

Lexical Case Absorption in Icelandic Raising

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Abstract The following paper examines case marking variations in Icelandic raising infinitives in instances where a lexical case (here of accusative or dative subjects) yields to a structural case in subject-to-object raising on the one hand, and subject-to-subject raising on the other. In grammaticality judgment tasks, subject-to-subject raising showing the preservation of a lexical case never received more than a 24% acceptance rate. In contrast, equivalent case absorption sentences with a structural nominative subject received acceptance rates of up to 50%. Furthermore, a corpus study identified significantly fewer examples of accusative and dative preservation in subject-to-subject raising than those of lexical case absorption. I propose that the high ratio of dative and accusative absorption results from two factors. Firstly, I argue that it is due to the rarity of these constructions in modern-day spoken Icelandic, particularly with lexical subject cases. Secondly, I suggest that instances of case absorption could be explained as a consequence of reinterpretation, where speakers reinterpret the raising infinitives as control infinitives. The scarcity of the construction might explain why speakers do not acquire rules regarding it, while reinterpretation involves speakers interpreting that the subject is assigned its theta-role by the verb in the matrix clause instead of the verb in the infinitival clause.

1 Introduction

While finite subordinate clauses in Icelandic usually contain an overt subject, most infinitival clauses do not (1a–c). However, an exception from that are so-called Accusative with Infinitive structures (henceforth *ACI*), or ECM (exceptional case marking) (1d):

- (1) a. Afi var vanur [að bjóða okkur pylsu og ís].
Grandpa was used to offer_{INF} us hot-dogs and ice-cream
- b. Ragnheiður ákvað [að fá sér hund].
Ragnheiður decided to get_{INF} herself a-dog
- c. Hundinn virðist [langa út].
Dog-the seems want_{INF} outside
'The dog seems to want to go outside.'
- d. i. Málfræðingurinn telur [kenninguna vera úrelta]. (active)
Linguist-the believes theory-the_{ACC} be_{INF} outdated
'The linguist believes the theory to be outdated.'
- ii. Kenningin er talin [vera úrelt]. (passive)
Theory-the_{NOMIS} believed be_{INF} outdated
'The theory is believed to be outdated.'

Icelandic infinitival clauses can be classified into several groups (see, e.g., Sigurðsson 1989:49, 2002 and Þráinsson 2005:409–433, 2007:410–443). In this paper, the focus will be on two of them: raising infinitives (1c) and ACI (1d). Various terms have been used to describe the ACI (Lat. *accusativus cum infinitivo*), such as subject-to-object raising (SOR) or exceptional case

marking (ECM). These various terms will be accounted for in section 2.1. The main distinguishing element of these two types of infinitival clauses—raising infinitives (1c) and the ACI (1d)—is the subject position. On the one hand, raising infinitives do not have an overt subject. This is usually explained by assuming that the subject raises from the infinitive clause to the matrix clause, which has no subject at D-structure (Þráinsson 2005:431, 2007:149). On the other hand, ACI (or ECM/SOR) deviates in that it seems to have an overt subject for the infinitive. In Icelandic, this construction mainly occurs with verbs of saying and believing, such as *telja* 'believe, think', *segja* 'say', *álíta* 'believe', think', *halda* 'think, believe' and *kveða* 'say', as illustrated in (1d) above.¹

The structural case of this overt subject is accusative in the active (1d, i) and nominative in the passive (1d, ii). Lexical subject cases, such as accusative or dative subjects, should, according to prescriptive grammar, be preserved in this construction, as has been pointed out before (cf. Zaenen, Maling & Þráinsson 1985). In this paper, however, I will discuss variations in the case marking of these verbs that usually take a lexical subject. Specifically, I will examine situations where lexical accusative or dative subjects change to a structural case in subject-to-object raising (i.e., the active, 2a) and in subject-to-subject raising (i.e., the passive, 2b).

- (2) a. Ég tel **henni** leiðast → Ég tel **hana** leiðast
 I believe her_{DAT} to-be-bored I believe her_{ACC} to-be-bored
 b. **Hana** er sagt skorta aga → **Hún** er sögð skorta aga
 She_{ACC} is said to-lack discipline She_{NOM} is said to-lack discipline

Out of the two construction, subject-to-subject (2b) raising shows the most variation and in grammaticality judgment tasks, those kind of sentences showing the preservation of a lexical case never received more than a 24% acceptance rate. In contrast, equivalent case absorption examples with a structural nominative subject received acceptance rates of up to 50%. Additionally, a corpus study found significantly fewer instances of the original accusative and dative preservation in subject-to-subject raising compared to case absorption. In the following sections, I will argue that this high ratio of dative and accusative absorption could result from

¹ Icelandic sensory verbs, such as *heyra* 'hear' and *sjá* 'see' (i–ii) and the verb *láta* 'make, let' are often categorized as taking the ACI-construction, since they take an infinitive with an accusative subject (Sigurðsson 1989:83 and Þráinsson 2005:437):

- i. Ég **heyrði** [Vikingur Heiðar spila Goldberg-tilbrigði í útvarpinu].
 I heard Vikingur Heiðar_{ACC} play_{INF} Goldberg variations-the on radio-the
 'I heard Vikingur Heiðar play the Goldberg variations on the radio.'
 ii. Hann **sá** [flugvélina lenda á Keflavíkurflugvelli].
 He saw airplain-the_{ACC} land_{INF} at Keflavík-airport
 'He saw the airplan land at Keflavík airport.'
 iii. Kennarinn **lét** [nemendurna lesa Snorra-Eddu].
 Teacher-the made students-the_{ACC} read_{INF} Prose Edda
 'The teacher made the students read the Prose Edda.'

Infinitival clauses with these verbs are, however, of a different nature than the construction that occurs with verbs of saying and believing, as pointed out in Sigurðsson (1989). In English, for example, these verbs take infinitives without infinitival participles, unlike with verbs of saying and believing. These sensory verbs, as well as *láta*, will therefore not be discussed further; when referring to the ACI-construction henceforth, it will only apply to verbs of saying and believing.

two factors. Firstly, I propose that it is due to the rarity of the construction, particularly with lexical accusative and dative subjects. Secondly, I suggest that case absorption instances could be a consequence of reinterpretation, where raising infinitives are reinterpreted as control infinitives. The rarity of the construction may account for speakers not acquiring rules about it, while reinterpretation would involve speakers interpreting that the raised NP is assigned its theta-role by the verb in the matrix clause instead of the verb in the infinitival clause. I will begin, in section 2, by giving an overview of Icelandic raising infinitives and case marking in the passive. In section 3, I will then introduce the corpus study and its findings, before turning to the judgment tasks in section 4, along with discussion about their main results in section 5. Finally, section 6 includes further data interpretation and discussions.

2 Background

2.1 Raising Infinitives

In Icelandic, raising verbs such as *virðast* 'seem' and *sýnast* 'appear' take so-called raising infinitives (Þráinsson 1979:ch. 6.3, Sigurðsson 1989:96–100). These raising verbs do not assign theta-roles to their subjects. However, the subject of the infinitival, which is theta-marked by the infinitive verb, raises to fill the empty subject position of the matrix clause:

- (3) a. ___ virðist [**stúlkuna** skorta allan aga]. (before raising)
 seems the-girl_{ACC} lack_{INF} all discipline
- b. **Stúlkuna**_i virðist [_{t_i} skorta allan aga]. (after raising)
 The-girl_{ACC} seems lack_{INF} all discipline
 'The girl seems to lack all discipline.'

In (3), the accusative DP *stúlkuna* is theta-marked and assigned accusative case by the verb *skorta* in the infinitival clause (*Stúlkuna skortir þetta* 'The girl_{ACC} lacks this'), and not by the raising verb *virðast* 'seem' of the matrix clause (**Stúlkuna_{ACC} virðist þetta*). The same goes for the dative subject *Nemendunum* 'the students' in (4a–b), which is assigned its case by the dative subject verb *leiðast* 'be bored', and the genitive subject *áhrifanna* 'the influence' in (4c–d), which is assigned its case by the dative subject verb *gæta* 'be perceptible':

- (4) a. ___ virðist [**nemendunum** leiðast fyrirlesturinn].
 seem the-students_{DAT} be-bored_{INF} the-lecture
- b. **Nemendunum**_i virðist [_{t_i} leiðast fyrirlesturinn].
 The students_{DAT} seem be-bored_{INF} the-lecture
 'The students seem to be bored by the lecture.'
- c. ___ virðist [**áhrifanna** gæta víða].
 seem the-influence_{GEN} be-perceptible_{INF} widely
- d. **Áhrifanna**_i virðist [_{t_i} gæta víða].
 The influence_{GEN} seems be-perceptible_{INF} widely
 'The influence seems to be widely perceptible.'

Other such raising verbs in Icelandic are *sýnast* 'appear', *reynast* 'prove' and *þykja* 'be regarded' (Þráinsson 2005:431). Subject raising in Icelandic is, however, not confined to these raising verbs. It also occurs with infinitive complements of verbs of saying and believing, such *telja* 'believe' and *segja* 'say', either when raised to the object position in the active, i.e. in subject-to-object raising (sometimes labelled *exceptional case marking*), or to the passive subject position, subject-to-subject raising, as will be further explained in the following sections.

In Icelandic, ACI occurs with verbs of saying and believing, mainly *telja* 'believe', *segja* 'say', *álíta* 'consider', *halda* 'think', *hyggja* 'believe', *gruna* 'suspect' and *kveða* 'say'. In the ACI-construction, these verbs take an accusative NP before an infinitive without an infinitival particle (Þráinsson 2005:425–431, 2007:149, 436–439; Sigurðsson 1989:89):

- (5) a. Eigendurnir sögðu [**hundinn** vera meinlausan].
 Owners-the said dog-the_{ACC} be_{INF} harmless
 'The owners said that the dog was harmless.'
- b. Saksóknarinn álitur [**ráðherrana** vera vanhæfa].
 Attorney-the believes ministers-the_{ACC} be_{INF} unqualified
 'The attorney considers the minister to be unqualified.'
- c. Platon taldi [**heiminn** byggja á frummyndum].
 Plato believed world-the_{ACC} consist_{INF} of forms
 'Plato believed the world to consist of forms.'

These same verbs all allow the same meaning to be phrased with an that-clause with a nominative NP and a finite subordinate clause instead of the ACI:

- (6) a. Eigendurnir sögðu [að **hundurinn** væri meinlaus].
 Owners-the said that dog-the_{NOM.SG} were_{SUBJ.3SG.PAST} harmless
 'The owners said that the dog was harmless.'
- b. Saksóknari álitur [að **ráðherrarnir** séu vanhæfir].
 Attorney-the believes that ministers-the_{NOM.PL} are_{SUBJ.3PL.PRES} unqualified
 'The attorney believes that the ministers to be unqualified.'
- c. Platon taldi [að **heimurinn** byggði á frummyndum].
 Plato believed that world-the_{NOM} consisted_{SUBJ.3SG.PAST} of forms
 'Plato believed that the world consisted of forms.'

The passive construction corresponding to the ACI (5) is often called Nominative and Infinitive (Lat. *nominativus cum infinitivo*, NCI). As the term indicates, the accusative case of the active ACI corresponds to the nominative subject of the passive. Hence, the active sentence in (5a) could be compared to the following passive (7). This is what we will henceforth call subject-to-subject raising:

- (7) **Hundurinn**_{*i*} er sagður [*t_i* vera meinlaus].
 Dog-the_{NOM} is said to-be_{INF} harmless
 'The dog is said to be harmless.'

A precise analysis of the accusative NP in the (active) ACI-construction has long intrigued syntacticians, as it simultaneously exhibits the characteristics of the object of the matrix clause and the subject of the infinitival clause. On one hand, the NP exhibits object-like properties by appearing in accusative case, which is the structural case for direct objects in Icelandic, following a transitive verb. On the other hand, the theta-role assigned to the NP by the infinitive suggests that it functions as the subject of the verb in the subordinate clause, as is evidenced by corresponding *that*-clauses in (6).

One of the derivations that has been proposed to account for the ACI assumes that the accusative NP belongs to the daughter sentence as its subject but that its case marking is *exceptional* in that the finite verb of the matrix clause assigns the accusative case to a NP of another clause. According to another account, the accusative NP is said to originate in the subject position of the infinitival clause but later raised to the object position of the matrix clause by subject-to-object raising (see Postal 1974; Þráinsson 1979:332–334, 366–368; 2005:429). In the corresponding passive (the NCI) it is assumed in the same manner that the subject of the infinitival clause raises to the matrix clause. In the passive, however, the NP raises to the subject position of the matrix clause (cf. (7)) and the movement is therefore called subject-to-subject raising. To avoid delving too deep into the structural difference of these two explanations, I will assume that the accusative NP in the ACI-construction (and the nominative in the NCI) is a result of subject raising. The active will thus be called subject-to-object raising, and the passive will be called subject-to-subject raising. Those terms are convenient for the current topic, as the intention is to make it clear what the NP's position is in each case.

The topic of this paper is the case marking in constructions where the main verb of the infinitival clause is impersonal, either assigning accusative or dative case to its subject. These are for example sentences like those shown in (8) with the impersonal verb *misbjóða* 'be offended', which takes a dative subject. Example (8a) shows subject-to-object raising with the active of *segja* 'say' and (8b) shows subject-to-subject raising with the passive *er sagt* 'is said':

- (8) a. Þau segja skáldinu [__ misbjóða gagnrýnin].
 They say poet-the_{DAT} be-offended_{INF} critique-the
 'The say that the poet is offended by the critique.'
 b. Skáldinu er sagt [__ misbjóða gagnrýnin].
 Poet-the_{DAT} is said be-offended_{INF} critique-the
 'The poet is said to be offended by the critique.'

Before delving into the case marking of these sentences, I will briefly discuss Icelandic case marking on a more general basis.

2.2 Case Marking and the Icelandic Passive

2.2.1 Case Absorption and Case Preservation

Icelandic has four different morphological cases: nominative, accusative, dative and genitive. Case marking is either structural or lexical (Zaenen, Maling & Þráinsson 1985; Yip, Maling & Jackendoff 1987 and Jónsson 1997–1998). When a nominal gets assigned structural case, the morphological case is dependent on its position in the construction and is, in that sense,

predictable. The nominative case is the structural case of subjects in Icelandic and accusative the structural case of direct objects. Lexical case, on the other hand, is assigned by certain words regardless of structural case, such as when impersonal verbs like *finnast* 'think' or *þykja* 'think, feel' demand a dative case on its subject instead of the structural nominative case.

Lexical case is further divided into two subcategories: thematic case and quirky case.² The thematic case is more regular than the quirky case because it is predictable from lexical semantics (Jónsson 2003, 2013, Jónsson & Eyþórsson 2003:12–13). For example, oblique subjects that have the theta-role of experiencers usually have the dative case rather than either accusative or genitive. The dative subjects of the verbs *finnast* 'feel, think' and *sýnast* 'think, believe' are therefore regular in the sense that in both cases, it is a psych-verb that assign its experiencer-subject the dative case.³ In contrast, the quirky (idiosyncratic) case is completely irregular and unpredictable. An example of the quirky case are genitive objects (e.g., with verbs such as *krefjast* 'demand', *minnast* 'commemorate', *sakna* 'miss') or accusative subjects (e.g., with verbs such as *langa* 'want, long for', *dreyma* 'dream', *gruna* 'suspect'). In both instances, case assignment cannot be related to the semantics of the verb in any obvious manner.

Whenever the syntactic role of an argument is changed, e.g., when an object becomes a subject, the fundamental difference between structural case and lexical case becomes clear. While the lexical case remains unchanged, the structural case adapts to whatever case general rules stipulate, for example, that the subject is nominative and the direct object is accusative (Jónsson 1997–1998, 2003, and Maling 2002). This can be clearly seen when comparing an active sentence with its corresponding passive. If the direct object in the active clause is accusative, it corresponds in the passive sentence to the structural case of the subject, i.e., nominative. This is called case absorption:

- (9) a. *Ég las bókina.* (active)
 I read book-the_{ACC}
 b. *Bókin var lesin.* (passive)
 Book-the_{NOM} was read

On the other hand, if case has been assigned lexically, the NP does not undergo such case absorption but remains unchanged, despite the altered syntactic role. This difference arises from the fact that the structural case is independent of the properties of the verb with which it stands, whereas the lexical case is not. This can be called the case preservation of the lexical case (or lexical case preservation):

- (10) a. *Ég stal bókinni.* (active)
 I stole book-the_{DAT}
 b. *Bókinni var stolið.* (passive)
 Book-the_{DAT} was stolen

² The thematic case has also been called *semantic case* and the quirky case *idiosyncratic case* (Jónsson 2003).

³ For additional information about Icelandic thematic cases and the syntax-semantic interface, see Jónsson (1997–1998; 2003; 2013) and Maling (2002).

When sentences like (10b) do not show the preservation of the lexical case, but instead ‘lose’ their case to nominative in non-standard variations, the variation could be called lexical case absorption (Ice. *fallglötun* ‘case damnation’, see Benediktsdóttir 2023). Now, the focus shifts to these absorption instances.

2.2.2 Dative Absorption in the Passive

Although the Icelandic morphological case system is generally more conservative than those of many other related languages, there are various examples of case marking variations where an irregular case pattern gives way to a more regular case pattern. An example of such a phenomenon is the so-called ‘dative substitution’ (Ice. *þágufallshneigð*), also termed ‘dative sickness’ (Ice. *þágufallssýki*), alongside the ‘nominative substitution’ (Ice. *nefnifallshneigð*). In the context of the dative substitution, the dative case becomes generalized for subjects of psych-verbs that typically take an accusative or nominative subject (Jónsson & Eypórsson 2003 and Eypórsson 2000:188):

- (11) a. **Hana** → **Henni** svimar.⁴
 Her_{ACC} → _{DAT} feels-dizzy
 ‘She feels dizzy.’
 b. **Hún** → **Henni** kveið fyrir prófunum.
 She_{NOM} → _{DAT} was-anxious about exams-the
 ‘She was anxious about the exams.’

In the so-called nominative substitution, the quirky case also yields to a more regular case. More specifically, the structural nominative case is generalized instead of the accusative or dative subjects of verbs of movement and change, such as *reka* ‘drift’ and *hvolfa* ‘capsize’:

- (12) a. **Bilnum**_{DAT} hvolfdi. → **Bílinn**_{NOM} hvolfdi.
 Car-the capsized
 b. **Bátinn**_{ACC} rak að landi. → **Báturinn**_{NOM} rak að landi.
 Boat-the drifted to land

Related to the nominative substitution is the lexical case absorption (Ice. *fallglötun*) which concerns the case marking variation that occurs when lexical case is not preserved between the active (13a) and the passive (13b) (see Benediktsdóttir 2023, Eypórsson 2017:110):⁵

- (13) a. Brynhildur leikstýrði **verkinu**.
 Brynhildur directed piece-the_{DAT}
 b. **Verkinu** → **Verkið** var leikstýrt af Brynhildi.
 Piece-the_{DAT} → _{NOM} was directed by Brynhildur

⁴ These sentences are from Jónsson and Eypórsson 2003.

⁵ This kind of dative absorption exists in other related languages like Faroese and is, in that case, in fact an active rule for direct objects (see Þráinsson et al. 2012:266–274 and Eypórsson 2012).

In the following, the term 'lexical case absorption' will also be used for the variation which occurs when lexical cases are not preserved in subject-to-object and subject-to-subject raising. In the next section I will explain that variation.

2.3 Oblique Subjects and ACI

As explained in section 2.1 about the ACI-construction, nominative subjects appear as accusative in subject-to-object raising like that in (14b). However, in the corresponding passive (14c), i.e. in subject-to-subject raising, the accusative is absorbed, just as in a 'simple' passive. Thus, the accusative *hana* 'her' in (14b) becomes the nominative subject *hún* 'she' in (14c):

- (14) a. **Hún** er gáfuð.
 She_{NOM} is intelligent
 b. Fólk telur [**hana** vera gáfaða].
 People believe her_{ACC} be intelligent
 'People believe her to be intelligent.'
 c. **Hún** er talin [vera gáfuð].
 She_{NOM} is believed be intelligent
 'She is believed to be intelligent.' (Þráinsson 2005:426–27)

Case marking of this kind is, however, generally limited to examples where the verb in the subordinate clause takes a nominative subject. When the verb in question takes an oblique subject, however, the lexical case (here, accusative or dative) should be preserved. This case preservation is like the one explained in section 2.2.1, where the lexical case does not undergo case absorption but remains unchanged despite a change in syntactic role. In (15), the case preservation thus consists of the fact that the dative *henni*, assigned by the dative subject verb *þykja*, is preserved, and does not become accusative like the nominative subject in (14):⁶

- (15) Ég tel [**henni** hafa alltaf þótt Ólafur leiðinlegur].
 I believe her_{DAT} have always found Olaf boring
 'I believe her always to have found Olaf boring.' (Zaenen, Maling & Þráinsson 1985)

In the corresponding passive, i.e., in subject-to-subject raising, the standard Icelandic case pattern also assumes the preservation of the dative subject. Þráinsson (2005:427, 2007:182–3) has pointed out the following sentences as an example of that:⁷

⁶ Sentences of this kind existed in Old Icelandic as well (see Bernódusson 1982; Rögnvaldsson 1996:58–61; Barðdal & Eyþórsson 2003:449–451):

- a. Þórður ... kvað [**þorgeiri** mjög missýnast] (Ljósvefninga saga, p. 1657)
 Þórður said Þorgeir_{DAT} much be-mistaken_{INF}
 'Þórður ... said that Þorgeir was very mistaken.'
 b. Ingólfur ... sagði [**þeim** vera mál að setjast um kyrrt] (Flóamanna saga, p. 730)
 Ingólfur said them_{DAT} be_{INF} time to sit on still
 'Ingólfur ... said that it was time for them to settle down.'

⁷ Rögnvaldsson (1996) and Barðdal & Eyþórsson (2003) have also written about subject-to-subject raising in Old Icelandic. However, their examples are all of raising-verbs and so-called *st*-verbs (such as *virðast* 'seem', *kveðast*

- (16) a. **Henni** er kalt.
 Her_{DAT} is_{IND} cold
 'She is cold.'
- b. Þeir telja [**henni** vera kalt].
 They believe her_{DAT} be_{INF} cold
 'They believe her to be cold.'
- c. **Henni** er talið [vera kalt].
 Her_{DAT} is believed be_{INF} cold
 'She is believed to be cold.'
- (17) a. **Þeim** hefur leiðst.
 Them_{DAT} have_{IND} been-bored
 'They have been bored.'
- b. Við teljum [**þeim** hafa leiðst].
 We believe them_{DAT} have_{INF} been-bored
 'We believe them to have been bored.'
- c. **Þeim** er talið [hafa leiðst].
 Them_{DAT} is believed have_{INF} been-bored
 'They are believed to have been bored.'

Furthermore, Maling and Zaenen (1990:45) have demonstrated the following examples of subject-to-subject raising where the accusative case is preserved:

- (18) a. **Bátana** hefur brotið í spón.
 Boats-the_{ACC} has broken into pieces
 'The boats have broken into pieces.'
- b. Allir telja [**bátana** hafa brotið í spón].
 All believe boats-the_{ACC} have_{INF} broken into pieces
 'All believe the boats to have broken into pieces.'
- c. **Bátana** er talið [hafa brotið í spón].
 Boats-the_{ACC} is believed have_{INF} broken into pieces
 'The boats are believed to have broken into pieces.'

That being said, it appears that this case preservation of oblique subjects in subject-to-object and subject-to-subject raising is not an active rule among all native Icelandic speakers, as is demonstrated by the results of grammaticality judgment tasks, which will be discussed in section 4. In these tasks, many people accepted the structural case instead of the lexical case in comparable sentences—i.e., case absorption instead of case preservation—but declined examples of case preservation in sentences as those demonstrated in (16b–c), (17b–c), and (18b–c).

The variation in case marking of oblique subjects in subject raising will be analyzed here as an example of lexical case absorption. On the one hand, this case absorption occurs in

'say' and *segjast* 'claim') but not of passives with verbs of saying and believing as is the centre of attention in this paper.

subject-to-object raising, where the accusative case replaces the dative case before the infinitive of a verb that typically assigns the dative case to its subject:

- (19) *Ég tel henni leiðast þetta.* → *Ég tel hana leiðast þetta.*
 I believe her_{DAT} be-bored_{INF} this. → I believe her_{ACC} be-bored_{INF} this
 'I believe her to be bored by this.'

Lexical case absorption also takes place in subject-to-subject raising, where the NP, whether accusative (20a) or dative (20b), raises to the subject position of the matrix clause in the passive, yielding to the structural nominative case of the subject position:

- (20) a. *Hana er talið langa heim.* → *Hún er talin langa heim.*
 Her_{ACC} is believed want_{INF} home → She_{NOM} is believed want_{INF} home
 'She is believed to want to go home.'
 b. *Henni er talið leiðast.* → *Hún er talin leiðast.*
 Her_{DAT} is believed be-bored_{INF} → She_{NOM} is believed be-bored_{INF}
 'She is believed to be bored.'

In the nominative variant, the passive verb agrees with its subject, since there is always gender and number agreement between nominative subjects and the past participle of the passive it stands with in Icelandic (see, for example, Sigurðsson 1990–1991, Þráinsson 1979:466, 1990:212, Andrews 1982). This agreement is, however, not true for the impersonal dative subjects, where the passive *er talið* stands 'frozen' with default agreement in the third person, singular, neuter, i.e., not agreeing with the standard dative subject 'henni'.

Although the form of the verb itself is not the focus of this study, it is important to be aware of this because often the declension of the past participle alone indicates whether the sentence shows lexical case absorption or preservation, e.g., if the raised noun phrase in question is ambiguous, e.g., because of syncretism:⁸

- (21) a. *Hann_i er talið [t_i langa heim].*
 He_{MASC.SING.NOM/ACC} is believed_{PAST PART.N.SG.NOM} want_{INF} home
 b. *Hann_i er talinn [t_i langa heim].*
 He_{MASC.SING.NOM/ACC} is believed_{PAST PART.M.SG.NOM} want_{INF} home
 'He is believed to want to go home.'

In (21b), the agreement of the participle reveals the lexical case absorption of the original *hann*, which is then in the nominative case rather than the accusative case since it agrees with the participle, while (21a) shows default agreement on the participle, indicating that the subject has the lexical accusative case. The same observation applies to examples with an empty subject position, such as in relative clauses:

- (22) a. *Þarna eru stelpurnar_i [sem ____i (F.SG.ACC) er sagt [t_i langa heim]].*
 There are girls-the who_{CONJ.} are said_{PAST PART.N.SG.NOM} want_{INF} home

⁸ Syncretism will be further discussed in section 6.4.

- b. Parna eru stelpurnar_i [sem ____i (F.SG.NOM) eru sagðar [t_i langa heim]].
 There are girls-the who_{CONJ} are said_{PAST PART.F.PL.NOM} want_{INF} home
 'There are the girls who are said to want to go home.'

Thus, (22a) is an example of case preservation while (22b) shows lexical case absorption of the accusative subject.

2.4 Prior Research

In a 2015 talk, Rögnvaldsson discussed changes in complements of verbs of saying and believing in the passive (i.e., in subject-to-subject raising), where he briefly mentioned the use of the nominative with verbs that usually take oblique subjects. There, he highlighted examples similar to those listed in (17) and questioned whether it represented a new language change, considering the scarcity of instances demonstrating the preservation of lexical cases. In the talk, Rögnvaldsson proposed that the lexical case absorption arises from speakers reinterpreting the infinitive as a control infinitive instead of a raising infinitive. This idea will be explored later. However, first, it is fitting to briefly discuss the nature of control infinitives in general.

The primary distinction between control infinitives and raising infinitives lies in the assignment of two distinct theta-roles to the subjects of the matrix clause and the infinitival clause in the former, whereas in raising infinitives, only one theta-role is assigned. This occurs because with raising infinitives, the matrix clause has an empty subject position at D-Structure, as explained in section 2.1, whereas in control infinitives the subject position of the matrix clause is not. While raising infinitives assume a trace (*t*), cf. (23), in control infinitives, in contrast, the infinitival clause contains the (covert) subject PRO, which is co-referential with an NP in the matrix clause (24):

- (23) a. ___ virðist [**henni** vera kalt].
 b. **Henni**_i virðist t_i vera kalt.
 She_{DAT} seems be_{INF} cold
 'She seems to be cold.'
- (24) **Hún**_i vonast til [að PRO_i verða ekki kalt].
 She_{NOM} hopes for to become_{INF} not cold
 'She hopes not to get cold.'

In addition to the fact that Icelandic control infinitives have an infinitive particle, whereas raising infinitives do not, the difference between the two infinitival clauses mainly consists in the fact that in raising infinitives (23), only one theta-role is assigned, while in control infinitives (24), two theta-roles are assigned; one in the matrix clause and another in the infinitival clause. Consequently, it is possible that the theta-roles of the subjects are not the same in control infinitives. In the reinterpretation of raising infinitives as control infinitives, as proposed by Rögnvaldsson (2015), it is thus implied that the subject of the matrix clause is assigned another theta-role independently of the verb in the infinitival clause. Consequently, the sentence in (25a–b) would replace the case preservation inherent in the subject raising in (25c):

- (25) a. ___ er sagt [**raunveruleikastjörnuna** langa heim til Los Angeles].
 is said reality-TV-star-the_{ACC} want_{INF} home to Los Angeles
 'The reality TV star is said to want to go home to Los Angeles.'
- b. **Raunveruleikastjörnuna**_i er sagt [_{t_i} langa heim til Los Angeles].
 Reality-TV-star-the_{ACC} is said want_{INF} home to Los Angeles
- c. **Raunveruleikastjarnan**_i er sögð [PRO_i langa heim til Los Angeles].
 Reality-TV-star-the_{NOM} is said want_{INF} home to Los Angeles

This proposal for the reinterpretation of raising as control will be discussed in section 6.3.

As mentioned earlier, this specific case variation has not been previously studied. Therefore, it is important to consider other research on case variation in Icelandic. The study most closely related to the topic of this paper, and therefore often referred to when interpreting the data, is Benediktsdóttir's (2023) study on dative absorption in Icelandic passives. In that study, Benediktsdóttir discovered that lexical case absorption in 'simple' passives, such as *Myndinni* → *Myndin var leikstýrð* 'The movie_{DAT}→_{NOM} was directed', is quite prevalent in Modern Icelandic. According to her, this phenomenon appears most commonly with the dative case of direct objects (as illustrated in the example mentioned above). Consequently, it was expected that the dative absorption would also occur in passive sentences with verbs of saying and believing, i.e., with subject-to-subject raising (such as *Honum_{DAT} var talið leiðast* → *Hann_{NOM} var talinn leiðast* 'He was believed to be bored').

Accusative, on the other hand, never appears as a lexical case of a subject in the 'simple' passive that Benediktsdóttir explored. This is because the accusative direct object in active sentences corresponds to the nominative subject in the passive, as discussed in section 2.2.1 regarding case absorption (e.g., *Ég las bókina_{ACC}* 'I read the book' and *Bókin_{NOM} var lesin* 'The book was read'). In fact, accusative never appears as the lexical case of subjects in passive constructions, except in the specific construction under consideration here, namely subject-to-subject raising with verbs of saying and believing, in accordance with Wood's (2017) Accusative-Subject Generalization (ASG).⁹ Previous studies on Icelandic case marking variations have suggested that the frequency of a form influences the extent of non-standard variations from the standard case. In other words, less common forms are more likely to exhibit greater variation (see Jónsson & Eyþórsson 2003). Given the rarity of passive accusative subjects, it was therefore expected that these examples would demonstrate significant variation, as was the case.

Research on the dative substitution (or 'dative sickness') has further confirmed the decline of the accusative as a lexical case for subjects (see, for example, Svavarsdóttir 1982, 2013; Jónsson & Eyþórsson 2003; Nowenstein 2012, 2014). Consequently, it could also be anticipated that in some cases, accusative subjects in subject-to-subject raising would be replaced by nominative cases, as was indeed observed. With that in mind, we will now proceed to examine natural data of subject-to-object and subject-to-subject raising from the Icelandic Gigaword Corpus.

⁹ Wood's (2017) ASG states that accusative subjects are never related thematically to a morphologically intransitive verb.

3 The Data

3.1 The Icelandic Gigaword Corpus

When examining lexical case preservation and case absorption in subject-to-object and subject-to-subject raising in Icelandic, the Icelandic Gigaword Corpus (henceforth IGC) was utilized. The IGC is tagged with morphosyntactic information and lemmas, including information about word class, grammatical gender, number, case, tense, voice, and mood (Steingrímsson et al., 2018). It consists of texts from diverse sources, such as news media, academic journals, administrative documents, social media, and blogs. The IGC was initially released in 2018 with 1259 million running words, and its latest edition, published in 2022, contains nearly double the amount, totaling 2429 million words. The most recent edition incorporates texts from published books, children's books, social media, and chat sites like *Bland.is*, adding a valuable resource for studying informal language that was previously underrepresented in the database. This study utilized the 2022 edition of the IGC. In the following section, an overview of the searches conducted in the IGC will be provided.¹⁰

3.2 Dative Absorption in Subject-to-Object Raising

In total, the searches in the IGC yielded 144 examples of dative absorption compared to 2647 cases of dative preservation. Examples of dative absorption in subject-to-object raising thus accounted for 5% of all the examples. The results are presented in Table 1 below. Only the verbs that showed more than twenty examples, either with the absorption or preservation of the dative case, are listed here.¹¹ The verbs are arranged here based on the rate of dative case absorption:

Table 1: Dative Absorption and Preservation in Subject-to-Object Raising.

Dative subject verb (in infinitive)	Examples of dative absorption	Examples of dative preservation	Total number of examples	Percentage of case absorption of total examples
<i>vera ábótavant</i> 'be incomplete'	17	53	70	24%
<i>takast</i> 'succeed'	42	183	225	19%
<i>mistakast</i> 'fail'	14	79	93	15%
<i>vera brugðið</i> 'be dismayed'	5	40	45	11%
<i>líka (við)</i> 'like'	3	31	34	9%
<i>finnast</i> 'think'	15	208	223	7%
<i>líða</i> 'feel'	21	291	312	7%
<i>þykja</i> 'feel'	6	97	103	6%
<i>fækka</i> 'decrease'	3	131	134	2%
<i>bregða</i> 'be startled'	2	130	132	2%

¹⁰ Here, the focus will be on the results of the corpus study, but not on specific details on individual search string and the design of various searches. All such information can be found in Svavarsdóttir (2023:20–30), with specific details about every search string and more methodological details.

¹¹ A comprehensive list of all the verbs that were examined, along with a more detailed table showcasing the results of the searches, can be found in Appendix F in Svavarsdóttir (2023).

<i>lítast á</i> 'think of'	1	58	59	2%
<i>ffölga</i> 'increase'	4	401	405	1%
<i>henta</i> 'suit'	0	209	209	0%
<i>sæma</i> 'be fitting'	0	165	165	0%
<i>berast</i> 'receive'	0	164	164	0%
<i>ljúka</i> 'be concluded'	0	78	78	0%
<i>hraka</i> 'worsen'	0	56	56	0%
<i>sýnast</i> 'appear to oneself'	0	26	26	0%
...				
in total	144	2637	2781	5%

In (26), three search results exhibiting lexical dative absorption in subject-to-object raising are shown for comparison with three examples of standard case preservation in (27). The absorbed NPs in (26) and the preserved datives in (27) are shown in **bold**, and the infinitive dative subject verb is *italic*:

- (26) a. Ögmundur Jónasson segir **þingmenn** Vinstri grænna *þykja* vel koma til greina að lækka virðisaukaskatt á lyfjum.
Ögmundur Jónasson says members_{ACC} of-Left Green consider_{INF} well come into consideration to reduce VAT on medicines
'Ögmundur Jónasson says that members of the Left Green Party consider it a good idea to reduce VAT on medicines.'
- b. Ólafur segir **íbúana** *finnast* eðlilegt að greiða vegtoll ...
Ólafur says inhabitants-the_{ACC} find_{INF} fair to pay toll
'Ólafur says that the residents find it fair to pay toll ...'
- c. ... hann taldi **kærasta hennar, brotapolann**, *vera illa* við sig.
he believed boyfriend her victim-the_{ACC} be_{INF} hostile towards himself
'... he believed her boyfriend, the victim, to dislike him.'
- (27) a. Biskup Íslands ... segir kirkjunnar **fólki** *blöskra* það ...
Bishop of-Iceland ...says church's-the people_{DAT} be-appalled-by_{INF} that
'The Bishop of Iceland says that the community of the church is appalled by that...'
- b. Hvalaskoðunarmenn segja **hrefnum** *hafa fækkað*.
Whale-watching-workers say minkies_{DAT} have_{INF} become-fewer
'Whale watching workers say that minkies have become fewer ...'
- c. Vilhjálmur segir **siðferðilegum álitamálum** *ffölga* ...
Vilhjálmur says ethical problems_{DAT} increase_{INF}
'Vilhjálmur says that the number of ethical problems is increasing ...'

Since the majority of search results from the IGC belong to collections such as legal documents, parliamentary speeches, and news—which are formal, proofread texts—it was not unexpected that there was a disparity between the results from the IGC and those obtained from the judgment tasks, and that case absorption generally appeared to be less widespread according to

the corpus study than the judgment tasks.¹² That being said, let us now turn to the results of the corpus study.

3.3 Case Absorption in Subject-to-Subject Raising

3.3.1 Accusative Absorption

A corpus search on accusative preservation and absorption in subject-to-subject raising gave 49 instances of lexical accusative absorption, where nominative replaced accusative, but only 15 examples were found in the corpus of the standard accusative preservation. In (28), three instances of absorption are juxtaposed with three examples of case preservation in (29):

- (28) a. **Raunveruleikastjarnan** Khloe Kardashian er **sögð** hafa
langað heim til Los Angeles ...
 Reality-TV-star-the_{F.SG.NOM} Khloe Kardashian is said_{PAST.PART.F.SG.NOM} have_{INF}
 wanted home to Los Angeles
 'The reality TV star Khloe Kardashian is said to have wanted to go home to Los Angeles ...'
- b. ... er **hann sjálfur** **sagður** hafa *rekið* í rokastans ...
 is he self_{M.SG.NOM} said_{PAST.PART.M.SG.NOM} have_{INF} drifted to amazement
 '... himself, he is said to have been flabbergasted ...'
- c. **Hann** er **sagður** *skorta* þá manngerð ... sem ætlast sé til
 af forseta Bandaríkjanna
 He_{NOM.M.SG.} is said_{PAST.PART.M.SG.NOM} lack_{INF} the character which expected is
 of president of-United-States-the
 'He is said to lack the qualities expected of the President of the United States.'
- (29) a. **Þá** er **talið** *skorta* virðingu fyrir bráðinni.
 Them_{M.PL.ACC} is believed_{PART.N.SG.NOM} lack_{INF} respect for pray-the
 'They are believed to lack respect for the pray ...'
- b. **Krónprinsa** Arabíuríkjanna tveggja ... er **sagt**
greina á um stefnu ríkjanna ...
 Crown-princes_{M.PL.ACC} of-Arab-Republics two is said_{PAST.PART.N.SG.NOM}
 disagree_{INF} on stand of-republics-the
 'The crown princes of the two Arab Republics are said to disagree on the republics'
 stand ...'
- c. ... er **Diageo** t.d. **talið** *vanta* léttvín á sölulistann
 ... is Diageo_{MC.SG.ACC} e.g. believed_{PAST.PART.N.SG.NOM} lack_{INF} wine on sales-list-the
 'Diageo is e.g. believed to lack wine on the sales list.'

¹² Because of this high percentage of formal texts, the corpus results are less likely to exhibit variations that do not conform to the standard. Therefore, these texts may not always provide a realistic representation of the extent of a particular variation. In contrast, the judgment tasks rely on individual assessments without systematic corrections of deviations from the standard.

A total of 64 examples were found of subject-to-subject raising with an infinitive of an accusative subject verb. Given the limited number of examples, the statistical presentation of the search results is not included in a table.

Most accusative subject verbs yielded more examples of case absorption than preservation in subject-to-subject raising. These results align with what Rögnvaldsson (2015) pointed out in his lecture, i.e., that there were almost no examples to be found of subject-to-subject raising of accusative NPs. The verb *skorta* 'lack' exhibited significantly more instances of absorption compared to other accusative subject verbs, making up almost half of all examples of lexical accusative absorption. There is no obvious explanation for that. Although dative substitution has been noted with the verb (see, for example, Viðarsson, 2009), no studies have indicated a preference for nominative substitution. Furthermore, as will be discussed later, raising verbs like *virðast* 'seem' do not demonstrate nearly as much case absorption in subject raising.

In previous studies on case marking variations in Icelandic, it has been noted that non-standard variations are less likely to appear in the most common verbs and more likely to appear in the less common ones (see, e.g., Jónsson & Eypórsson 2003). This is because the more frequently speakers encounter specific verbs, the easier it becomes for them to acquire the case marking pattern. In other words, the rarity of the verb *skorta* might contribute to the level of variation observed in the raising construction. Other more common accusative subject verbs yielded fewer examples of lexical case absorption.

3.3.2 Dative Absorption

A total of 69 examples were found of subject-to-subject raising with a dative subject verb in the infinitive. Among them, 27 demonstrated lexical dative absorption, accounting for almost 40% of the total number of examples. The dative subject verbs that provided examples with dative absorption include *blæða* 'bleed', *finnast* 'think', *heilsast* 'fare', *hugnast* 'like', *líða* 'feel', *líka við* 'like', *lítast* 'like', *mistakast* 'fail', *takast* 'succeed', and *þykja* 'feel'. The verb *líka við* exhibited the highest number of examples, totaling five. In (30) below, three instances of dative absorption are presented for comparison with three instances of standard dative preservation in (31):

- (30) a. **Kanye West, fyrrverandi eiginmaður** Kim Kardashian, er **sagður**
finnast hann algerlega hjálparvana ...
 Kanye West, former husband_{M.SG.NOM} of-Kim Kardashian, is said_{PAST.PART.M.SG.NOM}
 feel_{INF} himself completely helpless
 'Kanye West, the ex-husband of Kim Kardashian, is said to feel completely helpless.'
- b. **Pence** er **sagður** ekki *hugnast* þessi leið.
 Pence_{M.SG.NOM} is said_{PAST.PART.M.SG.NOM} not like this plan
 'Pence is said to dislike this plan.'
- c. **Filippus** er **sagður** *þykja* Karl vera allt of veikgeðja.
 Philip_{M.SG.NOM} is said_{PAST.PART.M.SG.NOM} find_{INF} Charles be way too weak-willed
 'Philip is said to find Charles to be way too weak-willed.'

- (31) a. **Tímabili** hellenískrar heimspeki er yfirleitt **talið** *ljúka árið*
 Period_{N.SG.DAT} of-Hellenistic philosophy is usually believed_{PAST.PART.N.SG.NOM} end_{INF} year
 31 f.Kr. eða 27 f.Kr. ...
 31 BC or 27 BC
 'The period of Hellenistic philosophy is usually believed to have ended in 31 BC or 27 BC.'
- b. ... **barninu** er **talið** *bregða mjög í föðurætt*"
 ... child-the_{N.SG.DAT} is believed_{PAST.PART.N.SG.NOM} appear_{INF} very in father's-side"
 'the child is believed to strongly resemble its father's side'...'
- c. ... er **Theresu May** **forsætisráðherra** sagt *ofbjóða*
 ásakanir af því sem þar fór fram.
 ... is Theresa May_{F.SG.ACC} prime-minister said_{PAST.PART.N.SG.NOM} be-appalled-by_{INF}
 allegations of that which there went on
 'Prime Minister Theresa May is said to be appalled by the allegations about what happened there.'

If the percentage of absorption examples with dative subject verbs is compared with that of accusative subject verbs, the former exhibit fewer instances of absorption, accounting for approximately 40% absorption with dative subject verbs in contrast to 77% with accusative subject verbs. This difference is not surprising when considering that speakers are generally more acquainted with constructions featuring a dative passive subject than those with accusative passive subjects. Therefore, speakers should find it easier to acquire patterns involving dative passive subjects.¹³ A 'simple' passive (i.e., without the raising) can have a subject in the lexical dative case (10b), while the lexical accusative case on a passive subject does not occur in any other syntactic context apart from the subject-to-subject raising discussed here. In all other constructions, the accusative is absorbed.

3.4 Comparison with other Constructions

The statistics presented above indicate that oblique subject-to-subject raising with verbs of saying and believing is not common in Icelandic. However, these statistics specifically pertain to raising with verbs of saying and believing (also called ACI verbs). Therefore, to get a better idea of the bigger picture, other subject-to-subject raising constructions with oblique subject verbs should also be considered, particularly those involving raising verbs such as *virðast* 'seem' and *reynast* 'prove to be'. In this section, I will show that comparison with these raising verbs indicates that the construction with raising verbs such as *virðast* and *reynast* is more common than subject-to-subject or subject-to-object raising with verbs of saying and believing, especially when it comes to oblique subjects. Additionally, lexical case absorption appears to be relatively less frequent with raising verbs such as *virðast* and *reynast* than with verbs of saying and believing. Here, however, it is worth emphasizing that raising with verbs like *virðast* is only comparable to subject-to-subject raising with verbs of saying and believing, and not

¹³ The connection between construction frequency and language change within the context of language acquisition will be further explored in later sections. In essence, the concept suggests that the less frequently children are exposed to a particular form or construction, the more challenging it becomes for them to acquire and subsequently transmit it to succeeding generations. This process continues until there are few, if any, learners remaining.

subject-to-object raising, because in the latter construction, the NP does not move to the subject position of the matrix clause, but to its object position (which is not the case for raising with raising verbs like *virðast*). The comparison is therefore conducted by examining the results of searches like those in section 3.3, where the passive form of the verb of saying or believing is replaced by a raising verb such as *virðast*. For the time being, there is only space to provide a few samples, giving an idea of the bigger picture, for comparison with the verbs of saying and believing. One accusative subject verb was therefore examined with a raising verb, along with one dative subject verb. The verbs *skorta* 'lack' (ACC) and *mistakast* 'fail' (DAT) were selected for this purpose.¹⁴

Skorta yielded a total of 144 results of subject raising with the raising verb *virðast*. Among these, 85% of the examples demonstrated case preservation, while the remaining 15% exhibited lexical case absorption. This starkly contrasts the findings in section 3.3.1 on subject-to-subject raising with verbs of saying and believing, where nearly 83% of the *skorta* examples exhibited absorption and just over 17% showcased case preservation. Similarly, when the dative subject verb *mistakast* was examined with the raising verb *virðast*, the search gave 30 examples of subject raising, all of which maintained case preservation. This stands in contrast to the raising with a verb of saying or believing, where four out of five examples revealed lexical case absorption.¹⁵ This brief search thus suggests that lexical case absorption is considerably more prevalent in subject raising with verbs of saying and believing compared to subject raising verbs like *virðast*. Possible reasons for this disparity will be further explored in later sections.

Another comparison relevant here is that with explanatory clauses (or *að* 'that'-clauses), given the fact that all examples of raising infinitives with verbs of saying and believing can be paraphrased as that-clauses in Icelandic (cf. (6) in section 2.1). As explained in more detail in Svavarsdóttir (2023:30–33), a corpus study shows that in addition to being significantly more common than raising infinitives with verbs of saying and believing, Icelandic that-clauses are proportionately even more common than the infinitival clauses when the verb of the daughter sentence takes a non-nominative subject. In other words, the difference in frequency between the two constructions that verbs of saying and believing can take becomes even more significant in this context, suggesting that Icelandic speakers are even less likely to choose subject-to-object or subject-to-subject raising constructions when lexical subject cases are involved.

¹⁴ The following search strings are based on the one on p. 25 (example 37) in Svavarsdóttir (2023). Here is the one for the accusative subject verb *skorta* is the following:

- i. Case is NOM/ACC
- ii. Baseform is *virða* and voice is MIDDLE
- iii. 0–3 words in between
- iv. Word is *skorta/skort*

An example of case preservation was *Lögmánninn*_{ACC} *virðist ekki skorta sjálfstraust* 'The lawyer doesn't seem to lack self confidence' (*DV.is*, 2014) but an example of lexical case absorption was *Bjarni Ben*_{NOM} *virðist skorta sölumannshæfileikana* 'Bjarni Ben seems to lack the talents of a salesman' (*Málefni.is*, 2009). The search string for dative subject verb *mistakast* is the following:

- i. Case is NOM/DAT
- ii. Baseform is *virða* and voice is MIDDLE
- iii. 0–3 words in between
- iv. Word is *mistakast/mistekist*

An example found of case preservation is e.g. *Heimdalli*_{DAT} *virðist hafa mistekist að læra af hrúninu* 'Heimdallur seems to have failed to learn from the financial crisis,' (*DV.is*, 2009) but no examples were found of lexical case absorption in this particular search.

¹⁵ Cf. *Appendix F* in Svavarsdóttir (2023:67–78).

4 Grammaticality Judgments

4.1 Methodology and Variables

To get more precise answers to the question of to what extent Icelandic speakers accept a structural case instead of a lexical one in subject-to-object and subject-to-subject raising with infinitives of accusative and dative verbs, grammaticality judgment tasks were administered to over 1000 native Icelandic speakers. Given the limited number of examples found in the corpus study, the judgment tasks played a crucial role in this study.¹⁶

The survey encompasses two primary variables: firstly, case, which involves either preservation or absorption of the lexical case, and secondly, the position of the nominal, which determines whether it is the object or subject within the matrix clause (i.e., in the active or passive voice). As a result, there was a total of six types of relevant sentences:

Table 2: Six types of judgment sentences.

subject-to-object raising with a dative subject verb	i.	preservation	subject	verb of saying/believing in the active voice	DAT	INF dative subject verb	...
			e.g. <i>Kennarinn taldi krökkunum</i> leiðast fyrirlesturinn. 'The teacher believed the kids _{DAT} to be bored by the lecture.'				
subject-to-object raising with a dative subject verb	ii.	absorption	subject	verb of saying/believing in the active voice	ACC	INF dative subject verb	...
			e.g. <i>Kennarinn taldi krakkana</i> leiðast fyrirlesturinn. 'The teacher believed the kids _{ACC} to be bored by the lecture.'				
subject-to-subject raising with an accusative subject verb	iii.	preservation	ACC	verb of saying/believing in the passive voice (non-agreement)		INF accusative subject verb	...
			e.g. <i>Lögregluna er talið</i> skorta mannafla. ' The police _{ACC} is believed to lack force.'				
subject-to-subject raising with an accusative subject verb	iv.	absorption	NOM	verb of saying/believing in the passive voice (agreement)		INF accusative subject verb	...
			e.g. <i>Lögreglan er talin</i> skorta mannafla. ' The police _{NOM} is believed to lack force.'				
subject-to-subject raising with a dative subject verb	v.	preservation	DAT	verb of saying/believing in the passive voice (non-agreement)		INF dative subject verb	...
			e.g. <i>Henni er sagt</i> þykja vænt um nemendur sína. ' She _{DAT} is said to be fond of her students'				
subject-to-subject raising with a dative subject verb	vi.	absorption	NOM	verb of saying/believing in the passive voice (agreement)		INF dative subject verb	...
			t.d. <i>Hún er sögð</i> þykja vænt um nemendur sína. ' She _{NOM} is said to be fond of her students'				

To achieve these combinations, verbs of saying and believing were chosen that take subject-to-object raising in the active voice but can also occur in the passive voice with subject-to-subject

¹⁶ That being said, it is important to note that while judgment tasks are valuable, they also have their limitations, like other research methods. Although no shortcomings were identified in the surveys presented here, it is generally recognized that various factors can influence respondents, leading them to answers based on language standards and norms rather than their own linguistic intuition. Issues such as the phrasing or content of sentences may also affect participants' responses (see, for example, Þráinsson et al., 2013:53).

raising. The two most common verbs, *segja* 'say' and *telja* 'believe', were therefore chosen, but other verbs of saying and believing with which the construction occurs are much less frequent, if not ungrammatical, in the passive voice. Given the decision to use only these two verbs in all the test sentences, it was evident that the test sentences had to be distributed widely throughout the judgment task so that the two verbs, *segja* and *telja*, would not be so prominent as to expose the research topic to the participants. Consequently, it was decided to divide the survey into two, with each participant taking only one of the two sets of judgment tasks. Each combination of the six appeared once in each survey.

Various factors were taken into consideration during the design of the test sentences, with a focus on maintaining consistency in their structure. The matrix clause was kept as simple as possible, as seen in combinations outlined in Table 2. Additionally, the past participle in the passive form of the verbs of saying or believing always contained the same number of syllables, achieved by selecting the feminine singular form of their subject. This resulted in pairs like *sögð*_{PAST.PART.F.SG.NOM} for sentences demonstrating case absorption and nominative agreement, and *sagt*_{PAST.PART.N.SG.NOM} for cases displaying non-agreeing oblique case preservation—both forms being monosyllabic. For instance, *sagðir*_{PAST.PART.M.PL.NOM} and *sagt*_{PAST.PART.N.SG.NOM} would have displayed a dissonance of two syllables in the former and one in the latter. Neuter nominals were intentionally omitted from the judgment sentences due to their nominative-accusative syncretism (e.g., *Barnið*_{NOM/ACC} *er talið langa heim* 'The child is believed to want to go home').¹⁷

4.2 The Structure of the Grammaticality Judgment Tasks

As mentioned before, each survey consisted of six test sentences: three with the original lexical case preservation and three with lexical case absorption. Additionally, there were four filler sentences for each test sentence. Therefore, the test sentences accounted for one-fifth (20%) of the total number of sentences, which amounted to thirty in each set of grammaticality judgment tasks.¹⁸ Filler sentences primarily served the purpose of concealing the survey's main topic to the participants. This was achieved by incorporating various other grammatical phenomena in the test sentences, in addition to those concerning preservation or absorption of the lexical case.¹⁹ Among these filler sentences, three were used to decide the overall reliability of the participants' responses. This was done by asking individuals to judge, on the one hand, sentences that should be grammatical to most or all Icelandic speakers, and on the other, those that should be unequivocally ungrammatical. If responses to these three sentences contradicted these expectations, all responses from that participant were excluded from the overall statistical analysis. Participation figures will be further elaborated on in the subsequent section.

Test sentences were evenly distributed throughout the surveys, with careful attention given to ensuring that they were not presented at too brief an interval. Test sentences were structured so that the sentence displaying lexical case absorption in one survey was presented

¹⁷ Syncretism will be discussed in section 6.4.

¹⁸ The survey was designed to be completed within five to ten minutes. The goal was to ensure that as many people as possible could finish it without finding the length burdensome or abandoning it halfway. According to the participants who took the preliminary surveys, this timeframe was accurate.

¹⁹ When determining which syntactic phenomena to incorporate into the filler sentences, earlier studies with a similar structure were taken as models (specifically Tómasdóttir 2021, Snorrason 2021, and Friðriksdóttir 2022).

with standard case preservation in the other. This approach allowed for a direct comparison between different speakers' assessments of lexical case preservation and absorption in minimal pairs. For example, sentence (32a) appeared in the first survey for one group of participants, and the corresponding sentence (32b) in the second for another group of participants:

- (32) a. Friðrik taldi **hana** *finnast* maturinn vondur.
 Frederick believed her_{ACC} to-find food-the bad
- b. Friðrik taldi **henni** *finnast* maturinn vondur.
 Frederick believed her_{DAT} to-find food-the bad

When participants were asked to evaluate the sentences, they were provided with three response options; either "Yes: A normal sentence, I could say this," or "?: Questionable sentence, I would hardly say it like this" or "No: An unacceptable sentence, I would not say it like this."

The surveys were administered using the online service *Google Forms*. Prior to the distribution of the main surveys, a preliminary survey was shared with a selected group of native Icelandic speakers to identify any areas that required improvement, such as unclear instructions, technical issues, excessive survey length, or any patterns in their survey responses that suggested the need for adjustments. No major issues were found, and the main survey was subsequently administered.²⁰

4.3 Execution

As mentioned earlier, the grammaticality judgment tasks were divided into two surveys. Instead of each participant answering sixty questions in one lengthy survey, each participant was only asked to complete one of the two surveys, i.e., thirty sentences.²¹ The final participation figures were 547 for the first survey and 675 for the second, totaling 1222 individuals. Among these, the answers of 1054 participants were utilized, with 482 from the former and 572 from the latter.²²

Before initiating the data processing, the responses of certain participants were excluded. As previously stated, three filler sentences in each survey were employed as benchmarks—namely, sentences that were expected to be perfectly grammatical or entirely ungrammatical to most, if not all native Icelandic speakers. For instance, an example of a perfectly grammatical sentence is *Orwell var ekki kommúnisti* 'Orwell was not a communist', while an example of a completely ungrammatical sentence is **Túlípanarnir hún keypti eru*

²⁰ More details regarding the structure of the preliminary survey and the main survey can be found in Appendixes A and B in Svavarsdóttir (2023).

²¹ To ensure clarity regarding participation in only one survey (not both), a systematic alphabetical order was followed for the distribution. Participants with first names starting from A to H were assigned the first set of judgment tasks, while those with names starting from I to Ö were directed to the second set. Furthermore, the survey instructions explicitly stated that each participant should take part only once. With this strategy, the aim was to achieve a relatively even distribution of participants for each survey.

²² The surveys were posted on the social media platforms Facebook and Twitter on Tuesday, March 14th, 2023, and remained open for nearly two days. They were shared on the author's profile where many friends and family members helped spread it by further sharing it to their profile. The processing of these responses will be explained in the following section.

rauðir.²³ If a participant provided answers that contradicted the anticipated responses for any of these sentences, all their responses were removed. The survey was structured in a manner that prevented participants' answers from being submitted unless they completed the entire survey, thus obviating the need to delete the responses of those who only answered a part of the questions. The final numbers were 482 responses from the first survey and 572 from the second, totaling 1054, representing over 86% of the initial number of participants.

Participants were asked to provide their age, gender, and the highest level of education they had completed. The social demographics of the participants in the two surveys were similar: in both surveys, 76% of the participants were women, and the most prevalent age range was 20–29 years. The education of the participants was notably high, with approximately 60% having completed either undergraduate studies at the university level, a master's degree, or a doctorate. The subsequent section will provide a more detailed discussion on social variables and their impact on the participants' responses.²⁴

5 Primary Results

Previous studies on variations in case marking of oblique subjects in Icelandic have demonstrated that uncommon case patterns tend to yield to more prevalent ones. Notably, among these studies, several observations have been made regarding the 'dative sickness' or 'dative substitution' in Icelandic, as outlined in Svavarsdóttir (1982, 2013), Jónsson & Eypórsson (2003), Nowenstein (2012, 2014), among others. The variation study most relevant to the present paper is Benediktsdóttir's (2023) forenamed study on dative absorption in the passive voice,²⁵ which concluded that since no participants in the judgment tasks rejected all instances of case preservation, lexical dative case absorption in the passive voice still is a case marking variation alongside dative case preservation. However, that is not the case in the current study, where lexical accusative and dative absorption in subject raising is under consideration. In the grammaticality judgment tasks, a significant portion of participants (14% in the first judgment task and 18% in the second) rated all examples of standard case preservation as ungrammatical.

In total, two different sentences were tested for each of the three oblique subject raising constructions under consideration: two demonstrating dative subject-to-object raising (e.g., *Kennarinn taldi krökkunum_{DAT} leiðast fyrirlesturinn*), two accusative subject-to-subject raising (e.g., *Lögregluna_{ACC} er sagt skorta mannafla*), and two dative subject-to-subject raising (e.g., *Henni_{DAT} er sagt þykja vænt um nemendur sína*). For every sentence exhibiting lexical case preservation, a corresponding sentence demonstrating absorption was included in the other set of judgment tasks. Interestingly, none of the sentences received notably favorable responses. However, both the sentences with lexical case preservation and the ones with absorption garnered a considerable number of respondents selecting the answer option '? = I would hardly

²³ The sentence is ungrammatical in Icelandic because it lacks a relative conjunction *sem* (or the relative pronoun *hverja*) at the beginning of the relative clause:

*Túlípanarnir	__	hún	keypti	eru	rauðir.
Tulips-the		she	bought	are	red

²⁴ A more detailed elaboration can be found in Appendix C in Svavarsdóttir (2023).

²⁵ In sentences like the one shown in (14).

say it like this.' On average, 26.8% of participants selected this option for each test sentence, a notably high percentage.

The subsequent section will delve deeper into the responses to the test sentences, focusing first on those demonstrating subject-to-object raising with a dative subject verb, followed by the sentences illustrating subject-to-subject raising with an accusative subject verb. Lastly, the analysis will examine the responses to sentences showcasing subject-to-subject raising with dative subject verbs.

5.1 Dative in Subject-to-Object Raising

The construction that received the most positive judgments was dative subject-to-object raising. These were the standard sentences (1.8) *Kennarinn taldi krökkunum_{DAT} leiðast fyrirlesturinn* 'The teacher believed the kids to be bored by the lecture' and (2.16) *Friðrik taldi henni_{DAT} finnast maturinn vondur* 'Frederick believed her to dislike the food', which were judged grammatical by an average of 36.8% of the participants. However, it is noteworthy that the percentage of participants who found the same sentences to be ungrammatical was not much lower, at 34.1%. See Figure 1 below.

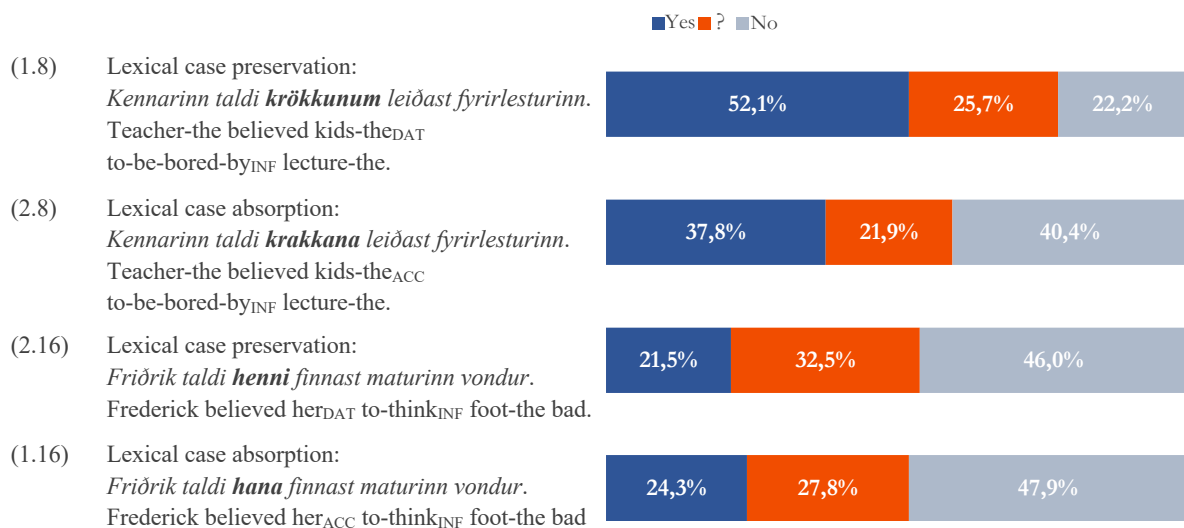


Figure 1: Dative Preservation and Absorption in Subject-to-Object Raising

There was a notable disparity between the two sentence pairs; the first one was more favorably received in both versions. The reason for this contrast is uncertain, but it might be linked to the fact that the verb *finnast* 'think' takes a more complex construction compared to *leiðast* 'be bored'. Following *finnast*, there is the small clause *maturinn góður*. Conversely, the verb *leiðast* only takes the direct object *fyrirlesturinn*; in other words, the sentence structure is simpler.

5.2 Accusative in Subject-to-Subject Raising

Sentences demonstrating subject-to-subject raising with oblique subjects received significantly lower ratings compared to the examples of subject-to-object raising discussed in the previous

section, especially with accusative subject verbs. These included the sentence (1.4) *Ágústu er sagt minna að Bretarnir hafi verið vinalegir* and (2.27) *Lögregluna er sagt skorta mannafla* (cf. glossaries in Figure 2 below). On average, these sentences obtained a 15.3% approval rate when displaying the standard case preservation, contrasting with a 63.1% rating them as ungrammatical. As emphasized before, it is plausible that the reason for the low ratio of accusative preservation in this construction is the unfamiliarity of speakers with the subject of a passive construction being in the accusative case, as it does not occur in any other syntactic context apart from this.

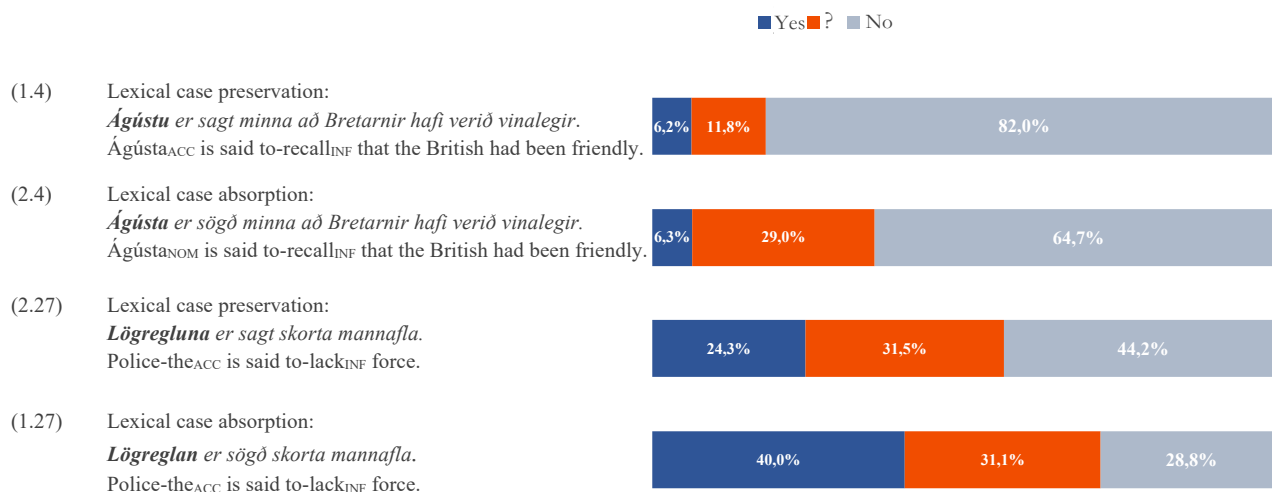


Figure 2: Accusative Preservation and Absorption in Subject-to-Subject Raising

As illustrated in Figure 2 above, the absorption example *Lögreglan er sögð skorta mannafla* (1.27), with a nominative subject instead of an accusative one, received a notably higher number of positive ratings compared to the other three sentences. This notable approval of the lexical accusative absorption with the verb *skorta* 'lack' aligns with the findings from the corpus study.

Test sentences featuring the accusative subject verb *minna* 'recall' received the poorest judgments among all the tested sentences, regardless of preservation or absorption. While there are examples of dative substitution with the verb (cf. Þráinsson et al., 2015), this scarcely accounts for the unfavorable judgments regarding the accusative preservation, as the subject *Ágústa* exhibits accusative-dative syncretism, with its form being identical in both the accusative and dative case. Moreover, it is worth noting that, according to the Icelandic Frequency Dictionary, the verb *minna* 'recall' ranks among the most common accusative subject verbs. Thus, one might have expected it to receive higher judgments with the standard accusative subject than it did. Consequently, the low ratings cannot be attributed to dative substitution or the verb's low frequency. Instead, it is more likely that the nature of the complement within the infinitival clause, i.e., whether it is a simple nominal or an explanatory clause, is a contributing factor. The distinction in the speaker's assessments of raising constructions with *skorta* and *minna* would then primarily be attributed to the fact that the verb *minna* takes a more complex complement, namely a whole explanatory clause, as opposed to the simple accusative direct object that *skorta* takes.

5.3 Dative in Subject-to-Subject Raising

Sentences demonstrating dative subject-to-subject raising were the third and final construction examined in this study. As anticipated based on the findings from the corpus study, these sentences received comparatively more positive judgments on average than those demonstrating accusative subject-to-subject raising. The distribution of judgments regarding dative preservation and absorption in subject-to-subject raising is depicted in Figure 3:

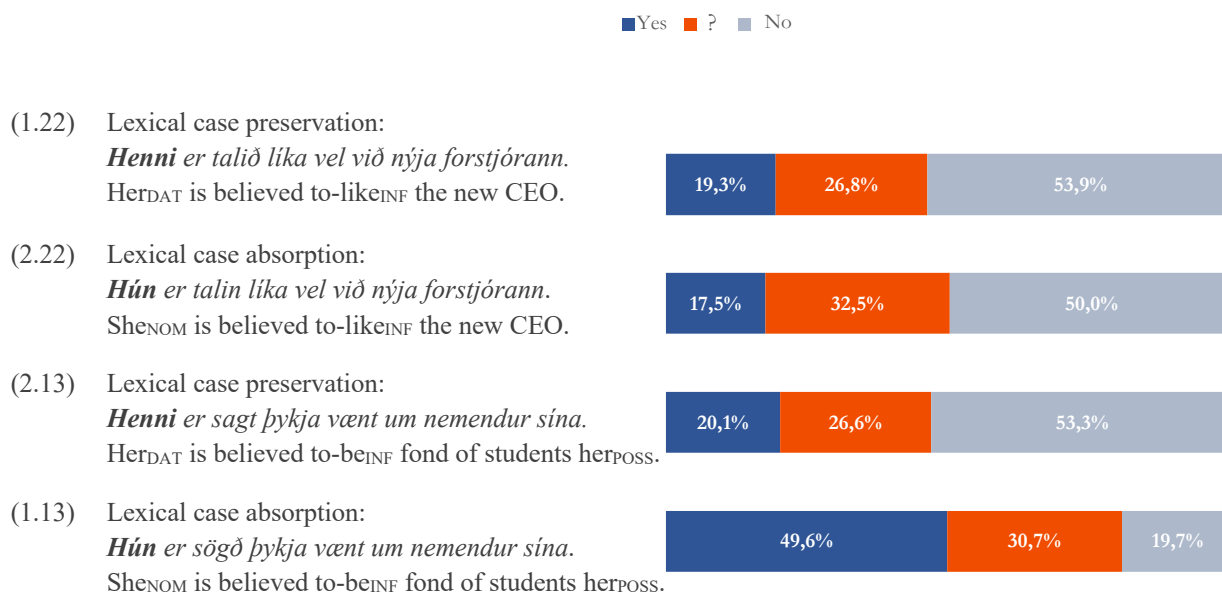


Figure 3: Dative Preservation and Absorption in Subject-to-Object Raising.

Sentences demonstrating dative preservation had approximately a 20% approval rate but was rejected by nearly 55% of the participants. Sentence (2.22)—with a lexical dative absorption and a structural nominative subject—yielded similar judgments. However, almost half of the participants found sentence (1.13) grammatical, where the nominative replaces the accusative in the subject position of the matrix clause. The reason for this high acceptance rate is unclear, but it may be due to so-called garden-path effects, i.e., that participants may have been unsettled by the similarity between the example of dative preservation, *Henni er sagt* + INF ('She is said to...'), and a 'simple' passive construction like *Henni er sagt að* + INF ('She is told to ...'), where the dative subject corresponds to the indirect object in the active voice. The only distinction between the S-Structures of these two constructions is the infinitive particle *að*.²⁶ That being said, further observations are necessary to determine the exact cause.

²⁶ These garden-path sentences would then lead the reader to subconsciously anticipate the most likely continuation of the sentence. However, confusion arises when the continuation diverges from what was predicted. Hence, it can be assumed that the matrix clause *Henni er sagt...* leads the speaker to expect a control infinitive with an infinitive particle, where the dative *henni* corresponds to the indirect object of the verb *segja* 'say'. However, the sentence suddenly becomes ungrammatical when it deviates from the expected pattern; in this case, the absence of the infinitive particle *að* 'to', which would be present in the 'simple' passive construction with a control infinitive, as in *Henni er sagt að þykja ...* 'She is told to think...'.

5.4 Social Variables

The participants' age and education were the two social variables that were shown to play a significant role in this study, while gender did not seem to have any impact.²⁷ The statistical significance of the difference in responses based on age and education was assessed using a chi-squared test (χ^2 test) conducted in RStudio (R Core Team 2023).²⁸ The significance level was set at 5%, implying that variations between different groups were deemed significant if the p-value was 0.05 or lower. The p-value then indicates the probability of the null hypothesis²⁹ being accurate. For instance, when the p-value is 0.05, there is a 95% probability of rejecting the null hypothesis. Additionally, apart from this p-value, a correlation coefficient denoted as 'r' was calculated. The value of 'r' falls within the range of -1 to +1, where -1 indicates a perfect negative correlation, +1 represents a perfect positive correlation, and 0 implies no correlation. First, the study explored the potential correlation between participants' ages and their positive evaluation of sentences demonstrating lexical case absorption. Secondly, it examined the correlation between participants' education levels and their positive evaluation of the same sentences. In each case, Fields' scale (2005:32) was employed to assess whether the correlation was high or low. Fields' scale indicates that an r-value between 0.1 and 0.3 suggests a weak correlation, while a range of 0.3 to 0.5 indicates a moderately strong correlation. A value of 0.5 and above suggests a strong correlation. With this in mind, we will now delve into the findings of the grammaticality judgment tasks.

There was a statistically significant difference in the number of positive answers both regarding the participants' ages and education levels in all but one test sentences. The sentence that showed no statistically significant difference at all was one of two examples that showed lexical accusative absorption in subject-to-subject raising: (3) *Ágústa_{NOM} er sögð minna að Bretarnir hafði verið vinalegir*. Most of the respondents, regardless of education or age, found that sentence ungrammatical, but only 36 (6.2%) found it grammatical. The possible reasons for this were discussed in section 5.2.

Table 3 shows the percentage of positive judgments of lexical case absorption in subject raising, classified by the participants' age. Here, *p* stands for p-value, *r* for r-value, and *N* for the total number of responses. The highest percentage of positive responses for each sentence is shown in bold:

²⁷ A detailed overview of the social variables is shown in *Appendix C* in Svavarsdóttir (2023).

²⁸ I would like to thank Guðrún Svavarsdóttir and Árni Kristjánsson for their invaluable assistance with statistical calculations and data processing in RStudio.

²⁹ In statistics, the term 'null hypothesis' refers to a statement that can be refuted or rejected based on the existing data. For instance, when examining whether there is a distinction between the responses of various age groups, the null hypothesis would suggest that there is no difference in the participants' assessment of lexical case absorption sentences with regard to their age. This null hypothesis can be refuted by conducting a chi-square test, revealing a p-value lower than 0.05.

Table 3: Positive judgment of lexical case absorption in subject raising, classified by the participants' age.

Lexical case absorption sentence	≤19	20–29	30–39	40–49	50–59	≥60	<i>p</i>	<i>r</i>	N
(2.8) Kennarinn taldi krakkana leiðast fyrirlesturinn. 'The teacher believed the kids _{DAT} → _{ACC} to be bored by the lecture.'	62.1	53.4	32.4	28.6	24.6	26.0	.000	.320	572
(1.17) Friðrik taldi hana finnast maturinn vondur. 'Frederick believed her _{DAT} → _{ACC} to find the food bad.'	21.4	41.5	24.7	23.1	9.0	7.8	.000	.292	482
(2.4) Ágústa er sögð <i>minna að Bretarnir</i> hafi verið vinalegir. 'Ágústa _{ACC} → _{NOM} is said to recall that the British were friendly.'	3.4	3.6	5.7	8.6	12.3	8.8	.069	-.108	572
(1.28) Lögreglan er sögð <i>skorta</i> mannafla. 'The police _{ACC} → _{NOM} is said to lack force.'	42.9	50.3	47.2	40.4	25.6	27.0	.000	.202	482
(2.23) Hún er talin <i>líka</i> vel við nýja forstjóran. 'She _{DAT} → _{NOM} is believed to like the new CEO.'	37.9	19.7	21.0	12.9	10.8	8.8	.000	.140	572
(1.13) Hún er sögð <i>þykja</i> vænt um nemendur sína. 'She _{DAT} → _{NOM} is said to be fond of her students.'	42.9	69.2	48.3	46.2	37.2	30.0	.000	.270	482

As previously mentioned, and as is evident from the p-values in Table 3, a statistically significant difference was observed in the responses of various age groups for all sentences except sentence (2.4), *Ágústa_{NOM} er sögð minna að Bretarnir hafi verið vinalegir*. As expected, the lowest correlation was found for that same sentence. On the other hand, all the other test sentences exhibited some positive correlation between a younger age and a favorable assessment of absorption examples. The strongest correlation was observed in subject-to-object raising (sentences (2.8) and (1.17)), where a moderate correlation was identified between the positive evaluation of lexical case absorption examples and the participants' young age.

The results of the judgment tests regarding the participants' education levels are presented in Table 4 below. Similar to the age variable (as shown in Table 3), sentence (2.4) stood out, where differences in the participants' responses based on their education were not statistically significant. While statistically significant differences were noted between the groups for all other test sentences, the correlation was consistently low and notably lower than with the age variable shown in Table 3. Consequently, the participants' level of education appears to have some influence on their assessment of the absorption, but not as much as their age; see Table 4.

Table 4: Positive judgment of lexical case absorption in subject raising, classified by education levels.

Lexical case absorption sentence	Elementary school exam ³⁰	Trade school degree/journeyman's license	Matriculation examination ³¹	University diploma	Bachelor's degree	Master's degree	Ph.D. degree	p	r	N
(2.8) Kennarinn taldi krakkana leiðast fyrirlesturinn. 'The teacher believed the kids _{DAT} → _{ACC} to be bored by the lecture.'	51.6	28.6	49.1	27.8	38.7	27.3	19.0	.002	0.168	572
(1.17) Friðrik taldi hana finnast maturinn vondur. 'Frederick believed her _{DAT} → _{ACC} to find the food bad.'	32.4	21.4	37.8	14.3	23.3	14.7	18.2	.001	.171	482
(2.4) Ágústa er sögð minna að Bretarnir hafi verið vinalegir. 'Ágústa _{ACC} → _{NOM} is said to recall that the British were friendly.'	3.2	0.0	4.4	5.6	6.0	9.3	9.5	.649	-.088	572
(1.28) Lögreglan er sögð skorta mannafla. 'The police _{ACC} → _{NOM} is said to lack force.'	32.4	64.3	44.5	14.3	42.6	36.0	40.9	.004	.032	482
(2.23) Hún er talin líka vel við nýja forstjóran. 'She _{DAT} → _{NOM} is believed to like the new CEO.'	32.3	7.1	23.9	11.1	14.9	13.0	14.3	.031	.124	572
(1.13) Hún er sögð þykja vænt um nemendur sína. 'She _{DAT} → _{NOM} is said to be fond of her students.'	55.9	64.3	58.0	42.9	55.8	37.3	36.4	.007	.147	482

5.5 Judgments of Individual Participants

When examining individual responses, it becomes evident that there is a significant amount of intra-speaker variation. Most participants accepted some of the lexical case absorption examples but rejected others, suggesting the simultaneous presence of both lexical case preservation and absorption within their language. However, for each pair of absorption and preservation, there was also a group of participants that accepted neither type, rating the

³⁰ Equivalent to UK O levels.

³¹ Equivalent to UK A levels (usually finished around 19–20 years old).

sentences as either questionable or entirely ungrammatical. In the first set of judgment tasks, 69 participants (14%) found all three examples of standard case preservation to be ungrammatical, while in the second set, there were 86 (15%). Conversely, in the first set of judgment tasks, 56 participants (12%) found all examples of lexical case absorption to be grammatical, and in the second set, there were seven participants (1%).³² However, it was only in exceptional cases that the participants did both—rejecting all examples of case preservation and accepting all examples of absorption, with three such instances in the first survey and one in the second (both <1%).

This suggests that the majority of participants have both lexical case preservation and absorption in their language. Conversely, it must be assumed that some individuals have neither type in their language, as a total of 13 participants in the first survey (3%) rated all test sentences as ungrammatical, regardless of case preservation or absorption, and 27 in the second survey (5%). Moreover, the unusually high percentage of responses in the option “? = I would hardly say that” should be considered. In this section, I have examined the primary outcomes of the judgment tasks, and in the following section I will interpret these findings.

6 Discussions and Data Interpretation

6.1 Frequency and Case Absorption

As stated previously, the results of grammaticality judgment tasks, coupled with findings from the IGC corpus study, indicate that fewer Icelandic speakers find sentences with the standard dative or accusative case preservation in subject raising acceptable than anticipated based on existing literature (cf. Þráinsson 2005:427, 2007:183, Maling & Zaenen 1990). None of the six test sentences demonstrating case preservation in accusative or dative subject raising received over 50% acceptance in the judgment tasks. Among the explored case preservation patterns, the dative subject-to-object raising garnered the highest acceptance rate, while the accusative subject-to-subject raising was rated the lowest. Sentences showcasing lexical accusative case absorption achieved 40% and 50% acceptance, whereas the corresponding standard accusative case preservation sentences received only 24% and 20% acceptance. Thus, it is evident that lexical case absorption is prominent in subject raising, particularly in subject-to-subject raising. This lexical case absorption is significantly higher than in other NP-movements, such as those occurring in (simple) passive constructions and with raising verbs like *virðast* 'seem' where the NP is moved from object to subject position.

There may be various reasons for this, but it is likely that among other factors the frequency of these constructions has an effect. Previous studies on Icelandic case marking variation have demonstrated that the rarer a specific word or construction is, the more challenging it becomes for speakers to acquire (see, e.g., Jónsson & Eyþórsson 2003:21). Moreover, data from the IGC and the CHILDES database confirm that subject raising with verbs of saying and believing are rare, and indeed appear to be scarcely used or not at all in the language and ethnolinguistic community of Icelandic children during their language acquisition

³² The reason for this difference likely lies in the fact that, in the first survey, the sentence demonstrating dative absorption received considerably more favorable judgments compared to the latter survey..

(Strömquist et al., 1995).³³ Research on raising infinitives (not limited to Icelandic) and raising verbs in children's language acquisition suggest that children generally tend to acquire subject raising—along with other constructions involving more complex movements—later in their language acquisition compared to simpler constructions such as control infinitives (see, for instance, Mateu Martin 2016; Hirsch & Wexler 2007; Hirsch, Ortifelli, and Wexler 2008). Furthermore, Icelandic children generally acquire oblique subjects later in their language acquisition compared to nominative subjects (see, for instance, Sigurjónsdóttir 2008, Erlingsdóttir 2010, and Nowenstein 2023). This is significant in the context of arguments on language change, ranging from the writings of the Neogrammarians (Ge. *Junggrammatiker*) to generative grammarians, who have suggested that language change originates in the critical period of language acquisition (see, e.g., Lightfoot 1999 and Kroch 2005). This can then be attributed to the fact that children do not fully acquire the language of adult speakers, particularly the aspect of the language that does not conform to general rules, such as oblique subjects in Icelandic.

In line with this, the lexical case absorption was found to be greatest with the least common subject case tested, namely the accusative case, which is generally in decline as a lexical case for subjects in Icelandic. As already mentioned, subject-to-subject raising with verbs of saying and believing is also the only syntactic environment where accusatives can occur as a lexical case on passive subjects. Therefore, it was expected that accusative subject verbs would exhibit significant variation in subject-to-subject raising.

The same argument can be applied to explain why absorption is less prevalent in subject-to-object raising of datives in sentences such as *Kennarinn taldi krökkunum/krakkana leiðast fyrirlesturinn* ('The teacher believed the children_{DAT/ACC} to be bored by the lecture'). In a corpus study conducted using the IGC, subject-to-object raising was found to be significantly more common compared to the other two patterns under investigation. In total (irrespective of case preservation or absorption), the search yielded significantly more examples of subject-to-object raising than the combined occurrences of subject-to-subject raising of accusatives and datives, with 2781 examples of subject-to-object raising but only 132 examples of subject-to-subject raising.

6.2 Theta-Roles and Neutrality

While it has been suggested here that frequency plays a role in the variation observed in subject raising with verbs of saying and believing, it is unlikely that frequency alone is responsible for the high rate of lexical case absorption. When the movement found in subject raising is compared to NP-movement in the 'simple' passive construction (cf. Benediktsdóttir 2023) or to raising with verbs such as *virðast* 'seem' and *reynast* 'turn out', several factors can be pointed

³³ Rather than employing that construction, the children, along with adult speakers in their environment, used either explanatory clauses or, more commonly, direct speech, as demonstrated in the following examples from the CHILDES database:

CHI: nei hann er að segja ég vill [*] ekki fá fisk í matinn.
 no he is to say: _{INOM} want_{+FIN} not have fish for dinner.
 'no, he's saying: I don't want to have fish for dinner.'

CHI: xxx hann sagði ekki segja pabba .
 xxx he said: not tell dad.
 'he said: do not tell dad.'

out that may influence, in addition to frequency, the preservation of lexical cases in raising with verbs of saying and believing being poorer than in other types of movement.

Let us first look at a comparison of subject-to-subject raising with verbs of saying and believing (33) and the 'simple' passive (34):

- (33) a. ___ var talið [málfræðingnum_i skjátlast].
 was believed linguist-the_{DAT} be-mistaken_{INF}
 b. Málfræðingnum_i var talið [_{t_i} skjátlast].
 Linguist-the_{DAT} was believed be-mistaken
 'The linguist was believed to be mistaken.'
- (34) a. ___ var hrósað málfræðingnum.
 was praised linguist-the_{DAT}
 b. Málfræðingnum var hrósað ___.
 Linguist-the_{DAT} was praised
 'The linguist was praised.'

The consequence of the raising in (33) is that the dative subject *henni* 'her' stands in a different sentence from the dative subject verb *skjátlast* 'be mistaken', which assigns its theta-role. Instead, the DP is in the subject position of the matrix clause. Conversely, in the passive construction in (34), the movement occurs within the same sentence. There, the dative subject *henni* is moved from the object position of the verb *hrósa* 'praise' to the subject position of the same verb. In other words, the latter movement is simpler.

In section 3.4, it was also mentioned that lexical case absorption is more prevalent in subject-to-subject raising with verbs of saying and believing compared to raising verbs such as *virðast* 'seem'. The findings from the corpus study suggest that lexical case absorption in subject-to-subject raising in passives, such as *Henni*→*Hún er talin skjátlast* ('She_{DAT}→_{NOM} is believed to be mistaken'), is more common than case absorption with raising verbs, as in *Henni*→*Hún virðist skjátlast* ('She_{DAT}→_{NOM} seems to be mistaken'). However, the distinction between the two constructions is not comparable to the one noted above (i.e., with the passive NP-movement) since both constructions involve movement between clauses (and not within it, as with the passive construction):

- (35) a. ___ virðist [málfræðingnum_i skjátlast]. (before raising)
 seems linguist-the_{DAT} be-mistaken_{INF}
 b. Málfræðingnum_i virðist [_{t_i} skjátlast]. (after raising)
 Linguist-the_{DAT} seems be-mistaken
 'The linguist seems to be mistaken.'

In (35a), the dative subject *málfræðingnum* 'the linguist' precedes the case assigner *skjátlast* 'be mistaken', which assigns it its lexical case, and in (35b), the subject raises to the subject position of the matrix clause before the verb *virðast* 'seem'. Hence, the difference between the infinitival clause with the raising verb *virðast* 'seem' in (35) and the one with *telja* 'believe' in (35) can be assumed to be attributed to factors other than the raising itself.

On the other hand, there is a difference between the verbs that take the two constructions, i.e., raising verbs on the one hand, and verbs of saying and believing on the other. The primary distinction lies in the fact that raising verbs, such as *virðast* 'seem', are not capable of assigning their subject a theta-role, unlike verbs of saying and believing. Sentences like (35) *Málfræðingnum er talið skjáttlast* ('The linguist_{DAT} is believed to be mistaken'), imply that someone (unspecified) believes something, in this case that the linguist is mistaken. However, in (35) *Málfræðingnum virðist skjáttlast* (The linguist_{DAT} seems to be mistaken), one does not have to consider any such perceiver or experiencer for the meaning to be complete. In that sense, the raising verbs are more neutral than the verbs of saying and believing, and therefore it could be assumed that the former would be less likely to exert any influence on their subject (since they never do so anyways, unlike the verbs of saying and believing).

The influence that the verb of saying and believing has on its source would thus be to assign it its theta-role. Consequently, two theta-roles would be assigned, one in each clause, and as a result, it would also have to be assumed that the unexpressed subject in the infinitival clause was the co-referential PRO and not the trace *t*. This aligns with the previously mentioned hypothesis made by Rögnvaldsson (2015) that the lexical case absorption in subject-to-subject raising is a result of the fact that the infinitive is reinterpreted as a control infinitive.

6.3 Reinterpreting Raising as Control

In assuming that instances of lexical case absorption such as (28a)—repeated below as (37b)—are a result of the reinterpretation of the infinitive as a control infinitive, one must also consider that two theta-roles are assigned in the control infinitive in (37), instead of the single theta-role in the raising infinitive in (36):

- (36) Case preservation in subject-to-subject raising:
- a. ___ er sagt [**raunveruleikastjörnuna** langa heim til Los Angeles]. (D-Structure)
is said reality-TV-star-the_{ACC} want_{INF} home to Los Angeles
 - b. **Raunveruleikastjörnuna**_i er sagt [_t_i langa heim til Los Angeles]. (S-Structure)
Reality-TV-star-the_{ACC} is said want_{INF} home to Los Angeles
'The reality TV star is said to want to go home to Los Angeles.'
- (37) Reinterpretation as control:
- a. ___ er sögð **raunveruleikastjarnan**_i [PRO_i langa heim til Los Angeles]. (D)
is said reality-TV-star-the_{NOM} want_{INF} home to Los Angeles
 - b. **Raunveruleikastjarnan**_i er sögð [PRO_i langa heim til Los Angeles]. (S)
Reality-TV-star-the_{NOM} is said want_{INF} home to Los Angeles

Instead of the subject being raised from the infinitival clause, speakers would then interpret the subject of the matrix clause as being theta-marked by the verb of saying or believing in the matrix clause. Consequently, the covert subject in the infinitival clause would be co-referential with the subject of the matrix clause—i.e., PRO instead of *t*—and it would therefore be possible for it to be assigned a different theta-role than that assigned by the verb of the infinitival clause.

Although Rögnvaldsson (2015) did not discuss subject-to-object raising in his talk, the same arguments could be used to explain the lexical dative case absorption in sentences such

as (26b), here repeated as (39), where the the NP *ibúana* 'inhabitants' has the accusative case instead of the dative although it stands with the dative subject verb *finnast* 'think, find':³⁴

- (38) Case preservation in subject-to-object raising:
- a. Ólafur segir __ [**ibúunum** finnast eðlilegt að greiða vegtoll] (D-Structure)
 Ólafur says inhabitants_{DAT} find_{INF} fair to pay toll
- b. Ólafur segir **ibúunum**_i [_i finnast eðlilegt að greiða vegtoll] (S-Structure)
 'Ólafur says that the inhabitants find it fair to pay tolls.'
- (39) Reinterpretation as control:
- Ólafur segir **ibúana**_i [PRO_i finnast eðlilegt að greiða vegtoll].
 Ólafur says inhabitants_{ACC} find_{INF} fair to pay toll

In the reinterpretation in (39), the subject of the infinitival clause would then be co-referential with the object of the matrix clause, akin to control infinitives such as those in (2) (see, e.g., Sigurðsson 2002 and Þráinsson 2005:411, 419):

- (40) a. Hann skipaði **hundinum**_i [að PRO_i þegja].
 He ordered dog-the_{DAT} to shut-up_{INF}
 'He ordered the dog to shut up.'
- b. Foreldrarnir leyfðu **dótturinni**_i [að PRO_i halda teiti].
 Parents-the allowed daughter-the_{DAT} to throw_{INF} a-party
 'The parents allowed the daughter to throw a party.'
- c. Kennarinn bað **nemandann**_i [að PRO_i æfa etýðuna].
 Teacher-the asked student-the_{ACC} to practice_{INF} etude-the
 'The teacher asked the student to practice the etude.'

As pointed out before, and as can be observed from the examples in (40), control infinitives consistently include an infinitive particle, whereas the infinitival clauses in (36) and (38) do not. Although this absence of an infinitive particle might raise questions about whether these are indeed examples of control infinitives, there are other examples of blending of different infinitival clauses and the use of infinitive particles in Icelandic. Notably, the so-called 'mixed construction' (Ice. *blandaða setningagerðin*) could be mentioned, where an infinitive particle precedes the raising infinitive in sentences such as *Hún virðist að vera komin* ('She seems to have come') (Rögnvaldsson 2014, Smári 1920:275). The blending is evident in the fact that the raising verb *virðast* 'seem' precedes the bound infinitival clause *að vera komin* with an infinitive particle, even though Icelandic raising infinitives normally do not contain infinitive particles. Hence, this would not be the first instance of different infinitival clauses overlapping in Icelandic.

This analysis of the sentences in (37) and (39) as control infinitives provides a seemingly convincing explanation for the prevalence of lexical case absorption in subject raising with verbs of saying and believing. However, it does not address why speakers appear to utilize the construction less frequently with impersonal verbs (i.e., accusative or dative

³⁴ This example is from the news-site *DV.is* (2012).

subject verbs) than with nominative subject verbs, nor does it explain why the majority of participants in the grammaticality judgment tasks generally rated both variants low, including both the case preservation and the case absorption sentences. Given that many Icelandic speakers considered case absorption sentences to be as ungrammatical as the case preservation option, it is apparent that the reinterpretation of the infinitival clauses as control infinitives is not generally favored over raising across sentences.

6.4 Syncretism: Best of Both Worlds?

Although many speakers have both variants in their language—lexical case absorption and lexical case preservation—others seem to have neither, as they deemed all the relevant test sentences in the judgment task to be ungrammatical, regardless of case preservation or absorption. These participants totaled 40, which is 4% of all the participants. Additionally, an unusually high percentage of participants, averaging over 27% for each relevant test sentence, selected the answer option "?". However, no participant judged all the test sentences as grammatical. In other words, many speakers appear to find neither variant grammatical, but none find both variants grammatical. These results are surprising for several reasons. While numerous previous studies on case marking variations in Icelandic have highlighted intra-speaker variability—meaning that speakers have both variants in their language—it is exceptional that they consider neither variant to be grammatical. For instance, in the context of studies on Icelandic case marking variation that demonstrate intra-speaker variation, one could refer to Benediktsdóttir's (2023) frequently mentioned study on lexical dative absorption in passives, as well as various studies on dative substitution (dative sickness) and nominative substitution. However, none of these studies suggest that speakers have deemed both variants ungrammatical.

As previously discussed, it appears that speakers are less likely to use the subject-raising construction with verbs of saying and believing when the verb in the infinitival clause is impersonal (i.e., assigning a lexical case to its subject) as opposed to when the verb is personal (i.e., taking a subject in the structural case). Instead, it can be assumed that speakers would prefer to use a *that*-clause in such cases, since all Icelandic subject raising with verbs of saying and believing can be paraphrased as a *that*-clauses. The *that*-clause would then presumably be considered more grammatical than the infinitival clause with subject raising, regardless of case preservation or absorption.

The results of the corpus study prompt us to consider whether any other features could render the sentences more grammatical to Icelandic speakers than paraphrasing them into *that*-clauses. As discussed before, the examples discovered in the Icelandic Gigaword Corpus of case preservation in accusative subject-to-subject raising primarily featured neuter accusative subjects, which consequently exhibited nominative-accusative syncretism. When examining all instances of accusative case preservation in subject-to-subject raising, it turns out that only three of them unequivocally demonstrate case preservation, i.e., without any syncretism. These three examples are listed in section 3.3.1. The remaining examples are structurally ambiguous because of morphological syncretism, as seen in the following instances:

- (41) a. **Hið mannlauða skip ...** er **sagt** reka stjórnlaust um Norðurhöf
 The deserted ship_{N.SG.NM/ACC} is said_{N.SG} drift_{INF} unruled about Northern-sees
 'The deserted ship is said to drift unruled about the Northern sees.'
- b. **Fólk** er **sagt** vanta alls kyns efni
 People_{N.SG.NOM/ACC} is said_{N.SG} need_{INF} all kinds material
 'People are said to need all kinds of material.'
- c. **Bungarokk ...** er oft **talið** skorta fræðilegan trúverðugleika
 Heavy-metal_{N.SG.NOM/ACC} is often believed_{N.SG} lack_{INF} theoretical credibility
 'Heavy metal is often believed to lack theoretical credibility.'
- d. **var umrætt ákvæði** reglugerðarinnar **talið** skorta lagastoð
 was said provision_{N.SG.NM/AC} regulation-the believed_{N.SG} lack_{INF} legal-basis
 'the said provision of the regulation was believed to lack legal basis.'
- e. **Starfsfólk** er **sagt** hafa skort þekkingu ...
 Staff_{N.SG.NOM/ACC} is said_{N.SG} have_{INF} lacked knowledge
 'The staff is said to have lacked knowledge.'

Syncretism occurs in this context due to the subject being in the neuter singular, which has the same form in nominative and accusative in Icelandic, as in other Indo-European languages. In the singular, the passive past participle form is also the same, whether it agrees with the subject (as in the case of absorption) or shows default agreement (with the lexical cases preservation).

Sigurðsson and Wood (2021) have recently argued that syncretism in Icelandic can affect the acceptability of certain syntactic constructions in which the grammar appears to require two separate cases at once. In that way, the ambiguous form *bíl*_{ACC/DAT} 'car' in the sentence *Strákurinn stal og eyðilagði bíl*_{ACC/DAT} ('The boy stole and ruined a car') would render the sentence, where two cases are required of the object, more grammatical. On the one hand, the verb *stela* 'steal' takes a dative object and on the other, the verb *eyðileggja* 'ruin' takes an accusative object. Consequently, syncretism could be considered a neutral morphological form (see Snorrason 2021:53–54). According to that, the neuter subjects in (41) would neither be unambiguously nominative nor unambiguously accusative but would satisfy elements of both cases. Thus, the structural ambiguity would render the sentences more grammatical, since both the structural and lexical requirements would be fulfilled; on the one hand, the accusative features of the syncretic form would meet the requirement of case preservation of the lexical case in the subject raising, and on the other hand, the nominative features would meet the structural requirements of a nominative subject with the agreeing past participle of the passive. However, these effects of syncretism await further observations due to a lack of space here.³⁵

³⁵ In the same context, it would be interesting to examine the effect of syncretism on dative STO raising with ACC-DAT syncretism, where the syncretic form simultaneously fulfills the accusative requirements of the ACI-construction (i.e., subject-to-object raising) and the lexical requirements of the dative subject verb:

- i. **Katrín ... segir stráksa heilsast vel**
 Katrín ... says kiddo_{OM.SG.ACC/DAT} be-doing_{INF} well
 'Katrín says that the kiddo is doing well.'

6.5 Variation or Language Change?

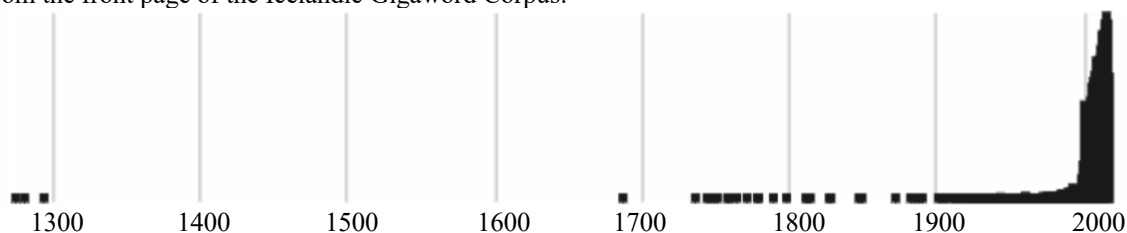
In her study, Benediktsdóttir (2023:80) concluded that lexical dative absorption in the 'simple' passive remains a variation, not strictly a language change, as none of the participants wholly dismissed all instances of lexical case preservation. As mentioned before, this is not the case in the grammatical judgment tasks documented here, as 155 participants (ca. 15%) in total rejected all three examples of lexical case preservation. Considering this, there is reason to question whether lexical case absorption in subject raising with verbs of saying or believing is prevalent enough in Icelandic to be considered a language change rather than a variation, as proposed by Rögnvaldsson (2015), who, however, also highlighted the challenge of determining the age of this linguistic variation.

While the focus here has been synchronic rather than diachronic, it should be pointed out that the corpus study only yielded two instances of lexical case absorption from before the turn of the 21st century. After the turn of the century, the number of examples appears to have steadily increased, with more than half of all instances originating from texts less than ten years old.³⁶ Nevertheless, this age distribution needs to be taken with a grain of salt since the largest portion of the texts in the corpus originates from around and after the year 2000.³⁷ Some subsections contain older texts, including Parliamentary speeches. However, the division between years is not uniform, and the variation within different subsections is significant. As a result, informal texts in the corpus primarily originate from younger sources, such as social media and blogs, while older texts are generally more formal.

The results of this study suggest that lexical case absorption in subject-to-subject raising represents a language change rather than a variation. Particularly, the increase in instances of lexical case absorption in written language in recent years and the outcomes of the grammaticality judgments, where the case preservation examples received very poor ratings, support this claim. However, the judgment tasks also revealed that while some participants entirely rejected the case preservation examples, the absorption examples were also completely rejected by others (and, in some instances, even by the same participants). Overall, the results of the judgment tests therefore indicate that neither variant is perceived favorably, as no version of the construction was rated as completely grammatical by more than half of the participants, regardless of preservation and absorption.

³⁶ Appendix E in Svavarsdóttir (2023) displays the age distribution of all the examples found in the corpus study regarding lexical case absorption in subject raising with verbs of saying or believing.

³⁷ The age distribution of the total 695,073,370 sentences in the corpus is depicted in the following graph, sourced from the front page of the Icelandic Gigaword Corpus:



7 Conclusions

In this paper, I have discussed the lexical case absorption of oblique subjects in subject-to-object and subject-to-subject raising with verbs of saying and believing in Icelandic. The case absorption entails a lexical case transforming into a structural case when an NP is raised from an infinitival clause to the matrix clause. These variations can be classified into three types:

- i. DAT → ACC in subject-to-object raising,
- ii. ACC → NOM in subject-to-subject raising,
- iii. DAT → NOM in subject-to-subject raising.

Natural data indicate that the occurrence of raising oblique subjects in subject-to-object or subject-to-subject structures with verbs of saying or believing is uncommon, regardless of whether it involves lexical case preservation or absorption. Among these constructions, the dative subject-to-object raising (i) is the most frequent (although all three are overall infrequent). Notably, the dative subject-to-object raising exhibits the least absorption, while the highest incidence is observed in the accusative subject-to-subject raising (iii), which, however, yielded the fewest examples in the corpus study. Consequently, it was concluded that the frequency of occurrence impacts the degree of variation; the rarer the construction, the more challenging it becomes for speakers to learn, resulting in increased variability. Hence, the significant prevalence of lexical case absorption in these structures can, at least partly, be attributed to their rarity. Also discussed was the possibility, first suggested by Rögnvaldsson (2015), that examples of case absorption in subject raising stemmed from the reinterpretation of the infinitival clause as a control infinitive, allowing for the assignment of two theta-roles instead of one.

In addition to the high rate of lexical case absorption, it is noteworthy how poorly all test sentences were judged, irrespective of whether they exhibited case preservation or absorption. Instead of opting for subject raising with verbs of saying and believing and the infinitive of an oblique subject verb, it can be inferred that speakers would prefer using the more common that-clause. However, it was also suggested that syncretism might influence the perceived grammaticality of the sentences in question. In cases of syncretism, it can be argued that the ambiguous morphological form remains neutral, displaying neither unambiguous case preservation nor unambiguous absorption, but rather features of both.

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