonian fringe in South America, the complex multilingual setting of the Republic of Suriname, the multilingual interaction of immigrant groups in the Netherlands, and two groups of multilingual individuals. New methods from structural phylogenetics are employed, and the same linguistic variables (TMA and evidentiality marking, argument realization) are studied in the various projects. A shared questionnaire is used in these projects, so that comparable data can be gathered. By applying the scenario model at various levels of aggregation, a more principled link between language contact studies and historical linguistics can be established.
increase in use, which we define as ‘hyperextension’. Since this increase in use makes that form a robust part of the language, we consider this to be a type of stability.

This section discusses two types of hyperextension of form in the heritage language contact scenario. The first type of form retention and extension is related to the character and quality of the form-meaning mapping and is accounted for by general effects of bilingualism (in §2.1). The second type of stability in form is caused by perceived similarities between the heritage language and the dominant language and is accounted for by cross-linguistic influence (in §2.2).

2.1 Indeterminate form meaning-mapping

One of the hypotheses in the literature on heritage language acquisition is that indeterminate structures may pose a challenge to heritage language learners (O’Grady et al. 2011; Laleko and Polinsky 2013).

Polinsky (2012) defines indeterminacy as follows:

1. Indeterminacy
   - Form X is suitable for multiple syntactic contexts and
   - The same syntactic context allows for more than one form

The reported result of indeterminacy is usually loss in heritage speakers. For instance, O’Grady et al. (2011) show that the Korean accusative marker -lul is disregarded by heritage speakers as a consequence of its optionality, low frequency (used only in 10% of the accusatives) and low perceptual saliency. Similarly, Montrul and Bowles (2009:380) conclude that the omission of direct object marking (DOM) a in heritage Spanish may be due to its indeterminacy and its low perceptual salience. In fact, the DOM marker a often merges with the vowel of the preceding verb (e.g. llama ‘(s/he) calls’ or vio ‘(s/he) saw’) becoming practically inaudible in speech.

Our hypothesis is that indeterminacy does not have to lead to loss, but can also cause hyperextension. Hyperextension due to indeterminacy occurs when the form concerned is highly frequent and salient. In other words, when semantic indeterminacy is compensated by frequency and phonological transparency/distinctness, the form may undergo functional extension rather than loss.

High frequency is an important factor in language acquisition and language maintenance, as it facilitates learning and protects against attrition (see Schmid 2007). Studies on the neurological aspects of activation have demonstrated that words that are used more frequently become more available to the speaker than words used less frequently (see the Activation Threshold Hypothesis in Paradis 2007).

Acoustic saliency is another input-related factor that affects acquisition success (see O’Grady 2012 and O’Grady et al. 2011). O’Grady (2012) manipulates acoustic saliency experimentally. He demonstrates that when the saliency of the
Korean accusative marker -(l)ul is enhanced in an experimental setting by manipulating the volume, the duration and the pitch, heritage speakers perform better in a comprehension task. Moreover Polinsky (2012) shows that phonologically heavy case markers in heritage Russian are overgeneralized at the expense of phonologically light case markers.

2.2 A case study: Hyperextension of ada in heritage Malay

Our case study on the hyperextension of form concerns the marker ada in Ambon Malay.2 This form is characterized by indeterminacy as it is optional and it can be associated with multiple contexts. The preverbal ada can have different functions. Its main function is to express the progressive aspect, as in (1):3

(1) tikus ada tidur
    mouse ADA sleep
    ‘The mouse is sleeping.’

Furthermore ada can occur with stative verbs indicating non-permanent or reversible states such as in (2).

(2) dia ini ada sakit
    3sg DEM ADA sick
    ‘He is sick.’

Additionally, in some pragmatic contexts, ada can carry an emphatic function indicating the affirmative mood such as in (3):

(3) E! se ada datang! Be kira mama sandiri.
    INT 2sg ADA come 1sg think mother alone
    ‘Hey, you’ve come (after all)! I thought mother was alone’.
    (van Minde 1997:1991)

Finally, it can indicate the realis mood (Paauw 2008:212), as shown in (4):

(4) ontua ada potong ikan menjadi tiga
    3sg.fml ADA cut fish become three
    ‘She cut the fish in three (lit: it became three).’

2. The language variety under investigation here is Ambon Malay, a language spoken in the Central Moluccas, Indonesia, and as heritage language in the Netherlands.

3. Abbreviations used in this paper are: 1, 2, 3: first, second and third person; clf: classifier; def: definite marker; dem: demonstrative; exis: existential; fml: formal; int: interjection; poss: possessive marker; sg: singular.
In short, *ada* is an indeterminate form because it is always optional and it can function in several contexts. However, it is acoustically salient because it carries stress and contains two open low-central vowels. Moreover, the word is highly frequent. Apart from the meanings listed in (1)–(4) *ada* is also an existential marker meaning “there is, to be (somewhere)”. We compared the frequency of the preverbal marker *ada* in two groups: baseline speakers and heritage speakers. The group of baseline speakers (*n* = 33) consists of 27 Malay speakers living in Ambon, and 5 Malay speakers who have been living in the Netherlands for more than 10 years (they represent the first-generation immigrant speakers in the Netherlands). The heritage group (*n* = 32) contains 32 Malay speakers who were born and raised in the Netherlands; they are second and third-generation speakers, all Dutch-Malay bilingual with Dutch as the dominant language.

A quantitative study of the data has shown that *ada* is used more extensively by heritage speakers than by baseline speakers. In the simultaneous video description task, the percentage ratio of *ada* was calculated for every speaker by dividing the number of occurrences of *ada* by the total number of predicates used in the same description. The box plots in Figure 1 illustrate that the frequency of *ada* in the group of heritage speakers (*M* = 13.7, *SD* = 9.32) is significantly higher than in the group of baseline speakers (*M* = 4.0, *SD* = 2.97), *t*(63) = −5.716, *p* < .001.

**Figure 1.** Frequency of *ada* in the simultaneous video description task

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4. Two participants were born in Indonesia but arrived in the Netherlands before age 2.5.
As Figure 1 shows, the heritage speakers use *ada* to a significantly higher extent than baseline speakers. The marker *ada* is used more extensively, not only in terms of absolute frequency, but also in terms of function. Specifically, *ada* is hyperextended from activities to accomplishments (*bounded process*) and to achievements (*punctual event*). We interpret the hyperextension of *ada* as the result of the reorganization of the aspectual system which is directly related to challenges in the acquisition process caused by high frequency combined with opaque form meaning mapping. Thus, we conclude that, while the form is stable in the heritage group the function is changing.

To conclude, the hyperextension of the form *ada* in heritage Malay is undoubtedly related to bilingualism, but it is not the result of direct cross-linguistic influence from Dutch.

### 2.3 Congruent lexicalization: Hyperextension of the definite marker -*nya* in heritage Malay

Our case study of *ada* shows how the overuse of an already frequent form can be explained by the combination of saliency, frequency and indeterminacy. In contrast, the present case study describes how a marginal form in heritage Malay, -*nya*, becomes frequent in heritage speakers because of the perceived similarity between the heritage language and the dominant language. The enclitic -*nya* shares functional properties with the Dutch definite article *de* *(or het)*. We believe that the semantic and discourse-pragmatic similarity between the two forms makes definiteness marking a permeable aspect of Malay grammar in Dutch-Malay bilinguals (Moro forthcoming). In other words, the obligatory use of the definite article in Dutch triggers the hyperextension of the (perceived) equivalent marker in Malay as spoken by Dutch-Malay bilinguals. The bilingual strategy to focus on structures that are shared by both languages is referred to as as ‘congruent lexicalization’ in Muysken (2013: 714).

In baseline Malay grammar, the enclitic -*nya* has two main functions: (i) it is a definiteness marker (*laki-*nya ‘the man’), and (ii) it indicates the third person possessor (*rambut-*nya ‘her hair’). Although -*nya* seems to be a peripheral form in baseline Malay, it was shown to be relatively frequent in the contact variety of Malay spoken in the Netherlands (Tahitu 1989; Huwaë 1992; Voigt 1994).

When used as a definite marker -*nya* marks the identifiability of a noun phrase (NP), either because the NP has been previously mentioned in the discourse, or because it is understood or presupposed by the context as exemplified in (5):

(5) rumah Anton ada kamar banyak. Kamar-nya bagus
    house A. exis room many room-DEF good
    ‘Anton’s house has many rooms. The rooms are nice.’ (Voigt 1994:42)
We compared the use of -nya as a definiteness marker in baseline speakers (n = 34) and in heritage speakers (n = 33) of Malay.

The box plots in Figure 2 illustrate the rate of -nya in the heritage speaker group and in the baseline group. The rate was calculated for every speaker by dividing the number of occurrences of -nya by the total number of nouns.

Two relevant findings can be deduced from Figure 2. Firstly, there is a significant difference in frequency between the baseline control group (M = 1.74%) and the heritage group (M = 6.36%), t(65) = −2.731, p < .008. Secondly, the box plots have very different spreads across the two groups, indicating that heritage speakers are less homogeneous as a group in their usage pattern of -nya.

As shown in Figure 2, -nya is used in heritage Malay more frequently than in baseline Malay. Note that the four most extreme outliers in the baseline group (63, 13, 27 and 59) are first generation speakers of Malay, who moved to the Netherlands (as adults) more than 40 years ago and hence are bilingual in Dutch and Malay. We interpret the high frequency of -nya in first generation speakers as a possible sign of ‘reverse’ transfer from Dutch, their L2, to Malay, their L1.

The hyperextension of -nya is arguably the result of cross-linguistic influence and as such it is also likely to occur in attrited speakers (i.e. first generation speakers; see Cook 2003 on the relationship between attrition and cross-linguistic influence).
3. Stability in function: Sortal classifiers following numerals

The syntactic function of the sortal classifier system is stable whereas the formal encoding of the system is not stable. The aim of this section is twofold: (i) to present the results of two studies on classifier use in heritage Chinese in the Netherlands combined with reported results on classifier use in other bilinguals and (ii) to explain retention of the grammatical function of classifiers and loss of variation in formal encoding in heritage speakers in relation to the heritage contact scenario. Before we consider the actual case studies let us first consider the nature of sortal classifiers.

3.1 The nature of sortal classifiers

Germanic languages like English and Dutch allow numerals to precede a count noun directly. It is grammatical to talk about ‘one table’ or ‘three goats’. It is only when non-counts nouns are discussed such as water or sand that measure words are obligatory in combination with numerals. We can talk about a cup of water and three buckets of sand, but not about ‘a water’ or ‘three sand(s)’.

Chinese languages (and many other East Asian languages, see Allan 1977; Erbaugh 1986 among others) are numeral classifier languages which require the use of a classifier in combination with all nouns including count nouns if the noun is preceded by a numeral or a demonstrative. So rather than saying one goat speakers refer to one-animal-goat where animal functions as the obligatory sortal classifier. Whereas mensural classifiers like bottle and cup refer to quantities and general groupings and usually combine with non-count nouns, sortal classifiers combine with count nouns and depend on the physical properties and the function of the objects they modify. They are related to the intrinsic characteristics of the noun referent they combine with (Allan 1977; Erbaugh 1986; Tse et al. 2007:497; Li & Lee 2001; Gao 2010:217).

Both Erbaugh 1986 and Li & Lee (2001) note that although the use of a sortal classifier is obligatory when following a demonstrative or a numeral, the specific form chosen is variable rather than categorical. Li & Lee (2001) remark that “Sometimes the choice of a classifier is arbitrary and not predictable from the meaning or physical characteristics of the referent. Moreover, there may be two or more alternative classifiers for the same noun.” Erbaugh reports variation in classifier use with one noun within and between speakers. She claims (1986:433) that “We cannot absolutely predict the use of a special classifier in a particular discourse context.” She (1986:408) describes that two of her adult participants referred to goat both as yi zhi yang (‘one-animal-goat’), yi-tou yang (‘one-head-goat’) and as yi tiao yang (‘one-long thing goat’).
All specific sortal classifiers in Mandarin can be replaced by the general classifier ge. Erbaugh (1986) shows that replacement by ge is common practice in adult speakers, especially when referring to old information. Both Erbaugh (1986) and Tse et al. (2007) note that the first mention of an object often featured a specific classifier, but that later the mention was very often simplified to the general classifier. To summarize we have seen that sortal classifiers are obligatory after numerals in Chinese and absent in the dominant language Dutch, the actual form chosen by speakers is variable and not always predicatale.

Now that we have considered the nature of sortal classifiers, let us now move to the two case studies on classifier use in order to test stability of the classifier. The first case study compares the number of classifiers used after the numeral one in seven heritage speakers of Mandarin Chinese in the Netherlands. The data was gathered by Shi Meng (cf. Shi 2011). The central question in this case study is whether heritage speakers omit classifiers. Table 1 shows the number of instances of the numeral one used per speaker followed by the number of instances when the numeral is followed by a sortal classifier. It shows that a classifier almost always follows the numeral one in the heritage speakers. The robust presence of classifiers following a numeral is also reported in literature on first language acquisition of classifiers both in Mandarin (Erbaugh 1986; Hu 1993) and in Cantonese Chinese (Tse and Li 2007).

Table 1. Number of instances of yi followed by a classifier

<table>
<thead>
<tr>
<th>Participant</th>
<th>Number of instances ‘one’</th>
<th># CL following ‘one’</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN</td>
<td>107</td>
<td>107/107 (100%)</td>
</tr>
<tr>
<td>BB</td>
<td>115</td>
<td>113/115 (98%)</td>
</tr>
<tr>
<td>BN</td>
<td>142</td>
<td>140/142 (99%)</td>
</tr>
<tr>
<td>HN</td>
<td>131</td>
<td>129/131 (98%)</td>
</tr>
<tr>
<td>HS</td>
<td>65</td>
<td>63/65 (97%)</td>
</tr>
<tr>
<td>J</td>
<td>137</td>
<td>137/137 (100%)</td>
</tr>
<tr>
<td>LL</td>
<td>140</td>
<td>140/140 (100%)</td>
</tr>
</tbody>
</table>

The second study conducted by Liu (2013) compares classifier use in one mother and her sixteen-year-old son. The mother was raised as a monolingual and became bilingual later in life. The son is a heritage speaker who became dominant in Dutch when he started elementary school. The central question in this study is whether there is a difference in selection of sortal classifiers between the mother and the son. The number of classifiers used by the mother and son are almost equivalent, but the proportion of the general classifier ge is much higher in the son than in the mother. Whereas the mother uses ge in 50/182 cases (27.7%) and specific sortal classifiers in all other cases, the son uses ge in 141 out of 180 instances (78%). Use of the general classifier is thus stronger in the son than in the mother. Example
(6) shows an utterance by the son in which he uses the classifier ge twice. When describing the same clips his mother used the specific sortal classifier zhi for ‘boat’ and the classifier gen for ‘string’.

(6) 一 个 船 被 一 个 绳子 拽 到 岸上
one CLF boat BEI five one CLF string drag to shore
‘A boat was dragged to the shore by a string.’

We have thus seen that heritage speakers hardly omit classifiers after a numeral and that they overgeneralize the general classifier at the expense of specific sortal classifiers. The results of these two studies are in line with other reports on classifier use in bilingual speakers. The observation that the syntactic structure (numeral classifier noun) is acquired early and that specific classifiers are replaced by the more general classifier, namely ge or go respectively, is also made for second language learners and for other heritage learners. Gao (2010) who reports on the second language acquisition of Mandarin Chinese in Sweden and Li and Lee (2001: 372) who report on heritage Cantonese in England, observe that classifier omission occurs very infrequently in their data. Li and Lee (2001) mention that two participants do not use classifiers at all, but these speakers speak very little Cantonese. The authors suggest that these speakers may switch to using English nouns to avoid having to use classifiers altogether. Note that in most of our Dutch data classifiers are not omitted, even when the following noun is a loan from Dutch. Example (7) is taken from Chau (2011: 76) and shows the use of the general classifier go both before the loan foto (‘photo’) and before the loan muur (‘wall’).

(7) 貼 一 個 photo 祐 個 muur 上 面
paste one CLF photo EXIS CLF wall above
‘stick a photo on the wall’

We have observed that all studies of learner varieties of Chinese reflect the same pattern: the obligatory use of classifiers after numerals (and demonstratives) is acquired early. The first stages of development show a preference for the general classifiers ge and go respectively. Thus the function is stable, but the choice between forms instable. How can we understand the instability in form? Erbaugh (1986) notes that the use of specific classifiers is infrequent in informal speech in general and very much so in child-directed speech. Since many heritage speakers

5. Bei marks the agent in a passive-like structure. There is no consensus in the literature on the categorial status of bei. Some argue that bei should be best treated as a verb, while others think that it is a preposition or a passive morpheme. See Tang (2001) for an overview on literature on the categorial status of bei. We will leave the gloss for bei as BEI for now.
only speak Chinese in informal settings the input of special classifiers is likely to be low. Moreover, the selection of classifier use is often difficult to predict, and depends on more than one feature (e.g. shape, size, animacy), we are dealing with an intransparent type of form meaning mapping. O’Grady et al. (2011:224) refer to frequency as “nature’s remedy to unclear form-meaning mappings”. Since heritage learners use the heritage language in a limited number of domains, it is precisely frequency of input that they lack. If frequency plays a role the prediction is that heritage speakers with relatively high-frequency input perform better than children with lower input. This prediction is borne out. Hu (1993:120) notes that children who stay at home with their mother and grandmother acquire more classifiers than children who go to (English) daycare. Because acquisition of the classifier system depends on frequency, which is precisely the element that heritage speakers lack, the instability of the special classifiers in all their different forms therefore comes as no surprise.

What is perhaps more of a surprise is that sortal classifiers are almost never omitted. There might be three reasons why speaker hardly omit classifiers, namely sequence in acquisition, determinacy and the necessity of individuation. Let us begin with the first reason. Jakobson’s (1941) regression hypothesis states that those elements that are acquired late are most prone to loss. In turn that which is acquired early and that which is transparent is expected to be retained. The obligatoriness of classifiers is acquired early. This early acquisition might protect classifiers from loss.

The second reason why we observe stability of the use of a classifier has to do with indeterminacy, obligatoriness and frequency. First of all classifiers are obligatory in contexts with numerals. Polinsky’s indeterminacy hypothesis states that elements that are non-obligatory are instable. The reverse may also be true, thus those things that are obligatory are also stable. Polinsky (2012; slide 21) writes: “If a given form and a given syntactic context are in one-to-one correspondence, the form is retained.” Although there is form variation in the choice between classifiers, the presence of an element between the numeral or demonstrative marker is robust and thus stable. Classifiers are also very frequent in the input. The combination (yiγe) (one general-clf) is in the top 3 of most frequent forms attested in the heritage speakers in our corpus. Therefore, both obligatoriness and frequency support the sortal classifier. Apart from acquisition sequence and determinacy there might be a third factor that plays a role in the retention of the sortal classifiers. Cheng and Sybesma (1999) show that nouns require a form of individuation in combination with numerals. Following work by Doetjes (1996, 1997) they claim that individuation can be created through plural morphology or through classifiers. Since Chinese does not have plural morphology (only the collective suffix -men, for discussion see Cheng and Sybesma 1999:536), the use of classifiers is necessary as a means of individuation; classifiers are considered to be singularizers. Hu (1993) illustrates that there is a relation between numerical knowledge
and classifier syntax. He shows that the two (bilingual) children in his sample who omit classifiers also have problems with the numerals. If children can handle numerals they use classifiers in the obligatory contexts.

The hypothesis that individuation is a fundamental part of language is confirmed by work by Van Marle and Smits (1993) who show that number marking is robust in heritage speakers of Dutch in the United States. Though much morphology is lost in this group, number marking is retained in all speakers. Li and Lee (2001:372) suggest that heritage speakers who are not capable of using classifiers switch to English when they use nouns that require a classifier, and this idea is also in line with the idea of obligatory individuation. English nouns do not require singularization and therefore forfeit the necessity of a classifier. The observation by Hu (1993:122) that only children who have numeral problems show classifier omission further supports the close-knit relation between classifiers and individuation.

In short we related the retention of the syntactic function of sortal classifiers to the robustness in the input: classifiers are highly frequent, use of classifiers is obligatory. Polinsky (2012) related obligatoriness to stability. Apart from frequency and obligatoriness a possible factor in the stability of classifier syntax is the necessity of individuation. The instability of the forms encoding classifiers can be related to intransparent form-meaning mapping and to the fact that the input of heritage speakers is informal and thus gives less evidence for specific sortal classifiers. We interpret loss of formal encodings to general effects of bilingualism. It would however be interesting to study heritage Chinese in combination with a dominant language that has specific sortal classifiers in order to investigate whether the presence of multiple sortal classifiers in the dominant language could support retention of these forms in the weaker language despite intransparency and less input.

4. Stability in form and function

The last type of stability that we discuss is stability both in form and in function. If we take grammaticalization as a process yielding both reduction in form as well as fading in meaning, we can interpret the halt on grammaticalization as a case of stability in both form and meaning (function). Our central claim is that, in some situations, the mapping between the phonological form and the grammatical function remains (unexpectedly) stable in the heritage language, whereas it changes in the homeland due to the grammaticalization process.

We will illustrate this point by providing an example from heritage Malay, in which the last stage of the grammaticalization process of the possessive marker punya has not yet taken place. We will account for the stability of punya in heritage Malay by addressing the issue of language usage patterns. Note that, in this specific case (as for the hyperextension of ada, cf. Section 2), stability is not related
to cross-linguistic influence from Dutch, but rather to a general effect of unstable bilingualism. Although it is possible that the dominant language plays a role in the halt of grammaticalization processes in the heritage language, this is not the (main) cause for the stability of punya.

4.1 Grammaticalization of punya in Ambon Malay

Malay expresses adnominal possession by means of a marker which intervenes between the Possessor and the Possessed item. This marker can have several phonological forms: punya, pung, pu, ng or zero (van Minde 1997: 161) as shown in (8):

(8) Parampung punya/pung/pu/ng/Ø tangang⁶
girl poss hand
‘The girl’s hand/ the hand of the girl’

The grammaticalization process of punya started a few centuries ago, probably after the 17th century (Tjia 2004). Yap (2007) reports that the word empunya, originally a noun meaning ‘master’ or ‘owner’,⁷ has undergone significant phonological reduction and grammatical abstraction, giving rise to the verb punya (meaning ‘to have, to possess’) and subsequently to the possessive marker punya. After the 19th century the grammaticalization of punya proceeded a step further and nowadays the form is spelled as pung/pu/ng or zero (Collins 1983, van Minde 1997; Tjia 2004). The zero construction is the final stage of grammaticalization.

4.2 Grammaticalization of punya: Baseline versus heritage speakers

We investigated the use of the phonological variants of punya in the simultaneous video clips descriptions provided by baseline speakers in Ambon (n = 17) and heritage speakers in the Netherlands (n = 16). In Ambon, all the variants are attested, although the zero marking is still confined to fast and informal speech and it is mostly used by young speakers. As shown in Figure 3, a negative correlation was found between age and frequency of zero marking \( r = -0.602, p = 0.011, n = 17 \). Thus, the data presented in Figure 3 demonstrates that the last stage of grammaticalization is relatively recent in Malay spoken in Ambon.

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6. Note that in Malay there is no distinction between alienable and inalienable possession. Similarly, no difference is made between nominal and pronominal possession.

7. The etymology of empunya can be traced back to a lexical noun empu meaning ‘master’ with third person enclitic -nya indicating third person possession (e.g. ‘his/her master’) (Collins 1983; Yap 2007).
As shown in Figure 3, zero marking is more frequent in younger speakers, between the ages of 20 and 40, while its frequency decreases in elder speakers. Note that this correlation is only valid for baseline speakers (speakers of Malay in Ambon), because, as we will see below, zero marking is completely absent in heritage speakers.

In heritage Malay the last stage of grammaticalization has not yet taken place and heritage speakers prefer the phonological longer variants: *punya* and *pung*. As shown in Figure 4, the level of phonological reduction (*punya* > *pung* > *pu / ng* > zero) is more pronounced in baseline speakers than in heritage speakers.

The form *pung* is the variant equally preferred by both groups (69.1% in baseline speakers and 61.6% in heritage speakers). With respect to the long variant *punya*, a significant difference was found between the baseline group (*M* = 4.8, *SD* = 8.4) and in the heritage group (*M* = 36.8, *SD* = 32.3), (*t* (31) = −3.945, *p* < .001). The data shows that heritage speakers have a stronger preference for the phonological long variant *punya* with respect to baseline speakers. Huwaë (1992:30) reports that first generation speakers say mostly *pung* instead of *punya*, whereas younger speakers of the second generation (i.e. heritage speakers) use both forms. The most interesting result here is that the reduced forms *ng* and zero are absent in heritage speakers. Thus, while in the baseline group 11.59% of adnominal possessive constructions consist of the zero form, in heritage speakers zero marking is not attested.
We can conclude that, while the change is slowly and gradually taking place in Ambon, it is not taking place in the Netherlands since zero marking is absent in all heritage speakers.\textsuperscript{8}

4.3 Discussion on the halt of grammaticalization of *punya* in heritage Malay

This section has illustrated the stability of the form and the function of *punya* in heritage Malay. We have seen that heritage speakers tend to preserve this construction more firmly than baseline speakers and consequently the grammaticalization process is less strong in the heritage group than in the baseline group. The halt in grammaticalization is related to the reduced language input and language output patterns in the heritage community. In fact, Malay is used as the only language of communication among Moluccans in a limited set of domains (church, weddings, etc.) and in interactions with elder speakers. Veenman (1994:40) reports that the majority of second and third generation Moluccans had already moved outside the wijken (Moluccan housing concentrations) in the 1990s.

\textsuperscript{8} A similar case is discussed by Boumans (2006) for Moroccan Arabic in the Netherlands and in the homeland. The two varieties diverge significantly with respect to the use of attributive possessive strategies. In fact, while in Morocco the analytic strategy has gradually replaced the synthetic ones, in the Netherlands this shift has occurred only partially and the synthetic strategies have remained fairly frequent.
Language use is fundamental in promoting three phenomena related to grammaticalization: word frequency, word predictability and ease of articulation. The first phenomenon promoting grammaticalization is that the most frequent words tend to become shorter with use (see Principle of Least Effort in Zipf 1965, and the OT constraint ECONOMY in Lestrade 2010). Heritage speakers, however, make limited use of the language and words are therefore activated with a lower frequency than in baseline speakers.

The second phenomenon relates to the notion of predictability. Piantadosi et al. (2011) have shown that speakers tend to shorten the most predictable words, those carrying little information content. Heritage speakers, like late bilinguals, have more difficulties in predicting upcoming words in speech.

Since speakers’ expectations about upcoming words are influenced by word frequency (Piantadosi et al. 2011), heritage speakers have a disadvantage in this respect. Hence, in heritage speakers the unpredictability of upcoming words prevents phonological reduction. As pointed out by Haspelmath (2008: 47): “predictability allows shortness of coding, while nonpredictability requires explicitness of coding”.

The third factor that explains the lack of grammaticalization in the heritage group is the great value heritage speakers attach to perceptual ease. Ernestus (2000: 24) shows that elision in casual speech is related to the relative importance that speakers attach to ease of articulation over ease of perception. Speakers who favor ease of articulation tend to reduce their speech, speaker who favor ease of perception are less likely to reduce their speech. Baseline speakers tend to belong to the former category and heritage speakers tend to belong to the latter category.

To conclude, language change is related to the development of the language in communities characterized by dense networks, high contact and with large amounts of communally-shared information (Trudgill 2011). These societal factors promote word frequency and predictability. As a result, speakers are more likely to shorten forms in order to facilitate articulatory ease. These conditions, however, are lacking in the heritage Malay community and this explains why the grammaticalization process of punya proceeds at a lower rate in heritage speakers.

9. One may object that heritage speakers do not delete punya or pung because in Dutch an overt element, namely der or ’s, always intervenes between the Possessor and the Possessed (’Possessor’s Possessed’). Although this is a reasonable objection, we do not think that Dutch plays a major role here, for two reasons. Firstly, heritage speakers often produce the typical Indonesian possessive structure ’Possessed Possessor’ which is also characterized by zero marking (note that in Dutch the marker van is necessary: ’Possessed van Possessor’). This suggests that heritage speakers do not have problems with the absence of overt markers. Secondly, the Dutch possessive construction ’Possessor’s Possessed’ occurs only with kinship terms and personal nouns. In the stimuli used for the present study the occurrence of kinship terms and personal nouns was extremely limited.
5. Conclusion

We discussed three forms of stability in heritage speakers: stability in form, stability in function and stability in both form and function. We linked features of the heritage contact scenario to domains of stability. The main characteristics of the heritage contact scenario are unbalanced bilingualism (the speakers’ dominant language is Dutch) on the one hand, restricted input mostly from informal registers and limited use on the other hand. We showed that two circumstances enhance stability in form. The case study of –nya showed how a marginal form could become a more central part of the language due to transfer from Dutch. The ada case study showed that indeterminate forms pose a challenge for learners, but that this challenge does not always result in loss. If an indeterminate form is frequent and salient it can become even more pervasive in the language and thus more stable.

The case study of sortal classifiers shows that if a syntactic feature is acquired early and is obligatory, such as the use of sortal classifiers after numerals, this syntactic feature can be retained even though it is absent in the dominant language. Form variation which depends on many different features (form, animacy, etc.) requires much input. It is frequent input that speakers lack, so it is no surprise that the size of the sortal classifier inventory in heritage speakers decreases.

The case study of punya showed that grammaticalization processes can be halted in heritage languages. Grammaticalization implies the reduction in form, which is most likely in speaker-orientated speech: if a speaker knows he or she will be easily understood because the listener can predict what he or she will say, form reduction is likely. Heritage speakers are more geared towards listener ease and are less likely to reduce their speech. The absence of reduction implies non-change both in form and in function.

We can thus hypothesize what aspects make linguistics structures resistant to change in the heritage situation. In some cases the (non)-stability depends on the heritage language itself. Frequency, (in)determinacy, obligatoriness and saliency determine how and whether a structure is affected by two aspects of the heritage language contact situation: less input and less use.

In other cases stability depends on the existence of perceived similarities between the heritage language and the dominant language: if a heritage feature can be connected to a feature in the dominant language by the speaker, this form is more likely to be retained.

In general, processes of reduction (including grammaticalization) are halted in the heritage language contact scenario, because of the listener orientation in heritage speakers thus yielding another case of non-change.
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