

ARTICLE

Prepositional phrases and case in North American (heritage) Icelandic

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Abstract

The paper investigates the use of PPs, specifically prepositions and the case marking on their DP arguments, in moribund North American (heritage) Icelandic (NAMIce), using data from a map task experiment. Since prepositional phrases combine semantic properties with morpho-syntactic properties, PPs allow us to investigate the relative vulnerability of both domains at once. Our results show that while the prepositional inventory of NAMIce is not reduced as compared to Modern Icelandic, the choice of prepositions is subject to crosslinguistic influence from the dominant language English. For case, we find an increase in the use of nominative and accusative case at the expense of the dative; prepositions may take over case functions too. Our results are in line with previous research on case in heritage languages as well as studies on language change, while partially contradicting the assumption that loss is reversely related to acquisition.

Keywords: case; heritage speakers; Icelandic; prepositional phrases; semantic roles

1. Introduction

Heritage language speakers (HSs) are generally defined as speakers of a minority language in a majority language context. Our paper is concerned with a particular type of HSs, who may best be characterized as speakers of a ‘moribund’ language or variety (Putnam, Kupisch & Pascual y Cabo 2018). These individuals often represent the final or penultimate generation of speakers, typically the fourth or fifth generation since their ancestors’ immigration, who have varying degrees of proficiency in the heritage language (HL) (Seliger & Vago 1991; Schmid & Köpke 2007, 2017). The US and Canada are home to many HLs of this kind, among them moribund North American Icelandic (NAMIce). Generally, the diasporic heritage varieties of Germanic languages have been well studied (e.g. Arnbjörnsdóttir 2006, 2015; Boas 2009; Putnam 2011; Johannessen & Salmons 2015; Page & Putnam 2015; Lohndal & Westergaard 2016; Arnbjörnsdóttir, Thráinsson & Bragason 2018a; Arnbjörnsdóttir, Thráinsson & Nowenstein 2018b; Westergaard & Kupisch 2020). HSs of these varieties are typically elderly, live in rural areas and possess little if any

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literacy in the HL. As a result, research with them is challenging, often based on spontaneous data and a relatively low number of participants (Putnam et al. 2018). In spite of these difficulties compared with other types of HSs (specifically, second generation immigrants), the grammatical systems of these speakers could often be shown to be equally complex as those of other types of HSs (Putnam et al. 2018).

Previous research showing differences in the representation of heritage speakers' grammars at adult ages compared with those of monolingual baselines has led to the conclusion that some phenomena are particularly unstable and either never fully develop in early acquisition under more heterogeneous input conditions (i.e. incomplete acquisition or fossilization) (e.g. Montrul 2008) or are lost due to insufficient L1 use and transfer from the dominant language (i.e. attrition) (e.g. Polinsky 1995). In contrast to truncated acquisition or erosion as the primary culprits of perceived language loss, alternative proposals argue that elements of heritage language grammars are not easily lost over the lifespan. Rather, in production and comprehension processes for heritage bilinguals, particular elements are more difficult to access than others, leading to differential representations and feature values or feature reassembly (e.g. Putnam & Sánchez 2013, Hicks & Domínguez 2020). This view complies with the observation that steady-state heritage grammars are different from whatever is taken to be the baseline, while challenging the view that difference is tantamount to 'lack'. Rather, there might have been some functional reorganization in heritage grammars, akin to those we typically find in diachronic change.

The present paper adds to this debate with fresh data from North American Icelandic (NAMIce), a HL still spoken in some parts of Canada and the US. More specifically, we investigate Prepositional Phrases in speakers who have been living in an L2 English environment for more than 60 years. The data show that the prepositional inventory is not reduced albeit subject to crosslinguistic influence from English. At the same time, there is an ongoing shift, resulting in a decrease of dative case marking, while other case markings increase. These data once again bear witness to complexity in the grammatical systems of heritage speakers (Bousquette & Putnam 2020).

Prepositional phrases (PPs) and prepositions (Ps) are at the crossroads of morphosyntax and semantics. Ps are a limited class of words, but with a wide range of meanings and uses (Zwarts & Gärdenfors 2016). They are often considered a hybrid word category whose members can be on opposite scales on a continuum with lexical elements as one extreme and functional elements as the other extreme (e.g. Rauh 1990, 1991, 1997; Gabriel 2002). The semantics of Ps is crucial for the expression of location or direction in space and time. Moreover, Ps commonly assign case in languages that mark those distinctions. Therefore, Ps allow us to investigate the relative vulnerability of the syntax–morphology and the syntax–semantics interface.

From a theoretical perspective, investigating the relative stability/vulnerability of specific linguistic phenomena might tell us which areas of languages are most likely to be affected by reduced language exposure. Previous research has established that syntax tends to be better preserved than phenomena at the internal and external interfaces (e.g. Benmamoun, Montrul & Polinsky 2013, Polinsky 2018, Polinsky & Scontras 2020). Relatedly, Tsimpli (2014) has proposed implications for bilingual development. Early phenomena are core, parametric, narrowly syntactic, and sensitive to age of onset effects. Late phenomena, by contrast, involve syntax- and language-external resources, i.e. the contribution of semantics, pragmatics and lexical knowledge. They map more readily to the notion of interfaces and are subject to input

rather than age of onset effects. Few studies so far have compared different domains based on the same data set to explore their relative vulnerability under reduced input. In this respect, PPs are a good testing ground, because they allow us to investigate interactions between syntax and morphology and those between syntax and semantics at the same time. With syntax being resilient, we do not expect case marking as such to disappear. However, the exponents of syntactic case marking, i.e. functional case morphemes, sit at the syntax–morphology interface, where they could be affected by crosslinguistic influence. Similarly, while we do not expect prepositions to lose their functions as assigners of semantic roles, we can expect a redistribution of roles due to external influences. Thus, case marking (syntax–morphology) and selection of thematic roles (syntax–semantics) are potentially vulnerable, possibly in different ways and to different degrees. This is what we are going to explore.

Previous studies have reported divergences between heritage grammars and monolingual grammars in nominal morphology more generally, but especially with case (Arnbjörnsdóttir 2006, Arnbjörnsdóttir & Thráinsson 2018, Björnsdóttir 2018 for NAMIce; see Benmamoun et al. 2013 for a general overview). Many of the observed patterns of case reduction happen when a case-marking language is in contact with English; see Polinsky (1995) for Russian; Montrul, Bhat & Bhatia (2012) for Hindi; Montrul, Bhat & Girju (2015) for a comparison of Spanish, Hindi and Romanian. For American Russian, Polinsky (1995, 2006) has shown a general decline in the number of case forms, from six to two cases. The restructuring of morphological case has also been extensively studied in diasporic varieties of German, including varieties spoken in Eastern Europe, Brazil, Australia, South Africa, and across North America (see Yager et al. 2015 for an overview). In these varieties, changes in dative case marking are most typical. Often one can identify some sort of cause for restructuring. For example, the weakening of case systems may well be related to the fact that case assignment is dependent on multiple exponence, and exponence may vary between HSs and homeland speakers due to differences in input and intake. Along these lines, Yager et al. (2015) have proposed that changes in morphological case marking should not simply be viewed as a loss of inflectional morphology but rather in terms of the emergence of new semantic–morpho-syntactic mapping strategies. While at first sight, HSs seem to have lost the ability of using morphological case marking, a close analysis suggests that they are developing patterns of Differential Object Marking (DOM), following a systematic hierarchy where case tends to be marked on animate and definite arguments over inanimate and indefinite ones. This latter account implies that heritage bilingual grammars are complete grammatical systems that show structural innovations that should be understood in terms of reanalysis of structural systems (see also Putnam & Sánchez 2013) rather than acquisition failure or attrition. An interpretation along these lines has also been offered for NAMIce (Björnsdóttir 2018), and the present paper follows this line of thinking.

2. Background

2.1 Prepositions and case in Icelandic

Modern Icelandic as spoken in Iceland (ModIce) has a rich prepositional inventory, consisting of simple and compound PPs, none of which inflect. They cover an array of

semantic meanings, including spatial and temporal relations (see e.g. Thráinsson 2005:107–123). PPs have the following main syntactic functions: predicates in copular constructions, as illustrated in (1) below, objects of prepositional verbs, as in (2), or nouns, as in (3), and modifiers (syntactic adjuncts), as in (4); Ps in bold.

- (1) *PP as predicates in copular construction*

Kirkja-n er **á** horn-i-nu.
church-NOM.DEF is on corner-DAT-DEF.DAT
 ‘The church is on the corner.’

- (2) *PP as object of prepositional verb*

Ég er að leita **að** Landakirkj-u.
I am to search for Landakirkja-DAT
 ‘I am looking for Landakirkja.’

- (3) *PP as object of noun*

Lundasafn-ið er á horn-i-nu **á** Lambastræti og ...
Lundasafn-DEF.NOM is on corner-DAT-DEF.DAT on Lambastræti-DAT and ...
 ‘The Lundasafn is on the corner of Lambastræti and ...’

- (4) *PP as syntactic adjunct (spatial modifier)*

Finnurðu Lundasafn-ið **á** kort-i-nu?
find.you Lundasafn.ACC-DEF.ACC on map-DAT-DEF.DAT
 ‘Do you find the Lundasafn on the map?’

Ps in Icelandic typically select NPs, which they govern and assign case to. Icelandic has bound definite articles, which attach to the right edge of a noun that is already inflected for case. The bound definite article exhibits gender, number and case. For illustration, see the paradigm for *garður* ‘garden MASC’ (stem: *garð-*) in Table 1.¹

ModÍce distinguishes four cases: nominative (NOM), accusative (ACC), dative (DAT) and genitive (GEN) (Einarsson 1973:32). Ps taking NP complements govern ACC, DAT and GEN case (for details see e.g. Einarsson 1973:106f., 109f., 113; Thráinsson 2005:113–120), shown in (5)–(7) (relevant Ps in bold).

- (5) *P governing ACC*

þú labbar **niður** Nínugöt-u.
you walk down Ninugata-ACC
 ‘You walk down Nínugata.’

- (6) *P governing DAT*

Ég fer **frá** upphafsstað-num norður.
I go from point.of.departure.DAT-DEF.DAT to.north
 ‘I go north from the point of departure.’

- (7) *P governing GEN*

Ég þarf að koma mér **til** myndastytt-u-nnar.
I must to come me to statue-GEN-DEF.GEN
 ‘I have to get to the statue.’

Table 1. Inflectional paradigm of *garður* ‘garden MASC’.

Case	Singular		Plural	
	Indefinite	Definite	Indefinite	Definite
NOM	garð-ur	garð-ur-inn	garð-ar	garð-ar-nir
ACC	garð	garð-inn	garð-a	garð-a-na
DAT	garð-i	garð-i-num	görð-um	görð-u-num
GEN	garð-s	garð-s-ins	garð-a	garð-a-nna

(8) *P* governing ACC (*a*; directional), *P* selecting DAT (*b*; stative)

- a. Ég fer í garð-inn.
I go in garden.ACC-DEF.ACC
 ‘I go into the garden.’
- b. Ég er í garð-i-num.
I am in garden-DAT-DEF.DAT
 ‘I am in the garden.’

Some Ps may govern more than one case, notably ACC and DAT, or ACC and GEN, often depending on the meaning in a given context (e.g. Thráinsson 2005:119). For example, the spatial prepositions *á* ‘on, onto’, *í* ‘in, into’, *undir* ‘under’, and *yfir* ‘over, above’ select ACC when expressing movement in a certain direction (directional P), but DAT when not expressing directional movement (stative P). This is illustrated for *í* ‘in, into’ in (8). Table A2 in the appendix provides an overview of Ps relevant for the present study, along with their ModIce meanings, the cases they govern and examples of their use.

2.2 Prepositions and case in the acquisition of Icelandic as a first language

It is generally assumed that properties that are acquired early are more resistant to processes such as attrition or crosslinguistic influence (CLI) from another language than late-acquired properties (e.g. Polinsky & Scontras 2020). This idea is compatible with the Regression Hypothesis (Jakobson 1941), which relates order of acquisition to order of language loss. For example, in a study of 45 first-generation Dutch emigrants in Anglophone Canada, Keijzer (2007) has revealed mirror symmetries between attriters and acquirers, thus providing support for the regression hypothesis. In the case of early bilingual acquisition, an additional factor is that the HL normally develops under less pressure from the dominant language until speakers start entering school. In a recent proposal, Tsimplici (2014) has considered timing differences in the monolingual development of features and structures, distinguishing between early and late acquired phenomena. This distinction reflects differences in the role of narrow syntax: Early acquired phenomena typically represent phenomena in narrow syntax that are associated with syntactic parameters and autonomous, i.e. independent of other linguistic or extra-linguistic domains. Late acquired phenomena, by contrast,

represent properties that link syntax with syntax-external and language-external domains. These timing differences have implications for bilingual development. Those phenomena that emerge early in monolinguals are sensitive to age of onset effects in bilinguals. Late phenomena, on the other hand, involve the contribution of semantics, pragmatics and lexical knowledge and as such they map more readily to the notion of interfaces. In bilingual acquisition, late phenomena are subject to input rather than age of onset effects. Thus, a first language acquisition perspective can help us understand the relative vulnerability of different linguistic properties in language contact situations.

In the monolingual acquisition of Icelandic, inflectional case marking is observed before the use of Ps, and production performance is generally better with bound functional elements (e.g. case suffixes) than with free ones (e.g. Ps) (Thordardóttir & Weismer 1998, Nicholas 2011). Monolingual children acquiring Icelandic use ACC and DAT inflectional case as early as with a mean length of utterance (MLU) of 1.1 (age 15 months), and GEN – while rarer – from 15 months onwards (Thordardóttir & Weismer 1998). Thus, inflectional case marking in Icelandic is acquired before school entry, i.e. before the speakers of the present study were intensively exposed to English. The situation for Ps is slightly different. Some local Ps are present at age 3;11 (years;months) and their use increases with growing vocabulary size (Nicholas 2011). In Sigurjónsdóttir's (1986) study, nine out of 10 children at age 5;0–5;11 used some Ps describing local relations correctly (*inn í* 'in into', *í* 'in', *ofan á* 'up upon', *á* 'on', *upp á* 'up on', *undir* 'under', *við hliðina (á)/hjá* 'next to'). However, the use of the Ps *fyrir ofan* 'over', *yfir* 'over', *ofan við*, *ofan* 'above', which started at age 4;0–4;11, had not been acquired by all children of age group 5;0–5;11. This corresponds to the age when the speakers of the present study entered school and came into contact with English. Thus, based on what is known about the acquisition of case and Ps in Icelandic, we would expect both case categories and case forms to be robust because they are early acquired, while at least some prepositions are late acquired and potentially more affected by exposure to the dominant language English.

Given the assumption that early acquired properties are robust, the early acquisition of case in Icelandic appears to be somewhat at odds with earlier research on case marking in heritage speakers. Indeed, for NAMIce, Arnbjörnsdóttir (2006:100) observed that '[c]ase assignment by prepositions has undergone some attrition' and that the 'most consistent regularity is that proper names of people and places are always in the nominative case, regardless of the preposition that precedes them',² while in ModIce proper nouns do inflect. Differences in the case forms following prepositions between NAMIce and ModIce have also been observed by Björnsdóttir (2018), who studied 152 letters written by a female speaker of NAMIce, Jóna, a second-generation emigrant to Canada, between 1908 and 1980. As a child, Jóna had fully acquired Icelandic. According to Björnsdóttir (p.c.), she was highly proficient in Icelandic, despite receiving no formal education in Icelandic. In particular, Björnsdóttir observes that dative increasingly replaces genitive and that dative is used with meanings that it does not have in ModIce, also replacing the accusative. As an anonymous reviewer remarks, and we agree, the situation described here for NAMIce may be one of differences in the realization of exponency. In other words, the exponents of the individual cases are expanded

to new semantic domains. If correct, then this suggests that we are observing extension of some forms rather than a full-scale reduction of the case system.

Regarding prepositional meaning in NAMIce, Arnbjörnsdóttir (2006:100) observes that ‘English meaning’ may be transferred onto the Icelandic prepositional form. For example, the ModIce preposition *fyrir* ‘in front of, on account of, for’ may take over functions of the English preposition ‘for’ which ModIce *fyrir* does not have, including ModIce *í* and *um* used in contexts relating to temporal duration (e.g. NAMIce: *ég lenti á spítala fyrir tvær nætur*; ModIce: *ég lenti á spítala í tvær nætur* ‘I was in hospital for two nights’; NAMIce: *þegar ég var búin með University þá fór ég til Evrópu fyrir tíma*; ModIce: *þegar ég var búin með University þá fór ég til Evrópu um tíma* ‘When I had finished university then I went to Europe for a while’; Arnbjörnsdóttir 2006:103).³ Arnbjörnsdóttir (2006:100) further notes that the NAMIce preposition *af* ‘off, of, from’ functions like the English preposition ‘of’. Finally, two or more ModIce Ps ‘collapse . . . into one’ in NAMIce (Arnbjörnsdóttir 2006:100). Arnbjörnsdóttir (2006:100–103) provides several examples of the use of Ps in NAMIce and the case they select, yet without identifying a systematic pattern or change in case assignment. For example, *af* ‘off, of, from’, which selects DAT in ModIce, is used with NOM and NOM/ACC in her examples. *P til* ‘to’, selecting GEN in ModIce, combines with DAT in her NAMIce data, and *yfir* ‘over’ occurs with DAT in NAMIce in cases where it would select ACC in ModIce. Björnsdóttir (2018), too, mentions innovative uses of Ps in the letters of her speaker.

In summary, while case is acquired early in Icelandic, i.e. ACC and DAT as early as aged 15 months, GEN about the same age, the acquisition of Ps is a protracted process, which is still ongoing after the age of five. Previous research on NAMIce has shown that the speakers may differ from baseline speakers in Iceland by means of their case-marking strategies (Arnbjörnsdóttir 2006, Björnsdóttir 2018), and that they also show transfer from English in their use of Ps.

Before moving on, let us stress once more that present-day speakers of ModIce are of course not the ideal baseline for the NAMIce speakers that migrated to North America several generations ago, because ModIce has also changed over the generations, and has done so under the impact of factors other than those that have potentially affected NAMIce. Nevertheless, in the absence of more appropriate baseline data and as long as we keep this caveat in mind, we believe that the comparison can provide valuable insights into the nature of language change.

2.3 Hypotheses

The present study investigates the use of Ps and their case assignment by speakers of NAMIce as compared to ModIce, and the implications for the relative vulnerability of semantic and morpho-syntactic properties of Ps in HSs. Based on the background provided above our hypotheses (Hs) are as follows:

- (9) H1: The prepositional inventory of NAMIce exhibits changes in use as compared to ModIce and there is influence from English.
- H2: Case marking by Ps is subject to restructuring. In particular, we observe changes with DAT marking.

H1 is based on the fact that some Ps are acquired late in Icelandic, coinciding with the age at which our speakers had been exposed to English for the first time, i.e. upon school entry at the age of five or six years. As outlined above, late acquired phenomena are more affected by reduced input than early-acquired phenomena (Tsimpli 2014). Moreover, previous work by Arnbjörnsdóttir (2006) has already shown potential influence from English on the use of NAMIce Ps; see also Björnsdóttir (2018). Given Arnbjörnsdóttir's (2006) observations, we expect in particular that NAMIce *fyrir* and *af* adapt the meaning of English 'for' and 'of', respectively.

As to H2, following the rationale that early-acquired properties are generally less affected by reduced input (Tsimpli 2014), Icelandic case should arguably be robust. However, we know from previous work on other Germanic heritage languages that case marking, especially for the dative, can undergo changes with respect to homeland speakers (Yager et al. 2015). Moreover, previous work on NAMIce already observed differences in case marking between NAMIce and ModIce (Arnbjörnsdóttir 2006, Arnbjörnsdóttir & Thráinsson 2018, Björnsdóttir 2018). Since all NAMIce speakers in the present study were monolingual speakers of Icelandic until around age six when they started school and continued to use Icelandic after the onset of acquisition of English (see Section 3.1 below), we assume that they had already acquired case when intensive contact with English started. If nonetheless deviances between NAMIce and ModIce are observed, these are likely to result from reanalysis rather than incomplete acquisition or attrition. But how can we identify these conceptually different scenarios in the absence of longitudinal data? We conceive of an 'incompletely acquired' or 'attrited' grammar as a grammar that lacks functionally relevant distinctions. The reanalyzed grammar, by contrast, features new ways of expressing functions that were also relevant in the 'old' grammar. While we expect the 'new' grammar to represent a (relatively) stable system, we should not be surprised to find instances of variation because (i) variation occurs naturally, including in monolingual speech, and (ii) restructuring is likely to be preceded by a period of variation.

3. Data and analysis

The data used here are taken from the Icelandic map task corpus collected in Iceland and in Manitoba, Canada, in 2013–2014 (Dehé 2015, 2018).

3.1 Speakers

The present analysis is based on data from 12 speakers of NAMIce (six male, six female), as well as 22 speakers of ModIce for comparison.

The NAMIce speakers were recorded in three locations in Manitoba, Canada: Winnipeg (two speakers; speaker identifiers CW01, CW08), Gimli (on Lake Winnipeg; eight speakers; CG01 through CG08) and Lundar (Interlake area; two speakers; CL02, CL03). All 12 speakers were born and raised in Manitoba. They were sequential bilinguals, as they grew up with L1 Icelandic until age five or six years (school entry) when English started to become their dominant language.⁴

All speakers continued to speak Icelandic at home until at least age 16. The speakers were between 64 and 89 years of age at the time of recording.

We further selected 12 ModIce speakers (ModIce1; five male, seven female) aged 64+ to match the age range of the NAMIce group, and 10 ModIce speakers (ModIce2; five male, five female) aged 19–34 to address possible effects of language change and growing influence from English on ModIce (as documented in Kvaran 2004, Thórarinsdóttir 2011, Rehm & Uszkoreit 2012, Rögnvaldsson 2018, Sigurjónsdóttir & Rögnvaldsson 2018). All ModIce speakers were from the north of Iceland (H: Húsavík, Ó: Ólafsfjörður), a region which is the origin of many immigrants to North America (Arnbjörnsdóttir 2006; see also Dehé 2018).

3.2 Method

Map tasks elicit quasi-spontaneous speech in an interactive discourse; they have the advantage that the experimenter has some control over the linguistic materials used by the participants. Another advantage, concerning the topic of this paper, is that it elicits a relatively high number of PPs. The maps used in the present study differ from previous map task experiments in several ways, one of them being that the target words were written onto the maps. The target words were landmarks (10) and street names (11).

- (10) *garður* ‘garden’, *verslun* ‘shop’, *skóli* ‘school’, *kirkja* ‘church’, *safn* ‘museum’, *myndastytta* ‘statue’, *búð* ‘shop’
- (11) *Melagata*, *Múlasíða*, *Mílugata*, *Melastræti*, *Munagata*, *Nínugata*, *Mímisgata*, *Malarvegurinn*, *Lómastræti*, *Málastræti*, *Málmateigur*, *Mílnagata*, *Myndastræti*, *Moldargata*, etc.

The participants were given time to familiarize themselves with these written target words before the start of their experimental session. They were tested in pairs, i.e. the data are from map task conversations between participants.

All map task dialogues were recorded using two Microtrack II (M-Audio) recorders and two Rode NT-5 condenser microphones. The dialogues were between 15 and 59 minutes long (NAMIce dialogues between 23 and 50 minutes). All map task dialogues were orthographically transcribed by native speakers of ModIce. If a transcriber judged a NAMIce utterance as deviant from a well-formed ModIce equivalent (e.g. for reasons of lexical choice, word order, or case), they added the closest well-formed ModIce version to the NAMIce transcription.

3.3 NAMIce: Data treatment

All NAMIce transcriptions were manually searched for contexts in which Ps were produced as well as those in which they were omitted although ModIce would have required one (according to the Icelandic transcribers). The PPs had the syntactic functions given in (1)–(4) in Section 2 above. Overall, the 12 speakers produced 546 (environments for) Ps, most of them spatial (due to the nature of the map task). They were the Ps listed in (12) in the order of their frequency.

Table 2. Transcriptions: Examples from a Gimli speaker (CG03).

Speaker:	CG03	CG03	CG03
NAMlce utterance	Ég ætla að fara í Landakirkjuna. 'I intend to go to the Landakirkja.' ^a	Er það á hornið? 'Is that on the corner?'	Og þá kemurðu loksins til Málaskóli. 'And then you finally come to Málaskóli.'
Modlce equivalent	<i>As above</i>	Er það á horn- inu ?	Og þá kemurðu loksins að Málaskóla.
NAMlce P	<i>í</i> (directional)	<i>á</i> (stative)	<i>til</i>
NAMlce form of NP	ACC-def	NOM/ACC-def	NOM-indef
Modlce P	<i>As above</i>	<i>As above</i>	að
Modlce form of NP	<i>As above</i>	DAT-def	GEN-indef (selected by <i>til</i>), or DAT-indef (selected by <i>að</i>)
Classification	Overall target-like	Only P target-like	Replacement

^aA reviewer notes that 'the definite article on *Landakirkja* is rather unnatural in [Modlce]'; without definite article the Modlce sentence will be *Ég ætla að fara í Landakirkju*.

(12) *Ps occurring in the data set (N = 546)*⁵

299 á 'on, onto, to' (252 non-directional, 40 directional, 7 others); **59 til** 'to, towards'; **37 af** 'off, of'; **32 hjá** 'at, with'; **29 í** 'in, into' (23 non-directional, 6 directional); **16 fyrir** 'on account of, for'; **10 að** 'to, towards'; **8 frá** 'from'; **11 á milli** 'between' (including deviant forms); **5 yfir** 'over' (4 directional); **4 upp** 'up'; **3 með** 'with'; **2 framhjá** 'past'; **2 um** 'about'; **2 út á** 'out on'; **1 eftir** 'along'; **1 við** 'with'; **1 úr** 'out (from)'; **1 á móti** 'opposite'; and **23** contexts for prepositions but none realized

For each of the 546 instances, the P as well as the morphological form (case and definiteness) of the following NP were coded, both as produced by the NAMlce speakers and as required in Modlce according to the transcribers (see Table 2 for examples). For ease of presentation, we will use the term 'target-like' when a form corresponds with what is expected according to Modlce norms and 'target-deviant' when a form does not correspond with what is expected in Modlce.⁶ The codings include lexical and morpho-syntactic features of prepositional use. The 546 occurrences were then classified according to the six categories in (13), which relate to the use of NAMlce Ps and case forms as compared to Modlce. They are illustrated in (14)–(18).

(13) *Categories*

- Overall target-like: Both P and the morphological form of the following NP conform to Modlce.
- Only P target-like: The P is as required in Modlce but the morphological form of the following NP is deviant.
- Replacement of P: The NAMlce utterance contains a P that diverges from the one expected in Modlce. (The accompanying case form may also diverge from Modlce.)
- Omission of P: No P used, although P is required in Modlce.

- e. Addition of P: P used in NAmIce, although no P is required in ModIce.
- f. Other.

(14) *Sorting category (13a): Overall target-like*

Já hún er þarna á horn-i-nu. Landakirkj-a-n. (CG01)
yes she is there on corner-DAT-DEF.DAT Landakirkja-NOM-DEF.NOM
 ‘Yes, it is there on the corner, the Landakirkja.’

(15) *Sorting category (13b): Only P target-like*

- a. Já ég er á Mangavegur. (CL01)
yes I am on Mangavegur.NOM
- b. Já ég er á Mangaveg-i (ModIce)
yes I am on Mangavegur-DAT
 ‘Yes, I am on Mangavegur.’

(16) *Sorting category (13c): Replacement of P*

- a. Tu⁷ tarft að fara frá Nínugata **til**⁸ Molnagata. (CG04)
you need to go from Nínugata.NOM to Molnagata.NOM
- b. Þú þarft að fara frá Nínugöt-u **að** Moldargöt-u. (ModIce)
you need to go from Nínugata-DAT to Moldargata-DAT
 ‘You have to go from Nínugata to Moldargata.’

(17) *Sorting category (13d): Omission of P*

- a. Ég vantar að fara Melabúð-in. (CW08)
I want to go Melabúð-NOM.DEF
- b. Ég þarf að fara í Melabúð-ina. (ModIce)
I must to go (in)to Melabúð-ACC.DEF
 ‘I want to/must go to Melabúð.’

(18) *Sorting category (13e): Addition of P⁹*

- a. Þú mátt barasta labba fyrir þrjár göt-ur vestur. (CG06)
you may only walk for three road-NOM/ACC.PL to.west
- b. Þú mátt bara labba þrjár götur í vestur. (ModIce)
you may only walk three roads to west
 ‘You may only walk three roads to the west.’

4. Results

4.1 NAmIce prepositions

For a first overview, the numbers of occurrences of the categories in (13) are presented in Figure 1, showing target-like and deviant use of Ps and case endings.

Categories (13a) and (13b) add up to 61% (N = 333) target-like, which means Ps are used in the same way as in ModIce in 61% of all cases. By contrast, only 22% of NPs were realized with a case form that corresponds with ModIce (N = 102 in category (13a); N = 26 in category (13c)). All speakers produce PPs and all speakers but one (CL02, who has fewest productions overall) produce PPs that are target-like in ModIce. Moreover, whether or not speakers produce PPs that correspond with

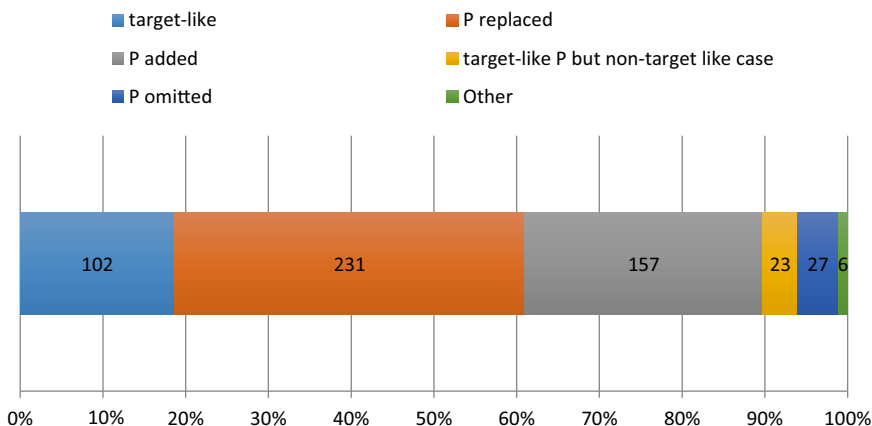


Figure 1. Distribution of PPs according to sorting categories in %; overall N=546 (100%).

ModIce forms is not a matter of place of recording¹⁰ (see Table A3 in the appendix for distribution by speaker). The example in (19) shows that one and the same utterance may contain forms that are target-like in ModIce or target-deviant (here: target-like PP *að Melabúðinni* followed by *Lindagata* uninflected for case).

- (19) a. *Lindagata gengur að Melabúð-inni. Finnurðu Lindagata?* (CG01)
Lindagata goes to Melabúð-DEF.DAT find.you Lindagata.NOM
 b. *Lindagata gengur að Melabúð-inni. Finnurðu Lindagötu?* (ModIce)
Lindagata goes to Melabúð-DEF.DAT find.you Lindagata.ACC
 ‘Lindagata goes towards the Melabúð. Do you find Lindagata?’

When the P was target-like but case on the NP was not (N = 231), participants used mostly case forms that exist but deviate in use from those required in ModIce (N = 217). Non-existent forms (N = 8) or incomplete forms (N = 6) were the exception. In the case of P replacements (N = 157), the by far most frequent scenario was a case form that exists but deviates from that required in ModIce (N = 123). It was less common for case on the NP to be target-like (N = 26) or non-existent (N = 8).

The results according to syntactic functions are summarized in Figure 2 (see also Table A4 in the appendix). They show that PPs in the corpus function most often as predicates (N = 233, 42.7%), followed by complement to V (N = 167, 30.6%), complement to N (N = 73, 13.4%), and adjuncts (N = 56, 10.3%).

Examples are given in (20)–(23).

- (20) *PP as predicate in copular construction*
 og *Lindakirkja-n* er þar á horn-i-ð. (CG03)
 and *Lindakirkja.NOM-NOM.DEF* is there on corner.NOM-NOM/ACC.DEF
 og *Lindakirkja-n* er þar á horn-i-nu. (ModIce)
 and *Lindakirkja.NOM-NOM.DEF* is there on corner-DAT-DAT.DEF
 ‘And the Lindakirkja is there on the corner.’

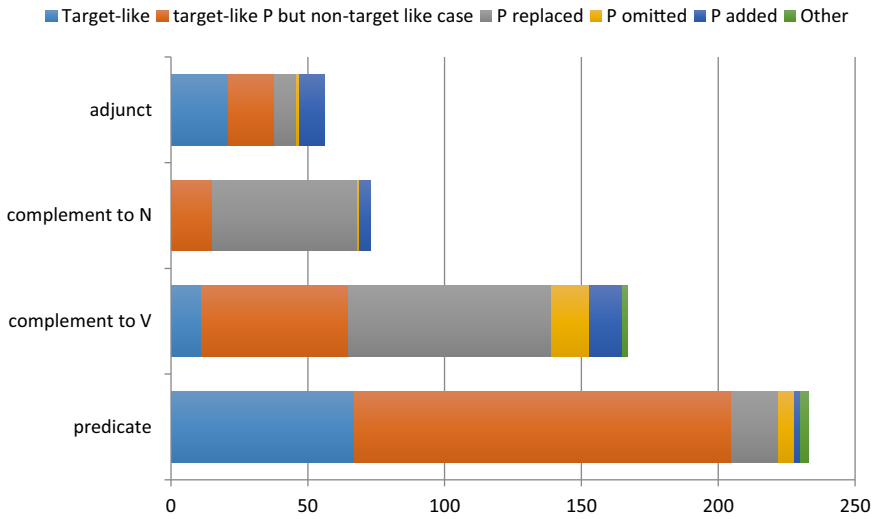


Figure 2. Distribution of PPs (absolute numbers) according to sorting categories by syntactic function. See also Table A4 in the appendix.

(21) *PP as complement to V*

Þú er að leita að Landakirkja? (CW08)

you are to.search for Landakirkja.NOM

Þú er að leita að Landakirkj-u? (ModIce)

you are to.search for Landakirkja-DAT

‘You are looking for Landakirkja?’

(22) *PP as complement to N*

Hún er á horn-i-nu af Mundagæta, Moldargæta.¹¹ (CG06)

she is on corner-DAT-DEF.DAT of Mundagata.NOM Moldargata.NOM

Hún er á horn-i-nu af Mundagöt-u, Moldargöt-u. (ModIce)

she is on corner-DAT-DEF.DAT of Mundagata-DAT Moldargata-DAT

‘It is on the corner of Mundagata (and) Moldargata.’

(23) *PP as adjunct*

Já, finnurðu Lundasafn-ið á kort-i-nu? (target-like) (CG01)

yes find.you Lundasafn.ACC-DEF.ACC on map-DAT-DEF.DAT

‘Yes, do you find the Lundasafn on the map?’

Within predicates, the P is target-like in 88% of the cases (N = 205 of 233), but the morphological form of the NP deviates more often than not (e.g. (20): DAT/ACC *hornið* realized, DAT *horninu* expected; (21): NOM *Landakirkja* realized, DAT *Landakirkju* expected). For PPs used as complements to a verb or a noun, as in (22), the predicted P is most often replaced by another P. Adjuncts, as in (23), have the highest percentage (37.5%, N = 21) of overall target-like forms.

Relating to our hypotheses, we zoom in on the results for categories ‘only P target-like’ (see (13b) above) and ‘replacement of P’ (see (13c) above). The former

specifically relates to changes in case-inflectional morphology (H2), while (13c) relates to the prepositional inventory (H1).

We begin with category (13c), replacement of P (H1). Prepositions were replaced by another prepositional form 28.8% of the time (N = 157/546); see Figure 1 (and Table A3 in the appendix). The most frequent preposition in the corpus is non-directional *á*. There are 308 environments for non-directional *á* in the data set, 240 (78%) of which were produced as expected in ModIce. Of the 68 non-target-like cases, 61 were replaced by another P, mostly by *af* (N = 31) and *hjá* (N = 24). All 31 replacements by *af* ‘of’ occurred in the context *á horninu á* ‘on the corner of’; lit.: ‘on the corner on’ and 21 of 24 occurrences of *hjá* occurred in the same context. Examples are given in (24).

(24) *Replacement of non-directional á*

- a. Ókei, það er á horn-ið **af** Málmastræti og Lambastræti. (CG08)
okay that is on corner-DEF.NOM/ACC of Málmastræti and Lambastræti
 Ókei, það er á horn-i-nu **á** Málmastræti og Lambastræti (ModIce)
okay that is on corner-DAT.DEF.DAT on Málmastræti and Lambastræti
 ‘Okay, that is on the corner of Málmastræti and Lambastræti.’
- b. Ókei, Lindakirkja-n er á horn-i-nu **hjá** Lómastræti og Mímisgata. (CW01)
Okay Lindakirkja-DEF.NOM is on corner-DAT-DEF.DAT with Lómastræti and Mímisgata
 Ókei, Lindakirkja-n er á horn-i-nu **á** Lómastræti og Mímisgötu. (ModIce)
Okay Lindakirkja-DEF.NOM is on corner-DAT-DEF.DAT on Lómastræti and Mímisgata
 ‘Okay, the Lindakirkja is on the corner of Lómastræti and Mímisgata.’

Another interesting case of replacements is that of directional prepositions. Of the 546 environments for prepositions in the NAMIce corpus, 124 (23%) are environments for directional *að*, *á*, or *í*; see Figure 3. Of these, more than half (56%) were replaced by a preposition the transcriber judged as deviant from ModIce. Most of the time, *að*, *á*, and *í* were replaced by the Icelandic preposition *til* ‘to, towards’, which suggests influence from English (see discussion in Section 5 below). Examples are given in (25).

(25) *Replacements of directional P¹²*

- a. Tu tarft að fara frá Nínugata **til** Molnagata. (CG04)
 Þú þarft að fara frá Nínugötu að Molnagötu. (ModIce)
 ‘You have to go from Nínugata to Molnagata.’
- b. Mig langar að fara **til** Lundasafnið. (CG05)
 Mig langar að fara á Lundasafnið. (ModIce)
 ‘I want to go to the Lundasafn.’
- c. Við skulum fara **til** Lindakirkju. (CL03)
 Við skulum fara í Lindakirkju. (ModIce)
 ‘We should go to Lindakirkja.’

4.2 NAMIce case marking

With respect to case marking (category (13b) above; H2), recall that overall, only 22% of relevant NPs were produced with a case form corresponding to the expected ModIce form. We focus on the subcategory where P as the case assigner is target-

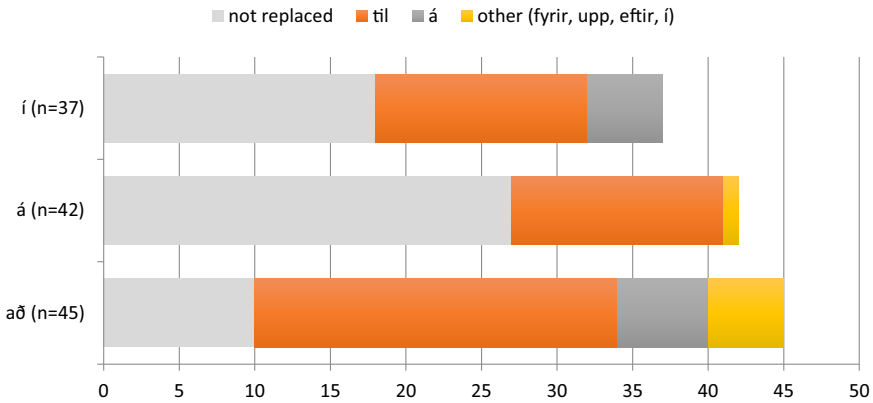


Figure 3. Directional prepositions in the corpus (*að*, *á*, *í*).

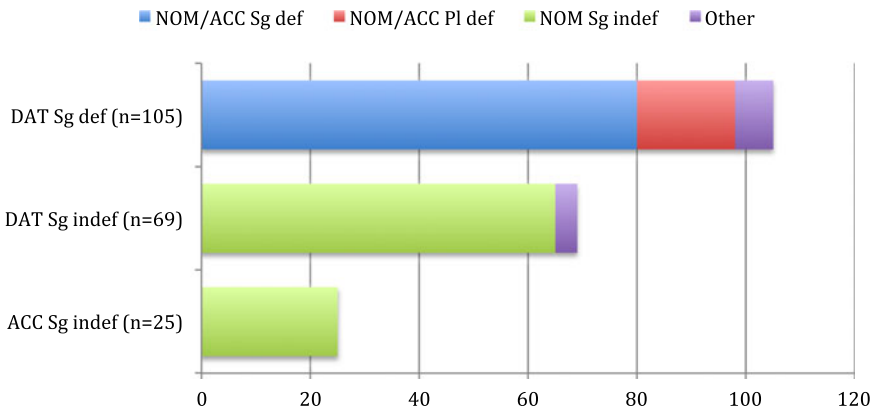


Figure 4. Target-deviant case assignment (total N=199; excluding 18 cases of case form expected ‘other’; see Table A5 in the appendix).

like, and the case form used in NAMIce exists in ModIce but a different form would be expected in ModIce (see (15)). The overall frequency of this subcategory was N = 217 (40%). A more detailed analysis is provided in Figure 4, which lists the expected cases from top to bottom and the actually realized cases from left to right. The most noticeable result concerns DAT case. The corpus contains 379 cases where the ModIce P would select DAT. Of these, almost half (46%) were realized differently in NAMIce. Most strikingly, DAT is frequently replaced by NOM case forms or by case forms that are ambiguous between NOM and ACC case due to case syncretism, e.g. in the feminine and neuter paradigms (see Figure 4, Appendix Table A5 and examples (26a, b)). There were comparatively few replacements (N = 18) of DAT Sg by NOM/ACC plural forms in NAMIce. These were 17 cases of *hornin* instead of *horninu* ‘the corner DAT’, and one case of *kortin* instead of *kortinu* ‘the map DAT’; see (26c, d), for instance, which require ACC in ModIce but are realized with NOM in NAMIce.

- (26) *DAT replaced by NOM or NOM/ACC*
- a. Er kirkja-n á horn-ið? (CG03)
is church.NOM-NOM.DEF on corner-DEF.NOM/ACC
 Er kirkja-n á horn-i-nu. (ModIce)
is church.NOM-NOM.DEF on corner-DAT-DEF.DAT
 ‘Is the church on the corner?’
- b. Ég er á Mundagata. (CW08)
I am on Mundagata.NOM
 Ég er á Mundagöt-u. (ModIce)
I am on Mundagata-DAT
 ‘I am on Mundagata.’
- c. Og það er á horn-in þarna. (CW08)
and that is on corner-DEF.NOM/ACC.PL there
 Og það er á horn-i-nu þarna. (ModIce)
and that is on corner-DAT.SG-DEF.DAT.SG there
 ‘And that is on the corner there.’
- d. Þú kemur út og fer á Mímisgata.¹³ (CG05)
you come out and go onto Mímisgata.NOM
 Þú kemur út og ferð á Mímisgötu. (ModIce)
you come out and go onto Mímisgata.ACC
 ‘You come out (of that road) and walk onto Mímisgata.’

Recall that case in Icelandic distinguishes between directional vs. non-directional (or: stative) uses of the same P (compare *í kirkjuna* (ACC) ‘into the church’ vs. *í kirkjunni* (DAT) ‘in the church’). If both ACC and DAT are replaced by NOM, the morphological marking of the semantic difference disappears. We therefore take a closer look at the most frequent preposition in the corpus, *á*, which can be used as either a directional preposition selecting ACC case or a non-directional preposition selecting DAT case. As Table 3 shows, NOM or NOM/ACC replaces both DAT and ACC in more than half of the cases, obscuring the semantic difference between the two uses.

Regarding structural innovation, we observe six cases of *af* taking over the function of genitive case. One example is given in (27a). In ModIce, the preposition *á milli* ‘between’ selects genitive (see (27b) below). In the NAMIce data, GEN is reclining (see also Björnsdóttir 2018), and in this context it is replaced by *af* (27a), in analogy to English ‘in the middle of’. (Note that the P *á milli* occurs in different forms in the NAMIce data, one of them being *í miðjan*.)

- (27) *P af taking over GEN function*
- a. Alveg í miðja-n af Múlasíða og Mánagata. (CG04)
Right in middle-NOM.DEF of Múlasíða.NOM and Mánagata.NOM
- b. Alveg á milli Múlasíð-u og Mánagöt-u. (ModIce)
Right between Múlasíða and Mánagata
 ‘Right in the middle of/between Múlasíða and Mánagata.’

Concerning potential influence from English, we add that of eight cases of ‘search for’ (ModIce *leita að*) in the NAMIce data set, five were realized as *leita að* and three as *leita fyrir*.

Table 3. Directional vs. non-directional P.

Preposition	P selects	Deviant	NAMlce: NOM or NOM/ACC	NAMlce: ACC
á (non-directional) (N=252)	DAT	164 (65%)	157 (96%)	3
á (directional) (N=40)	ACC	21 (53%)	21 (100%)	n/a

In summary, what we observe is an instance of extension of the P-exponents to different semantic domains. This is not a lexical issue per se but one in which the exponent is mapped onto other semantic domains.

4.3 ModIce

For comparison, transcriptions from 22 speakers of ModIce were searched for prepositions. First, we searched the transcriptions of all 22 speakers for the prepositions *til*, *á* and *af*, the Ps that featured most often as replacements (see (16) above) and analyzed their functions. Comments had been made by reviewers as well as audiences at various talks where this work was presented that in ModIce, *til* has come to be used in some of the contexts that NAMlce speakers use it in, although the meaning might be slightly different ('up to'). Since *af* and *til* were the prepositions that speakers used most often in a non-target-like way, we looked at all instances of these two to see whether ModIce speakers used them in innovative ways, too (including fixed phrases, e.g. *til baka* 'back', *til vinstri* 'left', and parts of phrasal verbs, e.g. *vera til* 'exist', *segja til* 'say to'). All but two speakers produced utterances with *til*, there were 116 instances overall, and all were target-like. None were used in the contexts found for *til* in NAMlce. That is, uses like those illustrated in (25) above were absent from the ModIce data set. Like in the NAMlce corpus, *af* was produced less frequently (N = 54). All but five ModIce speakers produced instances of *af*, and all were target-like, for example, there were no cases of *af* instead of/replacing GEN case.

Second, we searched the transcriptions of the young ModIce speakers (ModIce2) for the Ps *á*, *i* and *yfir*, all of which select ACC case if used with a directional meaning, and DAT if used with a non-directional meaning, to test the possible change of case forms in ModIce due to influence from English, and accompanying loss of the case marking of the semantic distinction. The Ps *á* (N = 184), *i* (N = 155), and *yfir* (N = 40) were used with both DAT and ACC complements, and ACC complements were exclusively directional, while the use of DAT coincided with a non-directional meaning.¹⁴ *Yfir* (N = 19) occurred exclusively with ACC and a directional meaning. (The proportion of syncretic forms was 35% from the total). We finally searched for Ps that select DAT case (*að*, *frá*, *hjá*, *af*) to see whether there were any indications that ACC would be extended to these functions. However, the Ps *að* (N = 95), *frá* (N = 44), *hjá* (N = 115) and *af* (N = 20) were used exclusively with DAT complements. In sum, in the ModIce map task data, we did not find any evidence for change in either the use of Ps or the use of case forms that would correspond to the observations for NAMlce.

5. Discussion

We now discuss the results reported on in the previous section against the hypotheses, repeated below, as well as the implications for the relative vulnerability of the semantics and morpho-syntax.

- H1: The prepositional inventory of NAMIce exhibits changes in use as compared to ModIce and there is influence from English.
 H2: Case marking by Ps is subject to restructuring. In particular, we observe changes with DAT marking.

Our results have shown that the use of Ps in NAMIce is overall relatively stable, as the majority of Ps (61%) were used like in ModIce. The prepositional inventory does not seem to be reduced either. Whenever transcribers corrected a preposition, they used a preposition that was used target-like by the same speakers elsewhere in the NAMIce corpus, just not in that particular instance. However, there are also differences in use as compared to ModIce, and the changes are of different kinds, both semantic and structural. Semantic changes are mostly manifested in replacements, where one P is replaced by another P.

One example of a structural change is the preposition *af* taking over the case-marking functions of GEN case. As we have seen in (24) and (27), an NP marked for genitive case is replaced by the preposition *af* plus an NP marked for nominative case. In (27), the complex P *á milli* governing genitive case loses its case-marking ability in these contexts and selects a PP instead. This may be interpreted as influence from English. The structure emerging in NAMIce resembles English, because Icelandic *af* is close to English *of* in both orthography and pronunciation. Thus, when the genitive is lost, speakers of NAMIce seem to choose the P that is closest to the English equivalent, and *af* takes over functions from English *of*, as first observed by Arnbjörnsdóttir (2006). NAMIce *af* as an equivalent of English *of* also appears in another context: non-directional *á* frequently gets replaced by *af* in the context ‘on the corner of’; see (24). Another finding that may be due to influence from English is the occasional replacement of *að* by *fyrir* ‘in front of, on account of, for’ in *leita að* ‘search for’ (five out of eight cases). Also, NAMIce *fyrir* takes over functions of the English P ‘for’ which ModIce *fyrir* does not have. Finally, a NAMIce preposition that takes over functions from an English preposition is *til* ‘to, towards’, replacing various ModIce prepositions with directional meanings, specifically *á*, *í* and *að*. This suggests that *til* may, in the long run, take over directional meaning from other Ps, conflating the meanings of different prepositions into one (see also Arnbjörnsdóttir 2006), and possibly affecting the NAMIce prepositional inventory. NAMIce *til* is close to English *to* in meaning and phonological make-up. Note that while all instances of NAMIce *til* that entered the discussion here have been ‘corrected’ to either *á*, *í* or *að* by the native Icelandic speakers, *til* in ModIce may have a similar meaning. In fact, when the data were presented at the University of Iceland, Reykjavík, in November 2018, some members of the audience thought that in ModIce *til* was in fact possible in some of the contexts in which the transcribers had corrected NAMIce *til* to ModIce *á*, *í* or *að*. However, as reported above, we did not find any evidence for this in our own corpus, i.e. ModIce speakers did not use *til* in with directional meaning in the same way as NAMIce speakers did

anywhere in the map task corpus. Nevertheless, there are many indications that directional Ps are in the process of conflating onto *til* in NAMIce. Moreover, in NAMIce this change from *á*, *í*, and *að* to *til* is accompanied by a change in the case system. *Til* in ModIce selects GEN, but in NAMIce it typically takes a NP as complement with a NOM case ending.¹⁵ For Ps like *á* and *í*, the selection of DAT vs. ACC incorporates the semantic difference between non-directional P and directional P, respectively (e.g. *í kirkjuna* ACC ‘into the church’ vs. *í kirkjunni* DAT ‘in the church’). If all directional *á* and *í* are replaced by *til* ‘to, towards’, the case distinction becomes unnecessary, as with English directional *to*. However, at least in our data, replacements of prepositions are less prominent than changes in morphological form or changes in syntactic case assignment. The latter result in utterances which contain the original preposition (instead of *til*), but for which the case distinction has been lost, so that the actual meaning (direction vs. state) will have to be inferred from the context. Note that one basic question is to what extent the changes are syntactic (restructuring of the case-marking system) and to what extent they are morphological (reflecting problems with the relevant morphological paradigms). As pointed out above, it can be difficult to distinguish the two.

As to hypothesis H2, case marking is clearly subject to restructuring, in particular with DAT case. Only 22% of NPs in the data set were inflected for case like in ModIce. Of the deviant cases within subcategory (13b) (target-like use of P but non-target-like case form), 98% of all DAT forms selected by P were realized as either NOM or ACC (or a form which exhibits case syncretism between NOM and ACC). One striking consequence of this is the fusion of directional and non-directional meanings, which come to be expressed by ACC/NOM case. The results with respect to case are in line with previous research indicating that inflectional morphology shows great variability and instability (e.g. Benmamoun et al. 2013; Polinsky 2006, 2008; Montrul 2008; Rothman 2009). Montrul (2016:58) concluded that ‘case marking is [one] candidate for erosion and non-native mastery in heritage language grammars’ and earlier research on NAMIce maintains that ‘[c]ase assignment by preposition has undergone some attrition in [NAMIce] morphology’ (Arnbjörnsdóttir 2006:100; see also Salmons 2012 for a historical perspective of Germanic). Besides replacements, there is also considerable variation in inflectional case marking, including 22% target-like forms. This finding confirms previous results showing that restructuring of case systems is preceded by a period of variation and alternation between case forms or argument structures (Barðdal & Kulikov 2008:470).

Our data are consistent with the observation that DAT case is vulnerable and might eventually fuse with ACC case marking. However, rather than interpreting this process in terms of loss of case-marking exponents, we prefer to see it as a readjustment in the mapping of case exponents. This is even more plausible if we think about the decomposition of P along the lines of Svenonius (2007), who proposed that the category of adpositions (prepositions) can be split into at least two parts: P, the Ground (expressing a spatial relation), and p, the Figure (an element that introduces theme or location). The underlying structure of prepositions in NAMIce may simply exhibit different underlying structural specification (i.e. exhibiting true representational differences), which had already been determined very early on in the speakers’ acquisition of Icelandic in North America.

Such cases of readjustment or restructuring are not unique to heritage languages, but they also happen in diachronic change. For example, the Latin cases ACC and DAT have disappeared in (most of) the Modern Romance languages, but the traces are still visible. In fact, they have turned into new structural distinctions, as indirect objects are marked by a preposition (e.g. French *parler à qqn* ‘speak to someone’), while direct objects are not (*appeler qqn* ‘call someone’). The difference to heritage language acquisition is that normally (i.e. in the absence of an extreme situation of language contact) such processes happen more slowly.

What are the implications of our results for the relative vulnerability of morpho-syntax and semantics? We found that divergence between NAMIce and ModIce was more striking in inflectional case marking than in the use of Ps. Does this imply that in NAMIce, case morphology is more vulnerable to ‘attrition’ than the lexical aspects of prepositional use, in contrast to Tsimpli’s (2014) proposal that earlier acquired properties are not subject to input effects? Not necessarily. Instead, the nature of change seems to differ depending on the module. For Ps, which are late acquired and have semantic relevance, there is no loss of forms but a change in functions, possibly due to contact with English. For case marking, at first sight, there seems to be a loss of forms, as has been observed in previous research (e.g. Montrul et al. 2012, Polinsky 2006, Yager et al. 2015). However, the fusion of DAT and ACC that we observe may only be a temporary stage in a longer process of restructuring, where eventually the original case functions will be taken over by other elements, such as Ps. Since case is early acquired and part of narrow syntax, the divergence we see in the steady-state is more likely due to the fact that the exponents of case may not be as accessible to these speakers as they are to monolingual speakers. If HSs perceive and process the exponents of case differently, they may end up with a different steady-state, not because their development is arrested but because their ‘target’ was perceived to be different to begin with.

6. Conclusion

In this paper we have investigated the use of prepositions and case marking in North American (heritage) Icelandic based on 12 speakers, aged 60–90 years, born and raised in Manitoba (Canada), where they grew up with Icelandic as their first language and English as their chronological L2 but dominant language. We were particularly interested in the comparison of choice of prepositions and case marking because the former is primarily semantically conditioned, while the latter is primarily conditioned by morpho-syntax. The two were elicited in a map task experiment, which results in the production of a substantial portion of prepositional phrases, so that data on case and prepositions could be elicited simultaneously. We found that the speakers’ repertoire of prepositions was not reduced but the choice of prepositions was indeed subject to crosslinguistic influence from the dominant language English. In morpho-syntax, there seems to be an ongoing shift such that the use of dative case decreases, while use of nominative and accusative case takes over its functions. The latter is in keeping with earlier studies on the restructuring of case in heritage languages, indicating that dative case in Germanic has historically (and synchronically) been more vulnerable than other cases.¹⁶ It is possible that this is

related to the unique nature of dative in Germanic, being partially ‘lexical’ and partially ‘structural’.

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Notes

- 1 For reasons of space, we can provide only one example. Nouns in ModIce have inherent gender: masculine (MASC), feminine (FEM), and neuter (NEU); the example in Table 1 is a masculine noun. However, Icelandic also has several inflectional classes. Thus, nouns may be of the same gender but belong to different inflectional classes, and forms will thus differ (for details see e.g. Einarsson 1973, Þráinsson 1994). There is also case syncretism, especially in the feminine and neuter paradigms (see Appendix Table A1 for examples).
- 2 In the latter quotation, ‘always’ may be an exaggeration (see also Arnbjörnsdóttir & Þráinsson 2018, Björnsdóttir 2018).
- 3 A similar replacement has been observed for American Swedish, where *för* ‘for’ replaces *i* ‘in’ in durative adverbials such as ‘for many years’ (Larsson, Tingsell & Andréasson 2015).
- 4 The speakers included here were part of a larger group tested by researchers from the University of Iceland (Arnbjörnsdóttir et al. 2018a). While Arnbjörnsdóttir et al. (2018b) reported that about half of their speakers were exposed to English from birth, our study includes only speakers with (self-reported) late exposure to English.
- 5 Note that translations may vary in Modern Icelandic, depending on context.
- 6 We are, of course, aware that the ‘target’ for our NAMIce speakers may have been different from what would be considered ‘correct’ in today’s Icelandic as spoken in Iceland, i.e. ModIce. Moreover, we are using the term ‘target’ in the sense of ‘homeland-like’ (see Polinsky 2018:10–17 for a discussion of baseline speakers).
- 7 *Tu tarft* appeared and was transcribed as seen here. We refrained from changing this towards the ModIce spelling because it reflects actual pronunciation (plosive instead of fricative). It is true that actual pronunciation was not transcribed elsewhere, but this instance was striking enough to the transcriber to be highlighted by special orthography.
- 8 Note that *til* in ModIce requires GEN case on the following NP, thus case marking is deviant here as well as the use of P. See also the example in Table 2.
- 9 Note that this is also another case of omission, i.e. category (13d): NAMIce speaker CG06 omits the P *i* preceding *vestur* in ModIce.
- 10 This is in line with Dehé (2018), who found no differences between the intonational patterns produced by speakers from different origins (Gimli, Winnipeg, Lundar).
- 11 Note that ‘Mundagæta’ and ‘Moldargæta’ were transcribed like this by our native speaker transcribers to indicate pronunciation: <a> /a/; <æ> /ai/.
- 12 An anonymous reviewer asked whether it is clear that *til* in (25b, c) is a ‘replacement’ of P, because *á Lundasafnið* means actually *going to* (i.e. into the museum for a visit), but in a map task a directional *til* or *að* would be natural, whereas *á* is not directional. Similarly, *i Lindakirkju* means visiting the church rather than just going in the direction of it; directional *til* or *að* would seem natural and *i* does not mean the same thing. Our response to this is that we have relied on the transcribers, who, in all these cases ‘corrected’ *til* to *af* or *á*. We further checked the ModIce corpus for *til*, and *til* did not occur in these contexts in the ModIce corpus, while it did in the NAMIce corpus. We therefore concluded that *til* is not target-like here in NAMIce (see also results/discussion of the ModIce data).
- 13 Two reviewers wondered whether u-umlaut and possibly other stem alternations interact with the NAMIce results? We do not think that it is the umlaut that causes the ‘problem’. Otherwise *kirkja*, in other

examples, which does not take umlaut, should be unaffected. Instead, it is likely that these street names are considered proper nouns by the NAMIce speakers; proper nouns inflect in ModIce, but not in English.

14 Syncretic forms were taken to be target-like.

15 Björnsdóttir (2018:354) also mentions that *til* may take DAT instead of GEN in her corpus (e.g. *til Blönduós-i* ‘to Blönduós-DAT’ (place name; NOM: Blönduós, GEN: Blönduóss)).

16 Recall, however, that Björnsdóttir (2018) also provided evidence for the extension of dative case, i.e. dative replacing genitive and even accusative. Such cases seem to be rather exceptional, though. They may also indicate a period of variation before or during the restructuring process.

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Appendix

Table A1. Inflectional paradigms for *nál* 'needle FEM' and *land* 'land NEU'.

Case	Singular		Plural	
	Indefinite	Definite	Indefinite	Definite
NOM	nál	nál-in	nál-ar	nál-ar-nar
ACC	nál	nál-ina	nál-ar	nál-ar-nar
DAT	nál	nál-inni	nál-um	nál-un-um
GEN	nál-ar	nál-ar-innar	nál-a	nál-a-nna
Case	Singular		Plural	
	Indefinite	Definite	Indefinite	Definite
NOM	land	land-ið	lönd	lönd-in
ACC	land	land-ið	lönd	lönd-in
DAT	land-i	land-i-nu	lönd-um	lönd-un-um
GEN	land-s	land-s-ins	land-a	land-a-nna

Table A2. Selection of Icelandic prepositions occurring in the present study.

P	Meaning in ModIce	Case selected	Examples
<i>á</i>	on, onto, to	ACC, DAT	<i>á hornið</i> 'onto the corner ACC', <i>á horninu</i> 'on the corner DAT'
<i>í</i>	in, into	ACC, DAT	<i>í kirkjuna</i> 'into the church ACC', <i>í kirkjunni</i> 'in the church DAT'
<i>til</i>	to, towards, up to, until	GEN	<i>til Íslands</i> 'to Iceland'
<i>að</i>	to, towards	DAT	<i>að kirkjunni</i> 'towards the church'
<i>frá</i>	from	DAT	<i>frá upphafsstaðnum</i> 'from the point of departure'
<i>hjá</i>	at, with	DAT	<i>hjá kirkjunni</i> 'at the church'
<i>upp</i>	up	ACC	<i>upp götuna</i> 'up the road'
<i>niður</i>	down	ACC	<i>niður götuna</i> 'down the road'
<i>yfir</i>	over, above	ACC, DAT	<i>(ganga) yfir gatnamótin</i> '(walk) over the crossroads ACC', <i>(hátt) yfir bænum</i> '(high up) over the town DAT'
<i>á milli</i>	between	GEN	<i>á milli skólans og kirkjunnar</i> 'between the school and the church'
<i>af</i>	off, of, from	DAT	<i>(koma) af kortinu</i> '(come, get) off the map'
<i>fyrir</i>	in front of, on account of, for	ACC, DAT	<i>(hótel) fyrir ferðamenn</i> '(hotel) for tourists ACC', <i>(virðing) fyrir ferðamönnum</i> '(respect) for tourists DAT'
<i>með</i>	with, by (means of), together with	ACC, DAT	<i>(koma) með eitthvað</i> '(come) with something, to bring something ACC', <i>(koma) með einhverjum</i> '(come) with somebody, to go somewhere together DAT'

Table A3. Results by sorting category and speaker.

Speaker	1. Overall target-like	2. Only P target-like, NP non-target-like	3. Replace-ment	4. Omission of P	5. Addition of P	6. Other	Total
CG01	40	6	0	0	0	0	46
CG02	12	7	0	0	0	0	19
CG03	4	35	20	1	0	1	61
CG04	1	34	19	1	6	0	61
CG05	3	11	11	1	0	2	28
CG06	4	11	16	8	13	0	52
CG07	8	8	2	0	0	0	18
CG08	1	34	15	5	4	2	61
CL02	0	7	5	1	0	0	13
CL03	1	25	19	0	0	0	45
CW01	25	9	22	2	1	1	60
CW08	3	44	28	4	3	0	82
	102	231	157	23	27	6	546

Speaker origin: CG = Gimli, CL = Lundar, CW = Winnipeg

Note: The distribution is not a matter of place of recording. Compare, for example, speaker CG01 from Gimli, who shows very few deviations, with CG04, also from Gimli, who shows relatively many deviations; similarly for CW01 vs. CW08, both from Winnipeg.

Table A4. Distribution according to sorting categories by syntactic function.

Syntactic function	1. Overall target-like	2. P target-like, NP non-target-like	3. Replace-ment	4. Omission of P	5. Addition of P	6. Other	Total N (%)
Predicate	67	138	17	6	2	3	233 (42.7)
Compl to V	11	54	74	14	12	2	167 (30.6)
Compl to N	0	15	53	1	4	0	73 (13.4)
Adjunct	21	17	8	1	9	0	56 (10.3)
Unclear	3	7	5	1	0	1	17 (3.1)
	102	231	157	23	27	6	546 (100)

Table A5. Only P correct, subcategory 'P correct, form of NP existent in Modlce but deviant'.

Case form expected in Modlce	N	Actual form in NAmlce	N (%)
DAT Sg def	105	NOM/ACC Sg def	80 (76%)
		NOM/ACC Pl def	18 (17%)
		NOM Sg def	3
		ACC Sg def	1
		ACC/DAT Sg indef	1
		DAT Sg indef	1
		NOM/ACC Sg indef	1
DAT Sg indef	69	NOM Sg indef	65 (94%)
		NOM Sg def	2
		DAT Sg def	1
		mixed NOM/DAT (A-N sequence)	1
<i>Total DAT:</i>	174	<i>Overall DAT replaced by NOM or NOM/ACC:</i>	170 (98%)
ACC Sg indef	25	NOM Sg indef	25 (100%)
Other	18		
<i>Total:</i>	217		

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