

CASE AND GRAMMATICAL FUNCTIONS: THE ICELANDIC PASSIVE

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Recent attempts to capture the universal characteristics of passive have moved away from relying on word order configurations. Ignoring proposals that have recourse to essentially semantic means of capturing the active-passive relation (such as Gazdar and Sag, 1981; Dowty, 1982), there are two types of proposals that are currently being debated. The first is that passive morphology inhibits case marking, and hence that the advancement of the object to subject in passive is essentially forced by the violation of the constraint requiring that all NPs have case. This idea is embodied in slightly different forms in various GB and GB-related proposals (see, e.g., den Besten, 1981; Kayne, 1981; Chomsky, 1981; Freidin and Babby, 1982, 1983; see also Lieber, 1979).¹ The second proposal relies on grammatical functions, and is embodied in both RG and LFG. In this article we argue on the basis of data from Icelandic that the case-dependent approach is not general enough, whereas an approach based on grammatical func-

tions gives the correct result both for Icelandic, and also for languages such as German for which the case-dependent approach was developed. The main evidence for our argument comes from passives of the type illustrated in (1).

- (1) *Honum var hjálpað.*
 him (DAT) was helped
 'He was helped.'

We argue that such sentences contain a non-nominative subject.²

A second theoretical issue that we address is whether the same grammatical function can have more than one realization in the same clause. As we demonstrate, the Icelandic data at first glance seem to lead to the conclusion that this can happen, but virtually all current syntactic theories propose a prohibition against such double assignments. It is part of the θ -criterion in GB (Chomsky, 1981); it has been proposed as the stratal uniqueness law in RG (Perlmutter and Postal, 1983:92ff.), and as the functional uniqueness law in LFG (Bresnan, 1982b:163; Grimshaw, 1982:91). While there are empirical differences among these formulations, they lie beyond the scope of this article. As we demonstrate, a more careful study of the Icelandic data shows that it is compatible with the functional uniqueness principle and the assumption that only DOs passivize.³

Our attention is focused on what we call the periphrastic passive, illustrated in a noncontroversial instance in (2):

- (2) a. *Lögreglan tók Sigu fasta.*
 the-police took Sigga (ACC) fast (ACC)
 'The police arrested Sigga.'
 b. *Sigga var tekin föst af lögreglunni.*
 Sigga (NOM) was taken fast (NOM) by the-police (DAT)
 'Sigga was arrested by the police.'⁴

Icelandic also has some morphologically "middle" forms in the suffix *-st*, some of which have a passive meaning, as illustrated in (3):⁵

- (3) a. *Ekkert heyrir fyrir fossinum.*
 nothing (NOM) can-be-heard on-account-of the-waterfall (DAT)
 'Nothing can be heard on account of the waterfall.'
 b. *Úrið týndist.*
 the-watch (NOM) got-lost
 'The watch got lost.'

These are ignored in this article.⁶ We assume that they are derived in the lexicon and not in the syntax.

The general outline of the study is as follows: After giving some background information about Icelandic syntax in section 1, we quickly review in section 2 the syntactic characteristics of grammatical subjects in Icelandic. We then dis-

cuss in section 3 the problem of which NPs that are in postverbal position in unmarked active sentences can show up as the subject of a passive sentence. In section 4, we give an LFG account of passives in Icelandic and outline the principles of case marking and assignment of grammatical functions that obtain in Icelandic. We show that our account does not force us to the conclusion that Icelandic has double objects. We then briefly discuss in section 5 whether German constructions such as the one illustrated in (4) should be treated in the same way as their superficially similar Icelandic translations.

- (4) *Ihm* *wurde geholfen.* (German)
Honum *var hjálpað.* (Icelandic)
 him (DAT) was helped
 'He was helped.'

We show that the two constructions are syntactically very different in the two languages and then extend our account of case marking to cover the German data.

1. SOME RELEVANT FEATURES OF ICELANDIC SYNTAX

Icelandic has the richest inflectional system of any modern Germanic language. There are four cases (nominative, accusative, dative, genitive) and three genders (masculine, feminine, neuter). To make it easier to follow the examples, we give the paradigm for personal pronouns in (5).

- (5)
- | | Singular | | | Plural | | |
|-----|--------------|---------------|-------------|---------------|---------------|---------------|
| | Masc | Fem | Neut | Masc | Fem | Neut |
| NOM | <i>hann</i> | <i>hún</i> | <i>það</i> | <i>þeir</i> | <i>þær</i> | <i>þau</i> |
| ACC | <i>hann</i> | <i>hana</i> | <i>það</i> | <i>þá</i> | <i>þær</i> | <i>þau</i> |
| DAT | <i>honum</i> | <i>henni</i> | <i> því</i> | <i>þeim</i> | <i>þeim</i> | <i>þeim</i> |
| GEN | <i>hans</i> | <i>hennar</i> | <i>þess</i> | <i>þeirra</i> | <i>þeirra</i> | <i>þeirra</i> |

The basic word order of Icelandic is SVO, both in main and in embedded clauses. The main verb directly follows any auxiliaries, as in English but unlike German. This is illustrated in (6).

- (6) a. *Ég hafði séð hana.*
 I had seen her (ACC)
 'I had seen her.'
 b.**Ég hafði hana séð.*

However, unlike English and like the other Germanic languages, Icelandic has the verb-second constraint. That is, the subject inverts with the finite verb whenever another constituent is topicalized. This is illustrated in (7).

- (7) a. *Ólafur fann peysuna sína í skúffunni.*
 Olaf (NOM) found sweater (ACC) his [+ refl] in the-drawer (DAT)
 'Olaf found his sweater in the drawer.'
 b. *Peysuna sína fann Ólafur í skúffunni.*
 c.**Peysuna sína Ólafur fann í skúffunni.*
 d. *Í skúffunni fann Ólafur peysuna sína.*
 e.**Í skúffunni Ólafur fann peysuna sína.*

Thus far we have considered only simple transitive verbs with accusative objects. Icelandic, however, also has transitive verbs with dative and genitive objects, as illustrated in (8), and numerous ditransitive verbs (see section 3.2 below).

- (8) a. *Ég hjálpaði honum.* DAT
 I helped him (DAT)
 b. *Ég mun sakna hans.* GEN
 I will miss him (GEN)
 'I will miss him.'

Icelandic has an impersonal passive construction, illustrated in (9). When no topicalization takes place in impersonal passives, a dummy *það* occurs in sentence-initial position, as shown in (9a). Whenever there is a topicalized constituent, dummy *það* cannot occur in the sentence, either before or after the finite verb. This fact is illustrated in (9b-d).

- (9) a. *Það var dansað í gær.*
 There was danced yesterday
 'People danced yesterday.'
 b. *Í gær var dansað.*
 c.**Í gær var það dansað.*
 d.**Í gær það var dansað.*

When the auxiliary is *vera* 'to be' or *verða* 'to be, become', the participle agrees in number and gender with the nominative NP in the clause.⁷ This is illustrated in (10).

- (10) a. *Ólafur var farinn til Íslands.*
 Olaf (NOM) was gone (masc-sg) to Iceland (GEN)
 'Olaf had gone to Iceland.'
 b. *Sigga var farin til Íslands.*
 Sigga (NOM) was gone (fem-sg) to Iceland
 'Sigga had gone to Iceland.'
 c. *Barnið var farið til Íslands.*
 the-child was gone (neut-sg) to Iceland
 'The child had gone to Iceland.'

2. TWO HYPOTHESES: SUBJECT VERSUS TOPIC IN ICELANDIC

Given these basic features of Icelandic syntax, there are two possible analyses of sentences such as the ones in (11), where a DAT or GEN is in the first position, and the tensed verb in second position is third-person neuter, singular.

- (11) a. *Þeim var hjálpað.*
 them (DAT) was helped
 'They were helped.'
 b. *Hennar var saknað.*
 her (GEN) was missed
 'She was missed.'

The question is whether these forms are instances of topicalization in an impersonal passive construction, or personal passives in which the first NP is a bona fide subject. These two analyses are sketched in (12a) and (12b).

- (12) a.
-
- ```

graph TD
 S --> NP1[NP]
 S --> Aux[Aux]
 S --> VP[VP]
 NP1 --- Triangle[△]
 Aux --- var[var]
 VP --> V[V]
 VP --> NP2[NP]
 V --- hjalpað[hjálpað]
 NP2 --- þeim[þeim]

```
- b.
- 
- ```

graph TD
  S --> NP[NP]
  S --> Aux[Aux]
  S --> VP[VP]
  NP --- þeim[Þeim]
  Aux --- var[var]
  VP --> V[V]
  V --- hjalpað[hjálpað]
  
```

Under the first hypothesis, sentences such as (11) are simply examples of impersonal passives combined with the topicalization of the dative or genitive NP; under this analysis, the sentences are theoretically unproblematic and uninteresting. Under the second hypothesis, however, the dative NP is indeed a grammatical subject, and the construction therefore presents difficulties for those accounts of passive that are based on case marking. In what follows, we argue that the correct analysis is (12b).⁸ Before tackling that problem, we first review the arguments that have been amassed during the last years to the effect that nominative case marking is not a necessary prerequisite (nor a sufficient one) for subjecthood in Icelandic.

Recent research has shown that there are several syntactic properties that distinguish between topics and subjects in Icelandic (Andrews, 1982a,b, and this volume: 165–185; Thráinsson, 1979; Maling, this volume: 71–91; Zaenen, 1980). Andrews (1976) was the first to point out that this distinction does not coincide with that between nominative and non-nominative NPs, and that contrary to traditional belief, a sentence such as (13) must be analyzed as having a simple subject–predicate structure with a dative subject and a nominative object.

- (13) *Henni hefur alltaf þótt Ólafur leiðinlegur.*
 her (DAT) has always thought Olaf (NOM) boring (NOM)
 ‘She has always found Olaf boring.’

Arguments for that view were further developed in Maling (this volume: 71–91), Andrews (1982a), and Thráinsson (1979), who summarizes most of the tests. We refer to these non-nominative preverbal NPs as *oblique subjects*. We illustrate here each property with an example of a nominative subject and an example of oblique subject and refer to the relevant literature for further discussion.

2.1. Raising

Only subjects can raise, as illustrated by the contrast between (14b) and (14d). The verb *sakna* ‘to miss’ takes a nominative subject and a genitive object.

- (14) a. *Guðrún saknar Haraldar.*
 Gudrun (NOM) misses Harold (GEN)
 ‘Gudrun misses Harold.’
- b. *Ég taldi Guðrúnu í barnaskap mínum sakna Haraldar.*
 I believed Gudrun (ACC) in foolishness my to-miss Harold (GEN)
 ‘I believed Gudrun in my foolishness to miss Harold.’
- c. *Haraldar saknar Guðrún.*
 Harold (GEN) misses Gudrun (NOM)
 ‘Harold, Gudrun misses.’
- d.* *Ég taldi {Haraldar } sakna {Guðrún }*
 {Harald } {Guðrúnu }
 I believed {Harold (GEN)} to-miss {Gudrun (NOM)}
 {Harold (ACC)} {Gudrun (ACC)}

Since *í barnaskap mínum* ‘in my foolishness’ in (14b) is an adverbial belonging to the matrix clause, its presence between the NP *Guðrúnu* and the infinitive complement *sakna Haraldar* ‘to miss Harold’ is good evidence that the NP has been raised into matrix object position. (See Thráinsson, 1979: 389–393, for further discussion.) Of course, predicate nominals cannot be raised, despite their nominative case marking, as illustrated in (15).⁹

- (15) a. *Ólafur er bóndi.*
Olaf (NOM) is a-farmer
'Olaf is a farmer.'
- b. *Bóndi er Ólafur.* (Topicalization)
a-farmer is Olaf
'A farmer, Olaf is.'
- c. *Ég tel Ólaf vera bónda.*
I believe Olaf (ACC) to-be a-farmer (ACC)
'I believe Olaf to be a farmer.'
- d.* *Ég tel bónda vera Ólaf.*
I believe a-farmer (ACC) to-be Olaf (ACC)

However, so-called oblique subjects can raise, as shown in (16):

- (16) *Ég tel henni hafa alltaf þótt Ólafur leiðinlegur.*
I believe her (DAT) to-have always thought Olaf (NOM) boring (NOM)
'I believe her always to have found Olaf boring.'

We can conclude that whatever the surface case marking, all and only grammatical subjects can raise. (See Andrews, 1982b, and Thráinsson, 1979, for further discussion.)

2.2. Reflexivization

A second test is reflexivization. Many speakers of Icelandic allow only grammatical subjects to be the antecedents of reflexive pronouns, or, more accurately, allow objects to be antecedents only if the reflexive occurs in a predicate complement predicated of that object (see Maling, 1986, for discussion). For such speakers, we find the same sort of contrasts with respect to reflexivization as we did with respect to raising. We give the judgments for those speakers who allow only subject-controlled reflexivization. (For other speakers, the contrasts are more subtle: subjects control obligatory reflexivization, whereas objects control reflexives only optionally; see Thráinsson, 1976, and Maling, this volume: 277–287, for further discussion.) Boldface indicates intended coreference.

- (17) a. *Sigga barði mig með dúkkunni sinni/*hennar.*
Sigga (NOM) hit me (ACC) with doll (DAT) her (*[- refl])
'Sigga hit me with her doll.'
- b. *Ég barði **Siggu** með dúkkunni **hennar**/*sinni.*
I hit Sigga (ACC) with doll her (*[+ refl])
'I hit Sigga with her doll.'
- c. ***Siggu** barði ég með dúkkunni **hennar**/*sinni.*
Sigga (ACC) hit I (NOM) with doll her (*[+ refl])
'Sigga I hit with her doll.'

Again, the non-nominative subject can (in fact, must) control reflexivization, as shown in the following example:

- (18) a. *Henni þykir bróðir sinn/*hennar leiðinlegur.*
 her (DAT) thinks brother (NOM) her *[- refl] boring
 'She finds her brother boring.'
- b. *Hverjum þykir sinn fugl fagur.* (Proverb)
 everyone (DAT) thinks his [+ refl] bird (NOM) beautiful
 'Everyone thinks his own bird beautiful.'

2.3. Topicalization and Subject-Verb Inversion

Subjects appear immediately after the finite verb if another constituent has been preposed; whenever an object has been topicalized, no further topicalization can take place.

- (19) a. *Refinn skaut Ólafur með þessari byssu.*
 the-fox (ACC) shot Olaf (NOM) with this shotgun
 'The fox Olaf shot with this shotgun.'
- b. **Með þessari byssu skaut refinn Ólafur.*
 with this shotgun shot the-fox (ACC) Olaf (NOM)

Similarly, in direct questions the tensed verb is immediately followed by the subject; hence, direct questions and topicalizations are incompatible, as shown in (20):

- (20) a. *Sigga hafði aldrei hjálpað Haraldi*
 Sigga (NOM) had never helped Harold (DAT)
 'Sigga had never helped Harold.'
- b. *Hafði Sigga aldrei hjálpað Haraldi?* (Yes/no question)
 had Sigga (NOM) never helped Harold (DAT)
 'Had Sigga never helped Harold?'
- c. **Hafði Haraldi Sigga aldrei hjálpað?*
 had Harold (DAT) Sigga (NOM) never helped
- d. *Hvenær hafði Sigga hjálpað Haraldi?* (WH-question)
 when had Sigga helped Harold (DAT)
 'When had Sigga helped Harold?'
- e. **Hvenær hafði Haraldi Sigga hjálpað?*
 when had Harold (DAT) Sigga (NOM) helped
- f. *Haraldi hafði Sigga aldrei hjálpað.* (Topicalization)
 Harold (DAT) had Sigga (NOM) never helped
 'Harold, Sigga had never helped?'

The same is true of oblique subjects. Unlike topics, oblique subjects can immediately follow the finite verb.¹⁰ As shown in (21b), topicalization can apply to sentences such as (13), in which case the oblique subject inverts with the finite verb.

- (21) a. *Hefur henni alltaf þótt Ólafur leiðinlegur?*
 has her (DAT) always thought Olaf (NOM) boring (NOM)
 'Has she always find Olaf boring?'
- b. *Ólafur hefur henni alltaf þótt leiðinlegur.*
 Olaf (NOM) has her (DAT) always thought boring (NOM)
 'Olaf, she has always found boring.'
- c.* *Hefur Ólafur henni alltaf þótt leiðinlegur?*
 has Olaf (NOM) her (DAT) always thought boring

2.4. Extraction

Most speakers of Icelandic do not generally allow topicalization in binding domains; in other words, they allow topicalization to occur in embedded *að* 'that'-clauses, but not under (indirect) questions, comparatives, relatives, and so on. This is illustrated by the contrast in (22). (For further discussion see Zaenen, 1980, and Rögnvaldsson, 1984.)

- (22) a. *Jón telur að María hafi kysst Harald í gær.*
 John believes that Mary (NOM) has kissed Harold (ACC) yesterday
 'John believes that Mary kissed Harold yesterday.'
- b. *Hvenær telur Jón að María hafi kysst Harald?*
 when believes John (NOM) that Mary (NOM) has kissed Harold
 'When does John believe that Mary kissed Harold?'
- c. *Jón telur að Harald hafi María kysst í gær.* (Topicalization)
 John (NOM) believes that Harold (ACC) has Mary (NOM) kissed
 yesterday
- d.* *Hvenær telur Jón að Harald hafi María kysst?*
 when believes John that Harold (ACC) has Mary (NOM) kissed

Again, oblique subject NPs pattern here with the nominative subjects as opposed to topicalized NPs, as shown in (23):

- (23) a. *Jón telur að henni hafi alltaf þótt Ólafur leiðinlegur.*
 John believes that her (DAT) has always thought Olaf (NOM)
 boring (NOM)
 'John believes that she has always found Olaf boring.'

- b. *Hvenær telur Jón að henni hafi þótt Ólafur leiðinlegur?*
 when believes John (NOM) that her (DAT) has thought Olaf boring
 'When does John believe that she found Olaf boring?'
- c. *Jón telur að Ólafur hafi henni alltaf þótt leiðinlegur.* (Topicalization)
 John (NOM) believes that Olaf (NOM) has her (DAT) always thought boring
 'John believes that Olaf, she has always found boring.'
- d.* *Hvenær telur Jón að Ólafur hafi henni þótt leiðinlegur?*
 when believes John (NOM) that Olaf (NOM) has her (DAT) thought boring

Note, in particular, that in (23d) the object *Ólafur* is not patterning like a subject, despite its nominative case marking.

2.5. Indefinite-Subject Postposing

When a subject is indefinite, it can be postposed by a rule of indefinite-NP postposing (plus *það*-insertion). This cannot be done when a nonsubject is in first position.

- (24) a. *Það hefur þjófur stolið hjólinu mínu.*
 there has a-thief (NOM) stolen bicycle (DAT) mine (DAT)
 'A thief has stolen my bicycle.'
- b. *Hjóli hefur þjófurinn stolið.*
 a-bicycle (DAT) has the-thief (NOM) stolen
 'A bicycle, the thief has stolen.'
- c.* *Það hefur hjóli þjófurinn stolið.*
 there has a-bicycle (DAT) the-thief (NOM) stolen
- d.* *Það hefur hjóli stolið þjófurinn.*
 there has a-bicycle (DAT) stolen the-thief (NOM)

Again oblique subjects pattern like nominative subjects rather than like topicalized NPs.

- (25) a. *Það hefur einhverjum þótt Ólafur leiðinlegur.*
 there has someone (DAT) thought Olaf (NOM) boring (NOM)
 'Someone found Olaf boring.'
- b. *Ólafur hefur einhverjum þótt leiðinlegur.*
 Olaf (NOM) has somebody (DAT) thought boring (NOM)
 'Olaf, somebody has found boring.'

- c.**Það hefur Ólafur einhverjum þótt leiðinlegur.*
 there has Olaf (NOM) someone (DAT) thought boring

2.6. Subject Ellipsis

Another syntactic rule that distinguishes subjects from nonsubjects in Modern Icelandic is the kind of ellipsis that allows the subject of a coordinated clause to be deleted under identity with the subject of the preceding conjunct clause.¹¹ (The examples in (26c–d) are grammatical only if the verb *grafa* is interpreted intransitively as ‘to dig’ rather than transitively as ‘to bury’.)

- (26) a. *Þeir fluttu líkið og þeir grófu það.*
 they (NOM) moved the-corpse and they buried it
 ‘They moved the corpse and they buried it.’ —
- b. *Þeir fluttu líkið og — grófu það.* (Subj–Subj)
 ‘They moved the corpse and buried it.’
- c. *≠ Þeir fluttu líkið og þeir grófu —.* (Obj–Obj)
 ‘They moved the corpse and they dug.’
- d. *≠ Líkið var flutt og þeir grófu —.* (Subj–Obj)
 ‘The corpse was moved and they dug.’
- e.**Líkið hræddi þá og — grófu það.* (Obj–Subj)
 the-corpse (NOM) scare them (ACC) and — buried it (ACC)
 ‘The corpse scared them and — buried it.’

Now consider the coordination of sentences, one of which takes a nominative subject, the other an oblique subject. Consider the contrast between (27a) and (27b). Oblique subjects can be deleted under identity with nominative subjects, and vice versa, but objects cannot be deleted in this fashion, even when their case is nominative. This is illustrated by the following examples:

- (27) a. *Hann segist vera duglegur, en — finnst verkefnið of þungt.* (Subj–Subj)
 he (NOM) says-self to-be diligent, but — (DAT) finds the-homework too hard.
 ‘He says he is diligent, but finds the homework too hard.’
- b.**Hann segist vera duglegur, en mér finnst — latur.* (Subj–Adj)
 he (NOM) says-self to-be diligent, but I (DAT) find — (NOM) lazy
 ‘He says he is diligent, but I find [him] lazy.’

It is clear that ellipsis is sensitive to grammatical relations rather than to morphological case. In (27a), ellipsis is perfectly acceptable even though the cases differ because both NPs are subjects. However, (27b) is unacceptable, despite the fact that the coreferential NPs are both nominative case, because only one of the two is a grammatical subject. (For further discussion see Rögnvaldsson, this volume: 349–353; and Bresnan and Thráinsson, this volume: 355–365).

2.7. Infinitive Complements

Only subjects can be the target of EQUI-NP-deletion or be understood as “arbitrary” or anaphorically controlled PROs in Icelandic.

- (28) a. *Ég vonast til að fara heim.*
 I hope for to go home
 ‘I hope to go home.’
 b. *Að fara heim snemma er óvenjulegt.*
 to go home early is unusual
 ‘To go home early is unusual.’

Oblique subjects can also be the target of EQUI or be arbitrary PRO subjects of infinitives, as shown in (29). The verb *vanta* ‘to lack’ takes an accusative subject and an accusative object.

- (29) a. *Mig vantar peninga.*
 me (ACC) lacks money (ACC)
 ‘I lack money.’
 b. *Ég vonast til að vanta ekki peninga.*
 I hope for — (ACC) to lack not money (ACC)
 ‘I hope not to lack money.’
 c. *Að vanta peninga er alltof algengt.*
 to lack money is all-too common
 ‘To lack money is all too common.’

In conclusion, there are (at least) seven different syntactic criteria to distinguish subjects from topics in active sentences in Icelandic, and we see that these tests do not necessarily pick out the nominative NP.

3. WHICH POSTVERBAL NPs CAN PASSIVIZE IN ICELANDIC?

3.1. Oblique Subjects in Icelandic Passives

We are now in a position to return to the question posed above: what is the grammatical function of the preverbal NPs in passive sentences such as those in (11), repeated here for convenience:

- (11) a. *Þeim var hjálpað.*
 them (DAT) was helped
 'They were helped.'
 b. *Hennar var saknað.*
 her (GEN) was missed
 'She was missed.'

Note that regardless of the person or number of the initial NP, the verb is always in the third-person singular. Verbs agree in person and number with a nominative argument; if there is no nominative NP, then the verb occurs in the third-person (neuter) singular, which we take to be the unmarked form.

We now test the syntactic behavior of passivized oblique NPs using the same tests that we used above in section 2 for active sentences. As can be seen from the examples in the following sections, the preverbal dative NP in a sentence such as (11a) behaves in all respects like a grammatical subject.

3.1.1. RAISING

A first such test is subject-to-object raising.

- (30) *Ég tel þeim hafa verið hjálpað í prófinu.*
 I believe them (DAT) to-have been helped in the-exam
 'I believe them to have been helped on the exam.'

The preverbal NP undergoes raising and keeps its dative case-marking.

3.1.2. REFLEXIVIZATION

A second test is reflexivization. Many speakers of Icelandic allow only subjects to be the antecedents of reflexive pronouns, or, more accurately, allow objects to be antecedents only if the reflexive occurs in a predicative complement predicated of that object (Maling, this volume: 277–287). For such speakers, we find the same sort of contrasts with respect to reflexivization as we did with respect to raising. Note that the reflexive is obligatory in (31).

- (31) *Honum var oft hjálpað af foreldrum sínum/*hans.*
 he (DAT) was often helped by parents his [+ refl]/*[- refl]
 'He was often helped by his parents.'

3.1.3. SUBJECT-VERB INVERSION

Third, the preverbal dative can immediately follow the finite verb in direct questions, or if another constituent has been preposed.

- (32) a. *Var honum aldrei hjálpað af foreldrum sínum?*
 was he (DAT) never helped by parents his
 'Was he never helped by his parents?'
 b. *Í prófinu var honum víst hjálpað.*
 in the-exam was he (DAT) apparently helped
 'On the exam he was apparently helped.'

3.1.4. EXTRACTION

Fourth, many speakers of Icelandic do not generally allow topicalization in binding domains; in other words, they allow topicalization to occur in embedded *að*-clauses ('that'-clauses), but not under (indirect) questions, comparatives, relatives, and so on. However, these oblique NPs can appear preverbally in these contexts.

- (33) a. *Hann telur, að henni hafi verið hjálpað í gær.*
 he believes that she (DAT) has been helped yesterday
 'He believes that she was helped yesterday.'
 b. *Hvenær telur hann að henni hafi verið hjálpað?*
 when believes he that she (DAT) has been helped
 'When does he believe that she was helped?'

3.1.5. INDEFINITE-SUBJECT POSTPOSING

Fifth, the preverbal datives under consideration pattern like grammatical subjects rather than like topicalized NPs with respect to indefinite-subject postposing.

- (34) *Það hefur mörgum stúdentum verið hjálpað í prófinu.*
 there has many (DAT) students (DAT) been helped on the-exam
 'Many students have been helped on the exam.'

3.1.6. SUBJECT ELLIPSIS

Sixth, the preverbal dative can be deleted by subject ellipsis.

- (35) *Hann segist vera saklaus en — hefur víst verið*
 he (NOM) says-self to-be innocent but — (DAT) has apparently been
hjalpað í prófinu.
 helped on the-exam
 'He says that he is innocent but has apparently been helped on the exam.'

3.1.7. INFINITIVE COMPLEMENTS

Seventh, just like other grammatical subjects, the passivized dative object can be the target of EQUI, as illustrated in (36a); it can also be understood as an arbitrary PRO subject of an infinitive, as in (36b).

- (36) a. *Ég vonast til að verða hjálpað.*
 I hope for to be helped
 'I hope to be helped.'
 b. *Að vera hjálpað í prófinu er óleyfilegt.*
 to be helped on the-exam is un-allowed.
 'To be helped on the exam is not allowed.'

Thus, by the above seven tests, the preverbal dative and genitive NPs in (11) are clearly grammatical subjects and not topicalized objects, and the sentences in (11) must be analyzed as ordinary personal passives. It is clear that for Icelandic, oblique case is not immune to passivization.

3.2. Passive and Ditransitive Verbs

Icelandic has numerous ditransitive verbs. The possibilities are illustrated in (37) (from Thráinsson, 1979:21–22).

- (37) a. *Þeir leyndu Ólaf sannleikanum.* ACC–DAT
 they concealed (from)-Olaf (ACC) the-truth (DAT)
 'They hid the truth from Olaf.'
 b. *Jón bað mig bónar.* ACC–GEN
 John asked me (ACC) a-favor (GEN)
 'John asked a favor of me.'
 c. *Ég sagði þér söguna.* DAT–ACC
 I told you (DAT) a-story (ACC)
 'I told you a story.'
 d. *Ólafur lofaði Maríu þessum hring.* DAT–DAT
 Olaf (NOM) promised Mary (DAT) this (DAT) ring (DAT)
 'Olaf promised Mary this ring.'
 e. *María óskaði Ólafi alls goðs.* DAT–GEN
 Mary wished Olaf (DAT) everything (GEN) good (GEN)
 'Mary wished Olaf all the best.'

We see that virtually any combination of two case-marked postverbal NPs is possible, except that the first NP can never be genitive case.

There are several different types of ACC–ACC verbs, but it is debatable whether any of them are truly ditransitive. First, there are transitive verbs such as *kalla* 'to name, call', as illustrated in (38).

- (38) a. *Þeir kölluðu hana Kíddu.*
 they called her (ACC) Kídda (ACC)
 'They called her Kídda.'
 b. *Hún var kölluð Kídda.*
 she (NOM) was called Kídda (NOM)
 'She was called Kídda.'

But this type of verb is not a true ditransitive verb, since the second postverbal NP is clearly an (objective) complement rather than a verbal object. This can be seen from the passive version in (38b), where the “retained complement” becomes nominative, agreeing with the subject NP it is predicated of.

Second, there are also simple transitive verbs such as *höggva* ‘to hit’ and *kysa* ‘to kiss’, which can take an additional argument that might be described as a cognate object.

- (39) a. *höggva einhvern banahögg*
to-hit someone (ACC) a-deadly-blow (ACC)
‘to deal someone a deadly blow’
b. *slá einhvern kinnhest*
to-hit someone (ACC) a-blow-on-the-cheek (ACC)
‘to give somebody a blow on the cheek’
c. *kysa einhvern rembingsskoss*
to-kiss someone (ACC) a-loud-kiss (ACC)
‘to give somebody a smacking kiss’

Only the first postverbal NP in such constructions can passivize, as illustrated in (40), in which case the second object not surprisingly remains accusative.

- (40) a. *Skarphéðinn hjó Þráin banahögg.*
Skarphedin (NOM) hit Thrain (ACC) a-deadly-blow (ACC)
‘Skarphedin dealt Thrain a deadly blow.’
b. *Þráinn var höggvinn banahögg.*
Thrain (NOM) was hit a-deadly-blow (ACC)
‘Thrain was dealt a deadly blow.’
c.**Banahögg var höggvið Þráin.*
a-deadly-blow (NOM/ACC) was hit Thrain (ACC)

We briefly discuss the analysis of this type of ACC–ACC verb below in section 4.4.

A third possible type of ACC–ACC verb, pointed out to us by an anonymous reviewer, consists of simple transitive verbs such as *keyra* ‘drive’, which can optionally be followed by a second accusative NP indicating the thematic role of ‘path’. Here, too, only the first postverbal NP can passivize, and the second NP remains accusative.

- (41) a. *Hann keyrði bílinn þessa leið.*
he drove the-car (ACC) this route (ACC)
‘He drove the car this way.’
b. *Bílinn var keyrður þessa leið*
the-car (NOM) was driven this route (ACC)
‘The car was driven this way.’
c.**Þessi leið var keyrð bílinn.*
this route (NOM) was driven the-car (ACC)
‘This way was driven the car.’

Similar facts obtain for the verb *aka* 'drive', which takes DAT rather than ACC case on 'car'. We discuss the analysis of these verbs, too, in section 4.4.

To the extent that none of the above-mentioned types are truly ditransitive, there seem to be no triadic verbs in Icelandic where both objects are marked accusative.¹² We assume this to be an accidental gap. Nothing in our account of case marking would prevent such a combination.

Ditransitive verbs fall into two classes with respect to passive. In the first class, only the first postverbal NP passivizes, as illustrated by the following examples with the DAT-DAT verb *skila* 'to return':

- (42) a. *Ég skilaði henni peningunum.*
I returned her (DAT) the-money (DAT)
'I gave her back the money.'
- b. *Henni var skilað peningunum.*
she (DAT) was returned the-money (DAT)
'She was given back the money.'
- c. **Peningunum var skilað henni.*
'The money was given back to her.'
- d. *Ég tel henni hafa verið skilað peningunum.*
I believe her (DAT) to-have been returned the-money
'I believe her to have been given back the money.'
- e. **Ég tel peningunum hafa verið skilað henni.*
'I believe the money to have been given back to her.'

The behavior of these verbs is straightforward, the only noteworthy detail being that a DAT object passivizes; but this should not be at all surprising after the discussion of the previous section. Examples (42a-c) contrast nicely with the following, where the verb *skila* is used as a simple transitive verb, taking a DAT Theme but with the goal realized as a PP-complement instead of as a DAT NP.

- (43) a. *Ég skilaði peningunum til hennar.*
I returned the-money (DAT) to her (GEN)
'I returned the money to her.'
- b. *Peningunum var skilað til hennar.*
the-money (DAT) was returned to her
'The money was returned to her.'

We see that when *peningunum* is the sole bare NP-argument, it can passivize. These facts seem to suggest that the mapping between grammatical functions and phrase structure positions in Icelandic is fairly fixed: subjects are mapped onto the preverbal NP, and direct objects are mapped onto the immediately postverbal NP. However, this mapping is not the only possibility for objects, as shown by the passivization pattern of the second class of ditransitives, namely DAT-ACC verbs such as *gefa* 'to give'.

In some sense, the DAT-ACC pattern represents the core class of ditransitive verbs: only these verbs survive as ditransitives in English and in the Scandinavian

languages other than Icelandic, that is, in related languages without morphological case marking. All the other ditransitive verbs have become instead verbs taking NP-PP complements (presumably because at least one of the NPs is semantically quite predictable, for example, a recipient).

For DAT-ACC verbs, either postverbal NP can passivize, as illustrated in (44). Note that in (44a) the retained object is nominative (rather than accusative); this rather surprising fact follows from the principles for default case marking given in (61d) below.

- (44) a. *Konunginum voru gefnar ambáttir.*
 the-king (DAT) were given (fem-pl) slaves (NOM-fem-pl)
 'The king was given maidservants.'
- b. *Ambáttin var gefin konunginum.*
 the-slave (NOM-sg) was given (fem-sg) the-king (DAT)
 'The maidservant was given to the king.'

As noted above, the verb agrees with the nominative argument even when this argument is not the grammatical subject, as in (44a).

To show that in both (44a) and (44b) the object has indeed become a subject, we run the examples through the tests for subjecthood summarized previously.

Raising

- (45) a. *Ég tel konunginum hafa verið gefnar ambáttir.*
 I believe the-king (DAT) have been given (fem-pl) slaves (NOM)
 'I believe the king to have been given maidservants.'
- b. *Ég tel ambáttina hafa verið gefna konunginum.*
 I believe the-slave (ACC) have been given (ACC) the-king (DAT)
 'I believe the maidservant to have been given to the king.'

Reflexivization

- (46) a. *Konunginum voru gefnar ambáttir í höll sinni/?hans.*
 the-king (DAT) were given slaves in palace his (+ refl/?- refl)
 'The king was given maidservants in his palace.'
- b. *Ambáttin var gefin konunginum vegna fegurðar sinnar/?hennar.*
 the-slave (NOM) was given the-king (DAT) because-of beauty
 her (+ refl/?- refl)
 'The maidservant was given to the king because of her beauty.'

Subject-Verb Inversion

- (47) a. *Um veturinn voru konunginum gefnar ambáttir.*
 in the-winter were the-king (DAT) given slaves (NOM)
 'In the winter, the king was given (female) slaves.'

- b. *Um veturinn var ambáttin gefin konunginum.*
 in the-winter was the-slave (NOM) given the-king (NOM)
 'In the winter, the maidservant was given to the king.'
- (48) a. *Voru konunginum gefnar ambáttir?*
 were the-king (DAT) given slaves (NOM)
 'Was the king given maidservants?'
- b. *Var ambáttin gefin konunginum?*
 was the-slave (NOM) given the-king (DAT)
 'Was the maidservant given to the king?'

Extraction

- (49) a. *Hvaða ambáttir heldur þú að konunginum verði gefnar?*
 which slaves (NOM) think you that the-king (DAT) will-be given
 'Which maidservants do you think that the king will be given?'
- b. *Konunginum held ég að ambáttin verði gefin.*
 the-king (DAT) believe I that the-slave (NOM) will-be given
 'To the king I think that the maidservant will be given.'

Indefinite Subject Postposing

- (50) a. *Það voru konungi gefnar ambáttir í vetur.*
 there was king (DAT) given slaves (NOM) in winter
 'There was a king given maidservants this winter.'
- b. *Það var ambátt gefin konunginum í vetur.*
 there was slave (NOM) gefin konunginum (DAT) in winter
 'There was a maidservant given to the king last winter.'

Subject Ellipsis

- (51) a. *Konungarnir fóru víða og — voru oft gefnar ambáttir.*
 the-kings (NOM) traveled widely and — (DAT) were often given
 slaves
 'The kings traveled widely and were often given maidservants.'
- b. *Ambáttin kom frá Írlandi og — var gefin konunginum.*
 the-slave came from Ireland and — (NOM) was given the-king (DAT)
 'The maidservant came from Ireland and was given to the king.'

Infinitive Complements

- (52) a. *Að vera gefnar ambáttir var mikill heiður.*
 to be given slaves (NOM) was great honor
 'To be given maidservants was a great honor.'
- b. *Að vera gefin konunginum olli miklum vonbrigðum.*
 to be given the-king (DAT) caused great disappointment
 'To be given to the king caused great disappointment.'

- c. *Ambáttin vonast til að verða gefin konunginum.*
 the-slave (NOM) hopes for to be given the-king (DAT)
 'The maidservant hopes to be given to the king.'

These tests show that both the dative object and the accusative object can be made grammatical subjects by passive. When the dative object is passivized, the postverbal "retained object" appears in the nominative case, and the verb agrees with it in number. At first glance, this might seem to contradict our conclusion that it is the preverbal dative NP that is the subject, but as we show below, the nominative case marking is predictable. The accusative object of the active becomes the nominative subject of the passive and passes the same subjecthood tests with equal success.

4. PASSIVE IN LFG

In Lexical-Functional Grammar, actives and passives are related by a lexical redundancy rule. Given the existence of impersonal passives in Icelandic, it seems reasonable to dissociate the part of the rule that relates the active subject to the passive *by*-phrase from the part of the rule that associates the active object with the passive subject. Hence, we have the two rules in (53), whose effect is illustrated in (54):

- (53) a. SUBJ → AF-OBJ/∅
 b. OBJ → SUBJ

- (54)
- | | | |
|----------------|--------------------|-------|
| | Agent | Theme |
| <i>taka:</i> | V, 'take' (SUBJ, | OBJ) |
| <i>tekinn:</i> | V[+ part] (AF-OBJ, | SUBJ) |

We ignore here the fact that the Agent is only rarely expressed in passive sentences in Icelandic. A treatment of optional Agents can be found in Bresnan (1982a); for the use of ∅ in lexical rules, see Bresnan (1982b:166). The auxiliary verbs *vera* and *verða* are treated as "raising" verbs that take a SUBJ and an XCOMP. No thematic role is associated with the subject of these verbs and they get whatever subject their XCOMP gets (see Kaplan and Bresnan, 1982, for further explanation of the formalism used in LFG). The morphological principles assigning case are discussed below.

4.1. Grammatical Functions, Thematic Roles, and Case Marking in Icelandic

Our account of passive in Icelandic is based on the LFG analysis of passive sketched above. Note in particular that only NPs bearing the grammatical function OBJ passivize. To develop a full account of the passive construction, we

need to specify how these rules interact with other components of the grammar. In this section, we outline our view of this interaction, particularly with respect to thematic roles and case-marking rules.

4.1.1. THE LEXICAL COMPONENT

For the sake of clarity, we restate here the distinction made in LFG between semantically restricted and semantically unrestricted grammatical functions (GFs). The same distinction is made in Relational Grammar between "obliques" and "terms." SUBJ, OBJ, and 2OBJ are semantically unrestricted functions because they can bear any type of thematic role, depending on the verb. For example, in (55a) the SUBJ is an Agent, whereas in (55b) it is an Instrument.

- (55) a. *The president kissed the baby.*
 b. *The wrench opened the safe.*

This characteristic of SUBJs, OBJs and 2OBJs contrasts with the behavior of GFs such as *with*-phrases and *to*-phrases. While these PPs may bear more than one function, the functions are restricted by the form of the PP: there is no verb in English that expresses its Goal by means of a *with*-phrase, or its Instrument by means of a *to*-phrase. (This is necessarily an oversimplification; see Bresnan, 1982c, for a more elaborate discussion, and Levin, 1985, for further developments.) Thus, the nonverbal constituents of a sentence can be classified as follows into two kinds of verbal arguments plus a category of adjuncts.

- (56) ARG: (i) semantically unrestricted (SUBJ, OBJ, 2OBJ)
 (ii) semantically restricted
 ADJ: all types of adjuncts

4.1.2. CASE ASSIGNMENT

Case can be assigned in (at least) three different ways, which we call *semantic*, *lexical* or *idiosyncratic*, and *functional* case assignment.¹³ Semantic case marking includes such traditional "adverbial" categories as accusatives of time or duration, and instrumental datives; these are illustrated in (57).¹⁴

- (57) a. *Strákurinn beið allan daginn.*
 the-boy waited all (ACC) day (ACC)
 'The boy waited all day.'
 b. *Hann tók vini sínum opnum örmum.*
 he took friend his [+ refl] open (DAT) arms (DAT)
 'He greeted his friend with open arms.'

We cannot consider this type of case assignment in any detail here. Depending on their function, semantically case-marked constituents are either semantically restricted functions or adjuncts. Idiosyncratic or lexical case marking is an idiosyncratic property of a lexical item, assigned by a verb, preposition, or adjective.

We assume that idiosyncratic case is associated with a particular thematic role, and that this case marking is assigned before thematic roles are associated with grammatical functions. Functional case marking is what is widely referred to as regular or “default” case marking, which results in nominative subjects and accusative objects. It is sensitive to surface grammatical relations and hence applies after all association principles and reassociation rules, including passive.

4.1.3. THE MAPPING BETWEEN THEMATIC ROLES AND GRAMMATICAL FUNCTIONS

Our account of passive relies on the existence of association principles, which establish a mapping between thematic roles and grammatical relations. The existence of such association principles is assumed in various current linguistic theories but has not been fully fleshed out.¹⁵ Our account makes use of both universal and language-specific association principles.

We postulate a level of representation at which the valency of a verb is determined and its arguments can be distinguished in terms of thematic roles. At this level of thematic structure, verbs such as *dansa* ‘dance’ and *lesa* ‘read’ have the following representations:

- (58) *dansa* ‘dance’ ⟨Agent⟩
lesa ‘read’ ⟨Agent, Theme⟩

The relationship between different verb forms can be represented in terms of the optional suppression of an argument. For example, we might want to express the relation between the causative and noncausative forms of a verb such as *fækka* ‘decrease’ as follows:

- (59) *fækka* ‘decrease’ ⟨(Agent), Theme⟩

Idiosyncratic case marking takes this level as its input. Thus, we are assuming idiosyncratic case is assigned to thematic roles and not to grammatical functions. This assumption is motivated by the fact that for a given verb, the idiosyncratic case marking associated with a given thematic role is preserved under rules such as passive and raising when the GF changes. Hence, verbs such as *gæta* ‘take care of’ and *lofa* ‘promise’ get the following representations after the assignment of idiosyncratic case:

- (60) *gæta* ‘take care of’ ⟨Agent, Theme⟩
 [+ GEN]
lofa ‘promise’ ⟨Agent, Theme, Goal⟩
 [+ DAT] [+ DAT]

A set of association principles determines which thematic role will be mapped onto which grammatical function. Some of the association principles seem to be universal, whereas others are language specific. Where the universal and the language-specific principles interact, the language-specific ones take prece-

dence, and the universal ones act as elsewhere conditions. One universal principle that has often been proposed is that the Agent role is associated with the SUBJ-function. We assume that this principle is by and large correct.¹⁶ We also assume a hierarchy of grammatical functions.¹⁷

Given these background assumptions, we can now formulate the following set of association principles for Icelandic.

(61) ICELANDIC ASSOCIATION PRINCIPLES

- a. If there is only one thematic role, it is assigned to SUBJ; if there are two, they are assigned to SUBJ and OBJ; if there are three, they are assigned to SUBJ, OBJ, 2OBJ. (*Universal*)
- b. Agents are linked to SUBJ. (*Universal*)
- c. Case-marked Themes are assigned to the lowest available GF. (*Language specific*)
- d. Default case marking: the highest available GF is assigned NOM case, the next highest, ACC.¹⁸ (*Universal*)

4.2. Applying the Association Principles

These association principles are not specific to passives; they also account for preverbal oblique NPs in active sentences, as in (62).

- (62) a. *Mér er kalt.*
me (DAT) is cold
'I am cold.'
- b. *Henni hefur alltaf þótt Ólafur leiðinlegur.*
her (DAT) has always thought Olaf (NOM) boring (NOM)
'She always found Olaf boring.'

We assume that Icelandic does not have any impersonal verbs in the sense of "subjectless" verbs, except for those with no semantic arguments, for example, weather verbs or those with PP-complements but no arguments realized as bare NPs.

Now note that the association principles given here allow for two different assignments of GFs in the case of accusative Themes that do not bear idiosyncratic case. The association convention in (61c) does not say anything about them, since it only specifies that idiosyncratically marked Themes will be associated with the lowest available GF. Hence, in the ditransitive cases where we have a non-case-marked Theme and another nonsubject argument, we can assign the GFs in two ways. For a verb like *gefa* 'to give', we will get the following two possibilities.

- (63) *gefa*: V⟨Agent, Theme, Goal⟩
[+ DAT]
- a. SUBJ OBJ 2OBJ
 - b. SUBJ 2OBJ OBJ

Note that this type of dual association resolves the problem of double objects. Although we can associate either the Theme or the Goal with the direct object in the lexical form of a verb such as *give*, we are not able to associate both arguments with the direct object at the same time because the association principles respect functional uniqueness. Whichever GF the Goal is linked to will get marked with the (lexically assigned) dative case; whichever GF the Theme is linked to, it will get marked accusative in the active version by virtue of the principle of default case marking.

This solution is not empirically equivalent to a solution in which we have two direct objects. It predicts that whatever *other* characteristic of OBJ we might find in the language, it will *not* apply to the immediately postverbal NP (the "retained object") of a ditransitive verb in the passive because that NP must have been assigned to 2OBJ. To test this prediction, other syntactic rules that single out OBJs as opposed to all other postverbal GFs in Icelandic must be found. Rögnvaldsson (1982) discusses some data that might illustrate such a rule, and that support our analysis of DAT-ACC verbs.¹⁹ The evidence is based on the interaction of heavy NP-shift and reflexivization (at least for those speakers who allow nonsubject antecedents). Rögnvaldsson (1982: 133-135) shows that the reflexivization possibilities reflect the underlying order of the two postverbal NPs. This is illustrated for an ACC-DAT verb, *svipta* 'deprive', by the examples in (64), taken from Rögnvaldsson (1982, his [74a-b] and [80]).

- (64) a. *Sjórinn svipti hana_i [manni sínum_i].*
 the-sea deprived her (ACC) husband (DAT) her [+ refl]
 'The sea deprived her_i of her_i husband.'
- b.**Sjórinn svipti [konu sína_i] manningum_i.*
 the-sea deprived wife (ACC) his [+ refl] the-man (DAT)
 'The sea deprived his_i wife of the man_i.'
- c.**Sjórinn svipti manningum_i [gömlu konuna sína_i . . .]_{NP}.*
 the-man (DAT) old the wife his [+ refl]
 'The sea deprived of the man_i his_i old wife.'

Sentence (64b) is ungrammatical because the supposed antecedent does not precede the reflexive; however, crucially, applying heavy NP-shift to the first NP, as in (64c), does not make the reflexive possible.

One possible interpretation of this fact (not Rögnvaldsson's) is that an OBJ but not a 2OBJ can be the antecedent of a reflexive. This generalization (together with linear precedence) accounts for the contrast noted by Rögnvaldsson (1982: 231-322, n. 25). The DAT-ACC class of ditransitive verbs appear to have not one but two reflexivization patterns, that is, either object can be an antecedent. The following sentences are based on Rögnvaldsson's examples.

- (65) a. *Ég gaf konungi [ambáttina sína].*
 I gave a-king (DAT) slave (ACC) his [+ refl]
 'I gave the king his maidservant.'

- b. *Ég gaf ambáttina [konungi sínum]_{NP}.*
 I gave the-slave (ACC) king (DAT) his [+ refl]
 'I gave the maidservant to her king.'

Example (65b) contrasts with (64c) above. [Note that the shifted (dative) NP in (65b) need not be especially heavy.] Given our analysis of DAT-ACC verbs as getting dual assignments to GFs, these facts receive a very simple and natural explanation: an OBJ but not a 2OBJ can be the antecedent of a reflexive. Given the underdetermination of GF assignments embodied in the principles (61a-d) and the alternative assignments displayed in (63), this follows naturally.

As pointed out by an anonymous reviewer, further support for alternative assignments as in (63) seems to come from the facts discussed in Bernóðsson (1982:37-38). He observes that for many active DAT-NOM verbs (verbs with DAT subjects and NOM objects), either order feels natural ("eðlileg"); this intuition about "unmarked" word order correlates with the fact that either argument can occur between the finite and nonfinite verbs, a position reserved for grammatical subjects. The facts for actives are analogous to the facts for DAT-NOM passives derived from DAT-ACC ditransitive verbs.

The solution proposed here is preferable to one in which we would allow 2OBJ to passivize in Icelandic. Under such a proposal, we would need a different principle to exclude double passivization in the case of ditransitive verbs with other than DAT-ACC objects, a restriction that was illustrated above in (42).²⁰

We conclude this section by presenting Table I, which summarizes the case marking and the grammatical functions assigned to the arguments of the various classes of ditransitive verbs.

TABLE I
 CASE MARKING AND GRAMMATICAL FUNCTIONS OF DITRANSITIVE VERB ARGUMENTS

Verb type	Thematic roles	Lexical case marking	Grammatical functions (Association Principles)	Default case marking
DAT-ACC	Agent		SUBJ (61b)	NOM
	Theme		2OBJ/OBJ (61a)	ACC
ACC-DAT	Goal	DAT	OBJ/2OBJ (61a)	
	Agent		SUBJ (61b)	NOM
	Theme	DAT	2OBJ (61c)	
ACC-GEN	Source		OBJ (61a)	ACC
	Agent		SUBJ (61b)	NOM
	Theme	GEN	2OBJ (61c)	
DAT-DAT	Goal		OBJ (61a)	ACC
	Agent		SUBJ (61b)	NOM
	Theme	DAT	2OBJ (61c)	
DAT-GEN	Goal	DAT	OBJ (61a)	
	Agent		SUBJ (61b)	NOM
	Theme	GEN	2OBJ (61c)	
DAT-GEN	Goal	DAT	OBJ (61a)	
	Theme	GEN	2OBJ (61c)	

The default case-marking principle stated in (61d) correctly accounts for a rather surprising fact already noted in passing. Recall that in the passive sentence in (44a), the postverbal Theme is marked nominative, even though it is not the grammatical subject but rather a 2OBJ. Since the Theme is not assigned idiosyncratic case by this class of ditransitive verbs, whether or not it becomes the subject in the passive version, it will be the highest GF not already assigned case. Hence, it will get nominative case by the default case-marking principle.

4.3. Verbs of Variable Polyadicity

The association principles make some further predictions that are borne out by the data. As in English, many verbs can be used with variable numbers of grammatical arguments. For example, the verb *óska* 'to wish' can be either a simple transitive verb taking a genitive Theme, or a ditransitive taking a dative Goal and a genitive Theme; in other words, the Goal argument is optional.

- (66) a. *Þú hefur óskað henni þess.*
 you have wished her (DAT) this (GEN)
 'You have wished this to her.'
- b. *Þú hefur óskað þess.*
 you have wished this (GEN)
- c.* *Þú hefur óskað henni.*
 you have wished her (DAT)

Given the association principles for Icelandic in (61), the mapping between θ -roles and GFs is determined by the *polyadicity* of the verb. Hence, we predict that, for such verbs, the ability of a NP with a given thematic role (e.g., Theme) to passivize will also depend on the polyadicity of the verb. This can be seen from the different assignments of the OBJ-function in (67):

- (67) *óska*: V⟨Agent Theme (Goal)⟩
 [+ GEN] [+ DAT]
- | | | | |
|----|------|------|-----|
| a. | SUBJ | 2OBJ | OBJ |
| b. | SUBJ | OBJ | — |

Only when a NP is assigned to OBJ will it passivize.²¹ As an idiosyncratically case-marked Theme, *þess* can only be assigned to the lowest available GF. When the verb is used as a simple transitive, this will be the OBJ function, and hence *þess* will passivize and raise as shown in (68a). But when *óska* is used as a ditransitive, *þess* will be assigned to 2OBJ, and hence will be unable to become the subject of a passive and subsequently be raised. This is illustrated by the contrast in (68).

- (68) a. *Þess var óskað (*henni).*
 this (GEN) was wished (her [DAT])
 'This was wished to her.'

- b. *Ég tel þess hafa verið óskað (*henni).*
 I believe this (GEN) to-have been wished (her [DAT])
 'I believe this to have been wished to her.'
- c. *Henni var óskað þess.*
 her (DAT) was wished this (GEN)
 'She was wished this.'
- d. *Ég tel henni hafa verið óskað þess.*
 I believe her (DAT) to-have been wished this (GEN)
 'I believe her to have been wished this.'

Other verbs that work the same way include *leyna* 'to conceal', ACC-DAT; *biðja* 'to ask', ACC-GEN; *skila* 'to return', DAT-DAT; *hóta* 'to threaten', DAT-DAT; *synja* 'to deny', DAT-GEN.²² The judgments are extremely clear-cut. These facts show clearly that passive is not sensitive to thematic roles but rather must be expressed as an operation on grammatical functions.

4.4. Some Further Alternations

A few further alternations remain to be accounted for. Since we have not studied these alternations extensively, our proposals here are very tentative, but we want to give some indication of how such alternations could be analyzed within the general framework we are assuming.

In section 3.2, we noted the existence of a few different types of ACC-ACC verbs, some of which were arguably ditransitive. The first type, which was illustrated in (38) and is repeated here for convenience, is clearly not ditransitive:

- (38) a. *Þeir kölluðu hana Kiddu.*
 they called her (ACC) Kidda (ACC)
 'They called her Kidda.'
- b. *Hún var kölluð Kidda.*
 she (NOM) was called Kidda (NOM)
 'She was called Kidda.'

In verbs of this type, the second NP is neither an OBJ nor a 2OBJ but rather an XCOMP, that is, an (objective) complement, and hence falls outside the scope of this paper, since predicative complements never passivize. The status of the second type, illustrated in (39), is not so clear:

- (39) a. *höggva einhvern banahögg*
 to-hit someone (ACC) a-deadly-blow (ACC)
 'to deal somebody a deadly blow'
- b. *slá einhvern kinnhest*
 to-hit someone (ACC) a-blow-on-the-cheek (ACC)
 'to hit somebody on the cheek'

- c. *kyssa einhvern rembingskoss*
 to-kiss someone (ACC) a-loud-kiss (ACC)
 'to give somebody a smacking kiss'

Here, we have an alternation between a simple transitive form and what looks like a ditransitive form of the verb. For ease of exposition, let us refer to the second accusative, for example, 'a deadly blow', as a *cognate accusative*. The cognate accusative might be analyzed as (some kind of) an object; alternatively, it might be that the cognate accusative is actually a semantically restricted GF, that is, one restricted to a particular thematic role. As such, it would be neither an OBJ nor a 2OBJ and hence would not participate in any of the alternations we are discussing. The principles we have already formulated give us a way to test the correctness of this analysis: if alternating forms exist in which only the cognate ACC is present, do these monotransitive forms have passive counterparts? If the cognate accusative in sentences like (39) is assigned to a semantically unrestricted function, then its function is simply the highest available function given the polyadicity of the verb; we would then expect it to passivize when it is assigned to the OBJ-function. If, in contrast, it does not passivize when it is the sole postverbal NP, then we would want to look for arguments that, indeed, in both the ditransitive and monotransitive forms, the cognate accusative is either a semantically restricted (OBLique) argument or else not an argument at all.

It turns out that the cognate accusative can at least marginally be the sole postverbal argument, and in such examples it can be passivized, as illustrated in (69).

- (69) a. *Njáll hjó aldrei banahögg.*
 Njal hit never a-deadly-blow (ACC)
 'Njal never dealt a deadly blow.'
- b. *?Banahöggjið var höggvið á miðnætti.*
 the-deadly-blow (NOM) was struck at midnight
 'The deadly blow was dealt at midnight.'
- c. *Jón kyssir bara rembingskossa.*
 John kisses only loud-kisses (ACC)
 'John only gives smacking kisses.'
- d. *?Rembingskossar eru oft kyssir í ástarsögum.*
 loud-kisses (NOM) are often kissed in love-stories
 'Smacking kisses are often given in love stories.'

Crucially, the ACC case marking turns into NOMinative, showing that, in these examples at least, it was not idiosyncratically assigned. These facts suggest that the cognate accusative should be analyzed as a 2OBJ in examples like (39), but as an OBJ when it is the sole postverbal NP, as in (69a, c).²³

If this is right, the question becomes: what is its thematic role? Consider the example in (39a). The relation of *höggva* 'hit' to the animate object *einhvern* 'someone' seems to be the same with or without the cognate accusative; more-

over, the thematic role of the cognate accusative is presumably the same with or without the “hittee.” Although the “hittee” is arguably a Goal rather than a Theme, it seems unreasonable to assign the Theme role to ‘a deadly blow’ in either type of sentence. For most ditransitive verbs, the Theme is an obligatory argument. The cognate accusative, in contrast, is merely an optional complement; moreover, it certainly does not undergo the movement or action described by the verb ‘hit’. It seems to be a semantically empty argument, one that cannot really be questioned or focused. In fact, its semantic contribution to the meaning of the verb is rather like a manner adverbial. Just what role it bears is not clear to us. What is clear is that such cognate accusatives necessitate the formulation of another association principle, to make sure that they are always linked to 2OBJ if another NP-argument is present, since this assignment will not follow automatically from the principles in (61) if the cognate accusative is not an idiosyncratically case-marked Theme.

It also appears that these NPs are part of the VP. Consider the placement of an adverb such as *sjaldan* ‘rarely’ in sentences with an auxiliary verb, as illustrated in (70).

- (70) a.* *Hann hefur gefið barninu sjaldan pelann.*
 he has given the-child (DAT) rarely the-bottle (ACC)
 b.* *Hann hefur höggvið óvini sjaldan banahögg.*
 he has struck enemies (ACC) rarely a-deadly-blow (ACC)

Thráinsson (1986) argues that there is a class of adverbs in Icelandic (including *sjaldan*) that can occur anywhere in S as an immediate daughter of S (as long as other word order constraints, such as the verb-second constraint, are observed), but not embedded at a lower level, for example, within VP. He argues that in sentences with an auxiliary, there is a VP-node following the (finite) auxiliary and dominating the verb and its (postverbal) arguments. If his arguments are correct, the examples in (70) indicate that cognate objects such as *banahögg* ‘deadly blow’ in (70b) are within the VP just like regular objects such as *pelann* ‘the bottle’ in (70a).

A third type of double accusative can be found with verbs such as *keyra* ‘drive’. Here, we find the following alternations, pointed out by an anonymous reviewer:

- (71) a. *Hann keyrði bílinn þessa leið.*
 he drove the-car (ACC) this route (ACC)
 ‘He drove the car this way.’
 b. *Hann keyrði þessa leið.*
 he drove this route (ACC)
 ‘He drove this way.’

The second accusative in (71a) behaves in some respects like an object, namely, it passivizes when it is the sole postverbal NP:

- (72) *Þessi leið hefur aldrei verið keyrð.*
 this route (NOM) has never been driven
 'This route has never been driven.'

However, when two postverbal NPs are present, as in (71a), only the first NP passivizes:

- (73) a. *Bíllinn var keyrður þessa leið.*
 the-car (NOM) was driven this route (ACC)
 'The car was driven this way.'
 b.* *Þessi leið var keyrð bílinn.*
 this-route (NOM) was driven the-car (ACC)

Here again, we have a pattern in which only the first postverbal NP passivizes, confirming principle (61a). (Similarly, for another verb, *aka* 'drive', but with DAT rather than ACC case on 'the-car'.)

We assume that some transitive verbs allow the Path role, normally realized as a PP, to be assigned to the OBJ function when that position is otherwise unfilled. It is not entirely clear, however, how to analyze the accusative *þessa leið* 'this route' when it is the second postverbal NP and the OBJ function is filled, as in (71a). Such accusatives are frequently referred to as adverbials or semantic accusatives, which would suggest that they are not arguments (2OBJ) of the verb but rather some sort of adjunct. If that were the case, one might expect them to contrast with regular verbal arguments with respect to the VP-test discussed above. While most speakers agree that there is some difference, the judgments are unfortunately not very clear.

- (74) a.* *Jón hefur gefið barninu oft þennan þela.*
 John has given the-child (DAT) often this bottle (ACC)
 'John has often given the child this bottle.'
 b. ? *Ómar hefur ekið bílnum oft þessa leið.*
 Omar has driven the-car (DAT) often this route (ACC)

In addition, the placement of manner adverbs gives a similar (weak) contrast:

- (75) a. ?? *Hann mun gefa barninu mjög varlega þennan þela.*
 he will give the-child (DAT) very carefully this bottle (ACC)
 b. *Ómar mun keyra bílinn mjög varlega þessa leið.*
 Ómar will drive the-car (ACC) very carefully this route (ACC)

It is not obvious what to make of these rather subtle differences. However, within our framework, the fact that *þessa leið* remains accusative when the dative object of *aka* 'to drive' is passivized clearly dictates treating it as an adverbial adjunct rather than as a verbal argument.

To summarize, we have proposed the following representations at the thematic level for the two classes of verbs discussed in this subsection.

- (76) a. *höggva* 'strike' ⟨Agent, (Theme), (cognate-obj)⟩
 b. *keyra* 'drive' ⟨Agent, Theme⟩ or ⟨Agent, Path⟩
 c. *aka* 'drive' ⟨Agent, Theme⟩ or ⟨Agent, Path⟩
 [+ DAT]

The possible associations with GFs are shown in (77).

- (77) a. *höggva*: ⟨Agent, (Theme), (cognate-obj)⟩
 SUBJ OBJ 2OBJ
 SUBJ OBJ —
 SUBJ — OBJ
 b. *keyra*: ⟨Agent, Theme⟩ or ⟨Agent, Path⟩
 SUBJ OBJ SUBJ OBJ
 c. *aka*: ⟨Agent, Theme⟩ or ⟨Agent, Path⟩
 SUBJ OBJ SUBJ OBJ

If both the Theme and the Path roles for the verbs *keyra* or *aka* are realized, then the Path is an adjunct and not an argument of the verb.

5. GERMAN ASSOCIATION PRINCIPLES

Having demonstrated that in Icelandic oblique NPs can be made grammatical subjects by passivization, we need to address the question of whether the same is true of German, which has constructions that are superficially similar. Consider the German equivalent of an Icelandic sentence such as in (4), repeated here for convenience.

- (78) *Ihm* *wurde geholfen.* (German)
 Honum *var hjálpað.* (Icelandic)
 him (DAT) was helped
 'He was helped.'

Although the work on German syntax has not led to as extensive a study of the syntactic properties of subjects as has been made for Icelandic, it is clear that the German facts do *not* parallel the Icelandic ones. There are no reasons to assume that *ihm* in (78) above is a grammatical subject. Thus, the German examples, while superficially very similar to the Icelandic ones, are functionally quite different. Some of the evidence supporting this conclusion is illustrated in the following examples, mostly from Cole *et al.* (1978).

Subjects of infinitives in German can be controlled (either functionally or anaphorically), but this is not possible with the passives of verbs taking oblique case marking. Arbitrary PROs can be found as the understood subject of German

infinitivals, as shown in (79a), but not with idiosyncratically marked NPs, as shown in (79b).

- (79) a. *Im Sommer zu reisen, ist angenehm.*
 in summer to travel is agreeable
 'To travel in the summer is nice.'
- b.* *Geholfen zu werden, ist angenehm.*
 helped to be is agreeable
 'To be helped is nice.'
- c. *Aufgenommen zu werden, ist angenehm.*
 admitted to be is agreeable
 'To be admitted is nice.'

Similarly, EQUI control is not possible with the passives of verbs taking oblique objects. German has a rule of EQUI control, illustrated in (80).

- (80) *Er hofft, wegzugehen.*
 he hopes away to go
 'He hopes to go away.'

As shown in (81a), this rule applies to passives; however, as illustrated in (81b), it does not apply to the dative NP of a passive sentence like (78).

- (81) a. *Er hofft, aufgenommen zu werden.*
 he hopes admitted to be
 'He hopes to be admitted.'
- b.* *Ihm/*Er hofft, geholfen zu werden.*
 him (DAT)/he (NOM) hopes helped to be

Further examples can be found in Cole *et al.* (1978); for example, the preverbal oblique NPs cannot be deleted under identity with a (nominative) subject.

- (82) a. *Er kam und (er) besuchte die Kinder.*
 he (NOM) came and (he) visited the children
 'He came and (he) visited the children.'
- b. *Er kam und (er) wurde verhaftet.*
 he came and (he) was arrested
 'He came and (he) was arrested.'
- c.* *Er kam und ___ wurde geholfen.*
 he came and ___ (DAT) was helped
- d.* *Er sah die Damen und ___ gefielen sie.*
 he saw the ladies and ___ (DAT) pleased them(fem)
- e.* *Er sah die Damen und sie gefielen ___.*
 he saw the ladies and they pleased ___ (DAT)

Nor can the oblique NP be deleted by relative clause reduction.

- (83) a. *Der das Buch lesende Junge heisst Wilhelm.*
 the [the book reading] boy is-named Wilhelm
 'The boy reading the book is called Wilhelm.'
- b.* *Das der Junge lesende Buch heisst Sieben Legenden.*
 the [the boy reading book] is-named *Seven Legends*
- c. *Das vom Jungen gelesene Buch heisst*
 the [by-the boy read] book is-named
 'The book read by the boy is called *Seven Legends*.'
- d.* *Der vom Lehrer geholfene Junge bekam eine gute Note.*
 the [by-the teacher helped] boy got a good grade
 'The boy helped by the teacher got a good grade.'
- e.* *Der das Buch gefallende Junge sitzt da in der Ecke.*
 the [the book pleasing] boy sits there in the corner
 'The boy liking the book is sitting there in the corner.'

Thus, the same type of tests that show that oblique NPs can be grammatical subjects in Icelandic also show that the German analogues cannot be analyzed as such.

As in Icelandic, the "quirky" arguments of passive verbs do not behave differently in this respect from the quirky arguments of active forms. Consider active constructions such as the one illustrated in (84).

- (84) *Mir ist übel.*
 me (DAT) is nasty
 'I am nauseated.'

Here too it can be shown that *mir* does not behave like a grammatical subject, as illustrated in the following examples.

- (85) a.* *Mir hofft, übel zu sein.*
 me (DAT) hopes nauseated to be
 'I hope to be nauseated.'
- b.* *Ich hoffe, übel zu sein.*
 I (NOM) hope nauseated to be
- c.* *Übel zu sein, ist unangenehm.*
 nauseated to be is disagreeable
 'To be nauseated is disagreeable.'

In spite of the superficial similarities between Icelandic and German, the analysis of constructions without nominative arguments (be they active or passive voice) in the two languages must be quite different. We can account for these differences by means of one language-specific association principle for German, which replaces the language-specific principle for Icelandic in (61c):

- (86) Case-marked *thematic roles* are assigned to 2OBJ.

In other words, idiosyncratically marked arguments are associated with the function 2OBJ regardless of the valence of the verb. Thus the entire set of association principles for German is as given in (87):

(87) GERMAN ASSOCIATION PRINCIPLES

- a. If there is only one thematic role, it is assigned to SUBJ; if there are two, they are assigned to SUBJ and OBJ; if there are three, they are assigned to SUBJ, OBJ, 2OBJ. (*Universal*)
- b. Agents are linked to SUBJ. (*Universal*)
- c. Case-marked thematic roles are assigned to 2OBJ. (*Language specific*)
- d. Default Case Marking: the highest available GF is assigned NOM case, the next highest, ACC. (*Universal*)

Remember that universal principles are interpreted as elsewhere conditions applying after any language-specific principles or assignments of restricted GFs. Hence, all idiosyncratically marked arguments will have the status of 2OBS and thus will not passivize under the assumption that German has only the unmarked passive rule according to which only (direct) OBS passivize. Thus, they will never be subjects in either passive or active sentences. This is exactly the result that we want for German.

Together with the functional uniqueness law, the association principles for German make some further predictions: in German (unlike Icelandic) we cannot get two idiosyncratically case-marked NPs after the verb. This follows from (87c) given functional uniqueness: two different idiosyncratically case-marked thematic roles cannot both be assigned to the same GF, namely, 2OBJ. Thus, under the assumption that both DAT and GEN case are assigned idiosyncratically by the verb in German, there should be no DAT-DAT, DAT-GEN, or GEN-GEN verbs in that language.²⁴ Two accusative arguments are allowed if one is an OBJ and the other is idiosyncratically marked and hence a 2OBJ. In fact, DAT-GEN combinations do not exist in contemporary German, so the prediction made by our analysis is correct in that respect. Our predictions are also correct with respect to the behavior of verbs with two accusatives. The few cases that still exist allow only for the passivization of one of the objects, as shown by the following examples.²⁵

- (88) a. *Ich habe ihn das Gedicht abgehört.*
 I have him (ACC) the poem (ACC) heard
 'I had him recite the poem.'
- b. *Er ist das Gedicht abgehört.*
 he (NOM) is the poem (ACC) heard
 'He recited the poem.'
- c.* *Das Gedicht ist ihn abgehört.*
 the poem (NOM) is him (ACC) heard

So we can account for the difference between Icelandic and German by means of one language-specific association convention for each language. This account also correctly predicts the nonoccurrence of a certain number of combinations in German. Some other gaps remain unexplained, however; for example, nothing in our account would prevent Icelandic from having GEN-GEN or ACC-ACC combinations in postverbal position.²⁶ We have shown that superficially very similar sentences in two rather closely related languages must be analyzed in quite different ways. In doing so, we have shown that a possibility rejected on the basis of German data, namely, that of oblique subjects and nonaccusative direct objects, actually exists within Germanic. This leads to an interesting question in historical syntax: was English in its earlier stages more like German or more like Icelandic? We will not try to answer that question but instead merely note that it cannot be assumed on the basis of universal principles of language that English was like German, as has been done in some current work (see, e.g., Lightfoot, 1979, 1981).²⁷

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NOTES

¹The case-dependent approach is actually an adaptation of a traditionally made observation, namely, that oblique case is immune to passivization. Whereas the traditional observation is correct for Icelandic under the proper interpretation of "oblique," its adaptation in the current GB literature is not. To show that the two approaches are not empirically equivalent, we can compare the following two quotes.

I want to express in a generative framework the traditional insight among students of Germanic languages as well as among grammarians of older phases of English that oblique case is immune from passivization (den Besten, 1981: 67).

From most inflected languages we know that only those verbs which take an accusative object can form a personal passive. This seems to be the general rule, though in Old Greek also non-accusative objects can be made the subject of a passive sentence. In the Low German of my hometown (Krefeld) there is no distinction between dative and accusative, or rather, there is only one objective case. So verbs which in High German govern the dative (e.g., *helfen*, *kündigen*: *help*, *give notice*) come to be construed with the objective case in Lower German. In passive accordingly, we have personal constructions: *Ich werde geholfen*, *er ist gekündigt worden* (Marchand, 1974:98).

For Marchand, the notion 'subject' seems to coincide with that of nominative NP; hence his statement can be given an interpretation that allows it to apply correctly to both German and Icelandic. Den Besten's statement, however, does *not* hold for Icelandic, as we show. There are exceptions to Marchand's statement too, as he himself notes: Ancient Greek, but also Irish until it lost its dative case (C. Watkins, personal communication) and within Germanic, perhaps Modern Faroese, as described by Lockwood (1964), from whom we quote the following sentences:

- (i) *Teir fagnaðu Depilsmunnum væl.*
they received the-depilsmen (DAT) well
- (ii) *Depilsmenn voru væl fagnaðir.*
the-Depilsmen (NOM) were well received (NOM-pl.)

However (ii) is probably not an example of a participle but is rather an adjectival form.

²Before proceeding with our analysis, however, we must remark that it would be all too easy to empty these theories of their distinguishable content. For example, if *case* is used not to refer to any morphologically observable properties of NPs but rather simply to refer to whatever behaves syntactically like an OBJECT, then the case-marking theory of passivization becomes a notational variant of the function-based theory. Similarly, if OBJ is defined to be "whatever NP is assigned accusative case by the verb," then it will not be distinguishable from the case-assignment theory. In what follows, then, we assume that "case" and "function" are concepts with distinct morphologically and syntactically observable properties.

³The most problematic case of double objects discussed in the literature is that of Kinyarwanda (Gary and Keenan, 1977); see also Dryer (1983) for arguments that these are not really double objects. Zaenen (1983) argues that Kikuyu verbs that seemingly allow the double-object construction are better analyzed as allowing alternative assignments of grammatical functions; the argument is based on the interaction of passive with the prefixation of the direct object marker.

⁴Agent *af*-phrases are much less common in Icelandic passives than *by*-phrases are in English. A sentence such as (i) will always be interpreted as meaning (ii) rather than (iii):

- (i) *Bókin var tekin af Jóni.*
- (ii) 'The book was taken from John.'
- (iii) 'The book was taken by John.'

However, other sentences, such as (iv), are multiply ambiguous for at least some speakers.

- (iv) *Myndin var tekin af Jóni.*
 'The picture was taken from/of/by John.'

⁵ Example (3a) is taken from Einarsson (1945). Example (3b) shows that middle formation does not preserve oblique case; the verb *týna* 'to lose' takes dative objects in the active voice, dative subjects in the passive voice, but nominative subjects in the middle voice. See Zaenen and Maling (this volume: 137–152) for discussion of oblique case marking with respect to other quasi-productive lexical rules. Unaccusative verbs show that case preservation is not restricted to fully productive "syntactic" rules such as passive ("major" rule in the sense of Wasow, 1980). As far as we know, Bernódusson (1982) was the first to point out the existence of unaccusative verbs preserving accusative case on Themes.

⁶ The use of the *-st*-passive is less widespread in Icelandic than it is, for example, in Swedish. This is not meant to imply that there are not some uses of the *-st*-forms in Icelandic that are not found in Swedish, for example, the one exemplified under (i):

- (i) *Þeir sögðust ekki vilja gera það.*
 they said-themselves not to-want to-do that
 'They said that they did not want to do that.'

⁷ Strong verb participles such as *fara* end in *-inn*, *-in*, *-ið*; one class of weak verbs (e.g., *telja*) also has participles of this form, but most weak verb participles end in *-aður*, *-uð*, *-ð*.

⁸ This destroys the argument given in section 4.2 of Maling and Zaenen (this volume: 383–407) against the application of the *that* t-filter in Icelandic. However, the general conclusion reached in that paper still holds.

⁹ Non-NPs cannot in general undergo raising, as shown in (i):

- (i) **Eg taldi á fundunum í barnskap mínum hafa verið margt fólk.*
 I believed [at the-meeting]_{PP} in foolishness my to-have been many people

However, just when the PP can be analyzed as the grammatical subject, then it can undergo raising, as illustrated in (ii):

- (ii) *Ég taldi undir rúminu í barnskap mínum vera góðan felustað.*
 I believed under the-bed in foolishness my to-be good hiding-place.

¹⁰ Note that the superficially similar *Ist dir kalt geworden?* in German does not necessarily have to be analyzed as an instance of subject–verb inversion. According to German word order, both (nonsubject) *dir* and *kalt* can occur between the finite verb *ist* and the nonfinite *geworden* even without this rule, as illustrated in (i).

- (i) *Es ist dir kalt geworden.* (German)
 it is you (DAT) cold become
- (ii) **Það er þér kalt orðið* (Icelandic)
 **Það er þér orðið kalt.*

It is clear that the Icelandic construction differs significantly from its German counterpart. See section 5 below for an account of certain syntactic differences between German and Icelandic.

¹¹ It is well known that Old Norse allowed rather free ellipsis of NPs under identity with some NP in the previous sentence. Faarlund (1980:70) observes that ellipsis in Old Norse does not seem to be sensitive to either subjecthood or nominative case but rather simply deletes any unstressed recoverable pronoun; one could argue that the basic condition was not strict identity but simply coreference. However, in the Modern Scandinavian languages, such ellipsis or coordination is sensitive to grammatical relations. The examples in (26) are based on Faarlund's Norwegian examples. Note further that sentences such as (i) where both subject and object are elided are grammatical, if somewhat stilted:

- (i) *Þeir fluttu líkið og — grófu —.*
they moved the-body and — buried —

The syntactic constraints on this kind of "conjunct splitting" merit further investigation.

¹² The well-known class of exceptions to passives such as *weigh* includes one superficially ditransitive ACC-ACC verb, namely, *kosta* 'to cost', illustrated in (i).

- (i) *Það kostaði mig eina krónu.*
it cost me (ACC) one kronur (ACC)

Just as in English, neither postverbal NP passivizes. Our guess is that this is because the subject is not agentive enough. The classification of *kosta* thus depends on whether one thinks that a necessary criterion for (di)transitivity is having a passivizable object.

¹³ Although our terminology may differ, these are the same three types of case distinguished, for example, in Hjelmlev, and more recently in a GB framework in Babby (1980) and Freidin and Babby (1983).

¹⁴ These examples are taken from Friðjónsson (1978).

¹⁵ It is clear that this general schema owes much to the work of Anderson (1977) and Wasow (1977, 1980), to Ostler (1979) and Marantz (1981), and to Amritavalli (1980), Rappaport (1983), and Levin (1985). We do not have the time here to spell out the importance of these various contributions. These accounts assume the existence of something like a thematic level of representation. It is not completely clear to us that this is a purely linguistic level; it seems rather to be a level that mediates between cognitive and linguistic representations. In this paper, however, we treat it as a linguistic level.

¹⁶ We have ignored throughout the problem posed by the existence of ergative languages. It is not clear to us whether ergativity should be thought of as a difference in association principles ("deep" ergativity) or in case-marking principles ("surface" ergativity), or both.

¹⁷ The hierarchy of grammatical relations stems from work in Relational Grammar (Perlmutter, 1983; Cole and Sadock, 1977).

¹⁸ The default case marking is in a certain sense the equivalent of "structural case marking" in GB, except that we allow for exceptions such as nominative objects [see (62b)].

¹⁹ We thank an anonymous reader for pointing out the relevance of these data.

²⁰ Dual assignments have been shown to be independently motivated in other languages, and hence preferable to analyses that assume either that 2OBs can passivize or that the same sentence can contain two (direct) OBs. One such language is Kikuyu, as discussed

in Zaenen (1983). Given that this possibility of alternative assignments does exist in the world's languages, we can make use of it for Icelandic. Our conclusion, then, is that Icelandic does not violate the functional uniqueness principle and can be analyzed along lines that are known to be independently necessary for other languages.

²¹Note further that passive in Icelandic is not restricted to NPs that are thematically linked to the passive verb. We also find passives in the so-called raising constructions, as shown in (i).

- (i) *Hún er talin vera dugleg.*
she (NOM) is believed to-be conscientious (NOM).

Such examples indicate that passive in Icelandic is not a lexical rule in the sense of Wasow (1977) or Chomsky (1981). We have not taken raising and EQUI constructions into account here; see Andrews (1982b) for a fuller treatment of case assignment in Modern Icelandic.

²²We can speculate about the reason for the distribution of DOs in Icelandic: on the one hand, all immediately postverbal NPs that are arguments of the verb are DOs, regardless of their case marking; on the other hand, all postverbal accusatives that are neither XCOMPs nor have a semantically restricted function can passivize. It is difficult to resist the temptation to link these observations to the fact that Icelandic is a language that has at the same time a rather rigid word order and a rich case-marking system. It has often been noted that languages have two major strategies to encode grammatical relations, the one being word order, and the other case marking. Icelandic does both, and it can be assumed that it is this convergence of properties that is illustrated in the notion of direct object that is used in the language: a DO is an argument that either immediately follows the verb or is an accusative object.

²³This is not the only possible way to look at the data. We leave it to the reader to devise other possibilities too tedious to spell out at this point. The one we are exploring here, that is, the analysis as 2OBJ, is the one that seems the most problematic for our general account of passive, but also the one that intuitively seems to us to be the most likely.

²⁴This same prediction is made within the GB framework by Czepluch (1982); his modifications of the GB theory will not extend to Icelandic, however, where many of these combinations do occur. There are no GEN-GEN verbs in Icelandic either. We have not ruled out this possibility and treat it as an accidental gap in that language.

In support of the claim that verbs assign at most one lexical (i.e., idiosyncratic) case, Holmberg (1985) suggests that while the case marking on Themes is truly idiosyncratic in Icelandic, the apparent instances of two lexical cases actually reflect predictable case marking associated with particular thematic roles: for first objects, dative case marks [+recipient] and accusative case marks [-recipient]. Holmberg attributes the lack of GEN first objects to the fact that genitive case is not associated with any particular θ -role. The hypothesis that lexical items can assign at most one lexical case is clearly desirable from a theoretical standpoint, and Holmberg's characterization comes close to descriptive adequacy. Unfortunately, there are counterexamples that clearly require the assignment of lexical case to two arguments. Among the DAT-GEN ditransitives are at least three verbs with first (DAT) objects that are not recipients: *synja* 'to deny', *varna* 'to deny', and *frýja* 'to question'.

²⁵Of course, one must explain the fact that such forms existed in earlier stages of the

language. Unfortunately, it is difficult to determine what their status was. They seem to have always been rather bookish (see Curme, 1922, for discussion). Our guess is the following: in earlier stages, the dative case was not just an idiosyncratic case marking on a 2OBJ but could also encode semantically restricted grammatical functions (e.g., instrumentals). Hence, there would have been no violation of the functional uniqueness law.

One might speculate about why the evidence in the modern stages of both Icelandic and German points to an analysis in which bare NPs tend to be analyzed as occupying a semantically unrestricted function. But it seems true that even in the German languages that have maintained overt case, semantically restricted grammatical relations are in general realized as PPs.

²⁶ As noted above in sections 3.2 and 4.4, it is debatable whether any of the superficially ACC-ACC verbs are truly ditransitive.

²⁷ That such preverbal oblique NPs may have been grammatical subjects in earlier stages of English has been hinted at in Butler (1980), who gives statistics showing that they do not behave like normal impersonal constructions. See also Allen (1986), who shows that this is true for some but not all such verbs, and also Harris (1975).

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