THE PREDICTABLE CASE OF FAROESE

A DISSERTATION
SUBMITTED TO THE DEPARTMENT OF LINGUISTICS
AND THE COMMITTEE ON GRADUATE STUDIES
OF STANFORD UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Daniel Galbraith
August 2018

Abstract

This thesis concerns case-marking phenomena in Icelandic and Faroese. I argue that the best approach to case distinguishes the levels of abstract, morphosyntactic and morphological case, and permits mismatches between levels in some grammars (Linking Theory, Kiparsky 1997, 2001); these mismatches are best handled by an Optimality Theoretic output harmonisation on the mapping from argument structure to morphosyntax (Prince and Smolensky 1993 *et seq.*). Such a theory provides a cogent account of predicates with non-nominative subjects in Insular Scandinavian, which present an interesting puzzle: in Icelandic, dative-subject verbs occur with nominative objects that trigger number agreement, whereas in Faroese the object in such sentences is marked accusative and occurs with default third person singular agreement (1).

(1) a. Ice. *Mér líka hundar*
me.DAT like.3PL dogs.NOM.PL
'I like dogs'

b. Far. *Mær dámar hundar*
me.DAT likes.3SG dogs.ACC.PL
'I like dogs'

To date this difference has been poorly understood, and calls for in-depth analysis. The central hypothesis explored in this thesis is that the patterns in (1) are not language-specific idiosyncrasies, but the outcome of constraint interactions of a typical kind: namely, a pressure to index a nominative argument in the clause by number agreement, and a pressure to express structural accusative case on the object. I argue that similar constraint conflicts are responsible for the loss of lexical case in phenomena such as nominative substitution and case non-preservation, and correctly predict the availability of the passive in dative-subject predicates.

I include a substantial amount of new data from surveys conducted on the Faroe Islands and Iceland, which are consistent with my hypothesis, and shed new light on the case systems of these languages beyond simple monotransitives. Moreover, I propose a Competing Grammars Model of intra-linguistic variation (cf. Kroch 1989 *et seq.*), which finds empirical support in corpora, and offers a plausible framework for explaining the diachronic trajectory of these languages. Finally, the model of grammar proposed here is also cross-linguistically tractable, generating realistic typologies of case-related phenomena, and can easily be extended to other language families.

Acknowledgments

It goes without saying that this dissertation work would have been impossible without the considerable help, advice and support provided by so many.

First, I am extremely grateful to my advisor Paul Kiparsky. I know of no other successor to Pāṇini with such a mastery of the field and genius calibre insight into such a typologically diverse range of languages. I am sincerely going to miss our discussions of such fascinating topics as Saussure's longstanding analysis of Lithuanian pitch accent, morphosyntactic variation in the Scandinavian dialect continuum, Gerard Manley Hopkins and over-reaving, why the *Sjúrðarkvæði* is essentially a kind of *dol'nik*, obscure varieties of Swiss German, what Wangkumara and Nepali have to do with Faroese, Finnish sentences involving shooting bears, and so many others. *Paljon kiitoksia!*

Secondly, I would like to acknowledge my committee of Vera Gribanova, Boris Harizanov and Annie Zaenen. Opportunities for lively debate, combined with their constructive, detailed and helpful commentary have made my thesis so much better than it would otherwise have been. It was a privilege to have accomplished Slavicist syntacticians and the first author of "ZMÞ" available and willing to provide their insights. I would also like to thank Beth Levin for guiding and advising me through the entire PhD process from start to finish: it is hard to think "Stanford Linguistics" without immediately thinking of Beth.

Thirdly, I am thankful for the Faroese and Icelandic linguists who were such a wealth of knowledge and advice during fieldwork and in thinking about the data: for Faroese, Hjalmar P. Petersen who taught me the language at the Faroese Summer Institute and served as a supremely reliable consultant and advisor, in addition to Jógvan í Lon Jacobsen, Eivind Weyhe, Zakaris Hansen, Dániel Jákup Jørgensen and Niels á Velbastað. For Icelandic, thanks are due to Jóhannes Gísli Jónsson and Einar Freyr Sigurðsson, who were not only willing to provide linguistic advice and distribute surveys, but also to walk with me around Reykjavík in the rain.

I am also grateful for all the other academic linguists who I corresponded with, who contributed to discussions on various phenomena, and from whom I have learnt so much about language: I think especially of Arto Anttila, Mark Baker, Lev Blumenfeld, Penny Eckert, Caroline Heycock, Chris Manning, Rob Podesva, Chris Potts, Omer Preminger, John Rickford, Sten Vikner and Tom Wasow. I extend particular gratitude to Judith Degen and Rob Mina, whose guidance in statistical methods was invaluable. I thank my Cambridge supervisors Ian Roberts, Theresa Biberauer and Michelle Sheehan for the training in GB/Minimalism that has proven so useful. I am also thankful to my original cohort of Olek Główka, Sunwoo Jeong, Sara Kessler, Kate Lynn Lindsey, Prerna Nadathur and Simon Todd, as well as the other Linguistics PhD students at

Stanford — especially my office-mate, fellow syntactician and Open House host Bonnie Krejci. I also thank my linguist friends from other universities, in particular Deborah Wong at UCLA and fellow Cambridge MPhils.

I must also express deep gratitude to all the Faroese people who accommodated me, fed me, kept me company and functioned as my family while on fieldwork trips in this "home away from home". In particular I am thankful to Bogi and Súsanna Vinther and family, who opened their home and their hearts to me as if I were an extra son visiting from afar. They were so kind to me and were willing to provide plenty of food and accommodate my multiple visiting friends, even when this involved driving up to Sornfelli for the fourth time in a couple of weeks, or rushing me back to the Nólsoy ferry five minutes before it departed. I thank Beinir and Leslie Johannessen, in their friendship and willingness to accommodate us in both the Faroes and Denmark, and Beinir's help in general throughout my time on the Faroes (especially given what happened to his car). I also am thankful to Oddmar and Anna Maria Færø and family, who likewise provided lodging for me, Sunday dinners and fascinating conversations in a constant code-switching between Aberdeen English and Faroese. I am grateful to Rólant í Skorini and Richard Schwartson, both of whom welcomed me so well in my brief 2015 trip. I thank Pætur Gerðalíð for his kindness to me and my American friends, particularly when that involved driving out of his way to rescue us in a dark tunnel, inviting us to his band studio, and allowing Zach to borrow his motorcycle. I also thank Johann Petersen, Napoleon Smith, Øssur Andreasen, Einar Vang and everyone else at Ebenezer, who were my extended family while on the islands and who I hope to visit many times in the future. *Takk fyri, øll!*

A most heartfelt and personally meaningful round of thanks must go to my church community at Grace Presbyterian and RUF. I thank in particular my pastors Britton Wood, David Jones and Iron Kim, as well as my church family, for whom this brief acknowledgement section falls far short of what I wish to express. I would not be the person I am today without their impact on my life. I think special gratitude is in order to Zach Sunberg, Jeff Reid and Chris Berkey, who genuinely know me, and are true brothers to me, along with all my other church friends near and far. I also thank Aleksas Mazeliauskas, Jonathan Lancaster and Mark W.F. Galbraith for their consistent friendship. I want to thank my grandmother and Fiona for their kindness and always being eager to hear my news.

Finally, I thank my parents for their consistent love and support throughout my five years of doctoral work. From Dad teaching me the Greek alphabet as a 7-year-old, to Mum encouraging me to join French club as a primary school pupil, they have always supported my linguistic and academic endeavours, and for that I am extremely grateful.

Soli Deo Gloria

Abbreviations

Language abbreviations

Dan.	Danish
Dut.	Dutch
Far.	Faroese
Fin.	Finnish
Ger.	German
Hix.	Hixkaryana
Ice.	Icelandic
Kaq.	Kaqchikel
Kor.	Korean
Lav.	Lavukaleve
Nah.	Nahuatl
Swe.	Swedish
Yup.	Central Siberian Yup'ik

Glossing abbreviations

ABS	absolutive
ACC	accusative
ACT	active
ADESS	adessive
ART	article
COLL	collective number
COMPL	completive aspect
CONT	continuative aspect
DAT	dative
DEF	definite
DISTPST	distant past tense
EMPH	emphatic particle
ERG	ergative

EXPL	expletive
F	feminine
GEN	genitive
IMP	imperative
IND	indicative
INF	infinitive
INTERROG	interrogative mood
INTRANS	intransitive
M	masculine
N	neuter
NOM	nominative
O, OBJ	object
PASS	passive
PERF, PFV	perfective
PL	plural
PRES	present tense
PRT	particle
PST	past tense
RECPST	recent past tense
REFL	reflexive
S, SUBJ	subject
SG	singular
SUP	supine

Contents

Abstract v

Acknowledgments vi

Abbreviations viii

1 Introduction 1
- 1.1 The puzzle of Faroese . . . 2
- 1.2 Theoretical contribution . . . 5
  - 1.2.1 Linking Theory . . . 5
  - 1.2.2 Optimality Theory . . . 12
  - 1.2.3 Competing grammars . . . 16
- 1.3 Empirical findings . . . 18
- 1.4 Structure of thesis . . . 20

2 Research question 22
- 2.1 Non-nominative subjects . . . 22
  - 2.1.1 Icelandic oblique subjects . . . 22
  - 2.1.2 German pre-verbal dative experiencers . . . 27
- 2.2 Faroese clause structure . . . 29
- 2.3 Faroese dative experiencers . . . 37
  - 2.3.1 Subjecthood tests . . . 37
- 2.4 Summary . . . 42

3 Theoretical framework 44
- 3.1 Linking Theory . . . 44
  - 3.1.1 From Conceptual Structure to Semantic Form . . . 44
  - 3.1.2 From Semantic Form to syntax . . . 46
- 3.2 Optimality-Theoretic syntax . . . 50
- 3.3 Summary . . . 53

4 Faroese dative subjects 54
4.1 Introduction . . . 54
4.2 Overview of data . . . 55
4.3 Surveys on quirky case . . . 59
4.3.1 Faroese quirky case survey 1 . . . 59
4.3.2 Faroese quirky case survey 2 . . . 63
4.3.3 Icelandic quirky case survey . . . 66
4.4 Faroese and Icelandic case frames . . . 69
4.4.1 Case and agreement constraints . . . 69
4.4.2 OT analysis . . . 70
4.4.3 Factorial typology . . . 72
4.5 Two kinds of dative: competing grammars . . . 73
4.5.1 Accounting for 'weak' and 'strong' dative case . . . 74
4.5.2 Competing grammars model of nominative substitution . . . 76
4.5.3 Competing grammars and social meaning . . . 79
4.6 Summary . . . 85

5 Faroese passive 86
5.1 Introduction . . . 86
5.2 Data . . . 86
5.2.1 Faroese passive survey 1: no agent phrase . . . 87
5.2.2 Faroese survey 2: passives with agent phrase; sentences with *tróta* . . . 90
5.2.3 Summary of Faroese passive survey results . . . 91
5.3 Analysis . . . 92
5.3.1 Case preservation . . . 94
5.3.2 A word on Icelandic 'dative sickness' . . . 98
5.4 Summary . . . 99

6 Faroese ditransitives 100
6.1 Ditransitive verbs in Faroese . . . 100
6.2 Survey data I . . . 102
6.2.1 Faroese 'give' passives survey 1: colloquial context . . . 103
6.2.2 Faroese 'give' passives survey 2: formal context . . . 104
6.3 Analysis . . . 106
6.3.1 Position of the goal and theme arguments . . . 109
6.4 Survey data II . . . 110
6.4.1 Icelandic survey on 'give' passive . . . 110
6.4.2 Faroese survey 3: other ditransitive passives . . . 113
6.5 Summary . . . 117

7 Alternative hypotheses 118
7.1 Woolford (2007): An OT account . . . 118
7.2 Jónsson (2009): 'Covert nominative' . . . 122
7.3 Asarina (2011) . . . 125
7.4 Summary . . . 127

8 Syntax in OLG 128
8.1 Introduction . . . 128
8.1.1 Phrase structure . . . 128
8.1.2 Movement, or fillers and gaps . . . 134
8.1.3 Syntactic features . . . 141
8.1.4 OT syntax in practice . . . 145
8.2 Faroese clause structure revisited: OT account . . . 149
8.2.1 Factorial typology I . . . 157
8.2.2 Information-structural constraints . . . 158
8.2.3 Object shift . . . 159
8.2.4 Factorial typology II . . . 164
8.3 Summary . . . 165

9 Conclusion 166

Chapter 1

Introduction

This dissertation is focused on the following high-level question: How can we approach a unified account of case-marking, particularly in those instances where morphological case does not transparently map to grammatical function? The theory of case has been a topic of considerable debate and little consensus in the syntactic literature. The phenomenon of non-nominative subjects has been the focus of much discussion, particularly since the classic work on Icelandic (Andrews 1976, Levin and Simpson 1981, Zaenen et al. 1985 *et seq.*). Indeed, the majority of theories of 'quirky' case have, to a greater or lesser extent, built upon a framework that assumes Icelandic as the archetype. However, a closely related language, Faroese, has been largely neglected, despite exhibiting case-marking patterns that differ from Icelandic in challenging ways. In this thesis I propose that even apparently idiosyncratic Faroese and Icelandic case-marking patterns are in fact predictable from general principles, which in turn have implications for the kinds of case systems we expect to encounter cross-linguistically.

I adopt a version of Kiparsky's linking theory (Kiparsky 1997, 2001), which acknowledges both syntactic positions and case morphology as means of licensing arguments, and does not collapse argument structure into syntax. Instead, information relevant to case assignment is encoded via features that link the levels of abstract, morphosyntactic and morphological case. Abstract case is defined by a hierarchy of theta-roles, which itself is derived from the Semantic Form of the verb (Bierwisch 1986, Wunderlich 1997). By assuming a separate abstract case representation, distinct from syntactic positions, we allow for phenomena where a single grammatical function may be instantiated by several different morphological cases, e.g. subjects in Finnish. By acknowledging the availability of positional licensing in some languages, we also capture the fact that mismatches between positional and inflectional case may be tolerated, as in Faroese and Icelandic. Moreover, by giving syntax access to inflection, i.e. distinguishing morphological exponence from case within syntax, we cover instances where a syntactic operation appears to track morphology, such as the dependence of agreement on case.

Also following Kiparsky (2001), matching between levels of case is implemented in Optimality Theory (OT) (Prince and Smolensky 1993, McCarthy and Prince 1995). OT provides a way of formalising the generalisation that many linguistic phenomena involve markedness hierarchies, i.e. a default or 'elsewhere' form with potentially increasingly specific forms depending on the relevant grammatical conditions. Case

is a prime example of this, where in accusative languages nominative is the unmarked subject case, and non-nominative subjects the more marked form. Under OT, grammar is an optimisation of conflicting pressures, the set of which is universal, but the ranking of which is language-specific. I explore the hypothesis that a set of appropriately ranked, violable constraints is able to account for a range of case-marking, agreement and word order facts in Faroese and Icelandic, and correctly generates case-marking patterns in other typologically disparate languages.

Moreover, I propose a competing grammars model of synchronic intra-linguistic variation that goes beyond mere descriptive adequacy, providing a framework for approaching morphosyntactic variables that incorporates both internal and external factors.[1] I attribute morphosyntactic variation to a probabilistic calculus, in which grammars are selected from a set of rankings available to the speaker, according to differently-weighted factors which depend on the variable in question. It is possible to test the competing grammars hypothesis empirically, by training a model on corpus data, learning the weights assigned to relevant factors, and predicting when a speaker is likely to select a given grammar. The accuracy of the model can be verified through logistic regression and basic machine learning techniques, an exciting avenue for future research. Therefore this approach also presents an opportunity for developing computational methods to explore central questions in syntactic theory.

I support all of my conclusions with empirical evidence from extensive surveys conducted in the Faroe Islands and Iceland, as well as from corpora and native speaker consultations; I demonstrate the significance of my findings by repeatable statistical models of the patterns observed in the data. Thus I aim to account not only for discrete variants such as case selection or available argument positions in syntax, but also the kinds of grammatical, information-structural, sociolinguistic and contextual factors that contribute to case-marking in actual usage. The adoption of these three components — i.e. Linking Theory, Optimality Theory and the Competing Grammars Model, hereafter abbreviated to *Optimal Linking Grammar (OLG)* — provides a cross-linguistically tractable framework for approaching case-marking phenomena that is not only descriptively adequate, but is ultimately more explanatory than most contemporary approaches to case in the generative syntax literature.

1.1 The puzzle of Faroese

In both Faroese and Icelandic the standard transitive case-marking pattern is nominative-accusative, but some verbs occur with non-nominative higher arguments (2-3).

(2) a. Far. *Eg sá gentan*
I.NOM saw girl-the.ACC.SG
'I saw the girl'

b. Far. *Henni manglar mat*
her.DAT lacks.3SG food.ACC.SG
'She lacks food'

[1] See Kroch (1989), Santorini (1992) and Pintzuk (1999) *i.a.* for the origin of this idea in the context of language change and acquisition, although my proposal differs from these in that its primary focus is intra-speaker synchronic grammar selection.

(3) a. Ice. *Ég sá stelpan*
I.NOM saw girl-the.ACC.SG
'I saw the girl'

b. Ice. *Mér ógna þau vindaský*
me.DAT terrify.3PL those.NOM.PL winds.NOM.PL
'I am terrified of those winds'

c. Ice. *Hana vantar peninga*
her.ACC lacks.3SG money.ACC.SG
'She lacks money'

The sets of verbs which mark subjects with non-nominative case overlap across the two languages, but the Icelandic set is much larger than the Faroese and with a greater variety of case frames (see Þráinsson 2007:156–172). Moreover, in Faroese verbs with accusative subjects are no longer commonly used, unlike Icelandic (3c). The central empirical question I address is: Why are Faroese and Icelandic sentences with dative subjects different with respect to their object case and agreement? The distinction is illustrated in (4).

(4) a. Ice. *Mér líka hundar*
me.DAT like.**3PL** dogs.**NOM**.PL
'I like dogs'

b. Far. *Mær dámar hundar*
me.DAT likes.**3SG** dogs.**ACC**.PL
'I like dogs'

As can be seen in (4), in Icelandic the object argument in such sentences bears nominative case and triggers number agreement on the finite verb, whereas in Faroese the object bears accusative and occurs with default third person singular verb agreement.[2] On the surface, it is surprising that this phenomenon, a highly marked structure cross-linguistically, should exhibit such differences between two closely related languages, where the sentence type in question has the same origin in Old Norse sentences with preverbal datives (van der Gaaf 1904, Jespersen 1927, Allen 1995, Rögnvaldsson 1995, Barðdal and Eyþórsson 2003). Moreover, since it has long been known that Icelandic marks objects with nominative case in the presence of dative or genitive subject case, it is unexpected that Faroese marks the object with accusative in such predicates. Additionally, it remains to be explained why Icelandic sentences with non-nominative subjects exhibit object agreement in number, whilst the same apparent structure in Faroese exhibits non-agreement in number, or perhaps agreement with a null expletive (Barnes 1986, Þráinsson et al. 2004, 2012).

If the dative argument in (4) in both languages is a true subject by standard criteria, which does seem to be the case (Zaenen et al. 1985, Barnes 1986) and is corroborated by my fieldwork, the difference in object case cannot rest upon a difference in subjecthood of the dative. It is interesting, however, that the difference in object case co-varies with a difference in number agreement. Therefore, the main hypothesis I explore here is that these facts are connected. I propose that **the difference between Icelandic and**

[2] It has also been observed that full person agreement is not possible with nominative objects in Icelandic (Sigurðsson 1991, 1996, Taraldsen 1995 *et seq.*), but I suggest that this fact is tangential to the case-marking difference, since the patterns can be explained solely in reference to number agreement; that object agreement is 'impoverished' relative to subject agreement is unsurprising given the markedness of object agreement more generally.

Faroese dative-subject predicates results from a conflict between two pressures: (i) to mark the object with regular structural case, and (ii) to agree with an overt nominative argument.[3] If these pressures are weighted differently in the two languages, with Icelandic preferring object agreement and Faroese preferring accusative structural case, the sentences in (4) have an explanation. Furthermore, such an account appeals to general principles rather than *ad hoc* idiosyncrasies, and makes testable predictions about the typology of languages with case-marking.

In order to test this claim, two other reasonable hypotheses must first be ruled out:

(i) **Different structural object position**: if Icelandic and Faroese can be shown to have a distinct object position in these languages, *and* said position shown to be associated with nominative case-marking in Icelandic, the difference could be attributed to the configuration of the object with respect to other clausal elements.

(ii) **Lexical case-marking**: if the Faroese accusative object case could be shown to be lexically assigned, i.e. associated with the subset of verb lexemes marking dative case on the subject, previous analyses of Icelandic could be retained, in which accusative case is unavailable due to some kind of 'nominative first' preference (e.g. Yip et al. 1987).

In order to rule out these hypotheses, we must test whether the object in each language (a) behaves like a regular object with respect to its structural position, and (b) bears structural or lexical case. One means of investigating (a) in Scandinavian languages is the phenomenon known as *object shift*: if the object in both languages behaves no differently with respect to object shift, this constitutes evidence for it being structurally the same as a standard transitive object. Regarding (b), it is possible to determine whether the case is structural or lexical by testing *case preservation* behaviour: in Icelandic, when an object marked with lexical case such as dative is passivised, the corresponding subject of the passive 'preserves' case, and is not replaced by nominative. In contrast, structural object case (accusative in both languages) is replaced by nominative on the passive subject. If the Faroese verbs which mark accusative object case passivise, and the subject of the passive is nominative, this is consistent with the case being structural and not lexical.

I investigated these phenomena in extensive fieldwork on the Faroe Islands and Iceland via surveys and consultations with native speakers of each language, the results of which suggest that (i) and (ii) are not viable explanations for the observed patterns. Moreover, the data I collected *are* consistent with my proposal, that the key difference is a preference in Icelandic for agreement with a nominative argument conflicting with a pressure to express structural object case, whose relative importance is reversed in Faroese. These results have implications beyond Scandinavian languages, since they indicate that similar conflicting pressures are responsible for case-marking and agreement patterns in multiple disparate language families. Indeed, it turns out that a very similar interaction of constraints can account for Indo-Aryan and Finno-Ugric data.

[3] By 'object', I refer to the syntactic instantiation of [–HR] abstract case, which in these languages is standardly an argument which occupies object position (V,Comp). For the purposes of the constraints, an object is defined by the abstract case features, which different languages realise differently in morphosyntax.

1.2 Theoretical contribution

The OLG proposal involves three central theoretical assumptions, which I argue to be necessary to account for the range of data observed in Icelandic and Faroese alone, and also provides a flexible enough framework to generate realistic typologies of case systems beyond Scandinavian. These three pillars build upon previous work in the morphosyntax literature, but also innovate in terms of the specifics of case theory, and how grammar competition is modelled to capture intra-language variation.

1. **Linking Theory (LT)** (Kiparsky 1997, 2001): Case is determined by semantics, syntax and morphology, and the *linking* between these levels determines the output.
2. **Optimality Theory (OT)** (Prince and Smolensky 1993): Grammar is a *harmonic optimisation*, i.e. a universal set of violable constraints with language-specific rankings.
3. **Competing grammars model (CGM)** (cf. Kroch 1989, Pintzuk 1999): Native speakers have synchronic access to multiple competing grammars, where a grammar is defined by a constraint ranking; grammar selection is probabilistic.

I posit that this theoretical apparatus is in fact necessary for empirical reasons, and makes better sense of the data than a theory which collapses all of case and agreement into the syntactic component. Moreover, it does not attribute the difference between Icelandic and Faroese to mere language-specific exceptions or idiosyncrasies, but to general principles of language. Each component of the theory also makes testable predictions that I show to be borne out cross-linguistically.

1.2.1 Linking Theory

Originally proposed by Kiparsky (1997, 2001), the basic premise of LT is to assume three distinct levels of case: abstract, morphosyntactic and morphological. Abstract case is generated from a Semantic Form representation of the predicate and its argument structure. Morphosyntactic case is so called because languages may make use of *syntactic position*, *case inflection* or both to instantiate case within syntax. Finally, morphological case is a representation of mapping morphosyntactic case to morphology, i.e. the morphemic representation of case that feeds the pronounced surface form. All three of these levels are represented by the binary features [±H(ighest)R(ole)], [±L(owest)R(ole)], which refers to a hierarchy of thematic roles. These features 'mean' something distinct at each level, since semantics, syntax and morphology manipulate distinct types of elements: for example, [+HR] may be paraphrased as 'most prominent argument' at abstract case, 'subject position' or 'nominative inflectional case' in morphosyntax, and 'nominative morpheme' at morphology. LT also presupposes Lexicalism, i.e. that word-formation is subject to pre-syntactic lexical constraints as opposed to syntactic transformations, and therefore words enter syntax fully inflected (Chomsky 1970, Halle 1973, Siegel 1974 *et seq.*). Importantly, this does not rule out syntactic constraints targeting sub-parts of words such as case or agreement morphemes, it simply rules out the *construction* of words by syntactic rules or constraints (e.g. Distributed Morphology, see Halle and Marantz 1993, 1994 *et seq.*). In that sense, the theory adopted here joins a family of theories that combine lexicalism with

a constraint-based architecture, such as Lexical-Functional Grammar (Bresnan 1982) and Head-Driven Phrase Structure Grammar (Pollard and Sag 1987, 1994).

Kiparsky (2001) provides evidence from Finnish for the necessity of three levels of case. The table in (5) shows the paradigms of structural cases for nouns and pronouns as typically presented in pedagogical grammars:

(5) **Finnish structural cases 1**

	Nouns: 'bear'		Pronouns: 'you'	
	SG	PL	SG	PL
NOM	*karhu*	*karhu-t*	*sinä*	*te*
ACC	*karhu*, *karhu-n*	*karhu-t*	*sinu-t*	*teidä-t*
GEN	*karhu-n*	*karhu-j-en*	*häne-n*	*he-i-dä-n*
PART	*karhu-a*	*karhu-j-a*	*sinu-a*	*tei-tä*

The distribution of the accusative singular in *–n* in the noun paradigm is formalised as Jahnsson's Rule, which can be paraphrased as 'verbs with no overt subjects govern the endingless accusative, verbs with overt subjects govern the *–n* accusative' (Kiparsky 2001:3). What counts as an overt subject is a complex question, but the key issue is how to account for the apparent three-way allomorphy of accusative case, viz. the suffixes {*–t*,*–n*,*–Ø*}.

According to Kiparsky, the best analysis of allomorphy of the structural case suffixes is to treat these three as syntactically conditioned realisations of abstract accusative case, and that the paradigm shown in (6) better represents the alternatives:

(6) **Finnish structural cases 2**

	'bear'		'he, they'	
	SG	PL	SG	PL
NOM	*karhu*	*karhu-t*	*hän*	*he*
ACC	—	—	*häne-t*	*he-i-dä-t*
GEN	*karhu-n*	*karhu-j-en*	*häne-n*	*he-i-dä-n*
PART	*karhu-a*	*karhu-j-a*	*hän-tä*	*he-i-tä*

In other words, the accusative case paradigm is not an instance of suppletive allomorphy, but of three distinct ways of mapping *abstract* accusative to syntax, i.e. the *morphological* genitive or nominative in nouns, with the additional possibility of morphological accusative in pronouns. One piece of evidence for this is that in co-ordinate structures, a shared argument must be assigned the same case in each conjunct, which means that a nominative subject is paralleled by a nominative object but not an accusative object (7).

(7) a. Fin. *Mikko pyörty-i ja (Mikko) kanne-ttiin ulos*
Mikko.NOM faint-PST.3SG and (Mikko.**NOM**) carry-PASS.3SG out
'Mikko fainted and (Mikko) was carried out.'

b. Fin. *Hän pyörty-i ja *(häne-t) kanne-ttiin ulos*
he.NOM faint-PST.3SG and (him.**ACC**) carry-PASS.3SG out
'He fainted and (he) was carried out.'

Verbs in the active, like *pyörtyi* 'fainted', assign nominative to their sole argument, whereas passives such as *kannettiin* 'was carried' assign either (i) 'endingless' nominative case to their sole overt argument if it is nominal (here *Mikko*), or (ii) morphological accusative if it is pronominal (here *hänet*). Ellipsis is possible in (7a) because the shared argument *Mikko* is assigned morphological nominative case by both verbs, whereas in (7b) ellipsis is prohibited because the shared argument gets a different morphological case from each verb. If the generalisation is formulated using abstract case alone, ellipsis in (7a) should not be allowed since *Mikko* would bear abstract accusative; likewise, morphological case alone does not capture the fact that these allomorphs share the grammatical function of object, and adds needless complexity by having to re-state the distribution of the nominative, genitive and accusative in every analysis of abstract accusative.[4]

Returning to dative subjects in Icelandic and Faroese, it is clear that the grammatical function of subject, i.e. abstract nominative case, maps to non-nominative morphological case. In these languages, both of which have a marked nominative, both structural position and case inflection are available for marking grammatical relations; I treat case on *positions* and on *items* occupying those positions as language-dependent varieties of morphosyntactic case. Abstract case maps directly to structural position in languages with positional licensing: that is, subject position bears [+HR] positional case and object position [–HR]. I propose that the important case-matching constraints target the mapping from positions to items, e.g. ensuring that an argument bearing [+HR] occupies a position matching that feature, whereas MAX constraints ensure that abstract case features are instantiated at the level of morphosyntactic case, e.g. penalising an output without a [–HR] feature when one is present in the input.

Although this apparatus may initially appear redundant, it is empirically necessary to maintain the distinction between Semantic Form, structural position, case inflection in syntax, and morphological spellout. My dissertation adds to Kiparsky's evidence for the necessity of a three-level case approach, one illustrative example being passives of ditransitives. Ditransitive actives have three arguments, and the application of passivisation demotes the subject, resulting in a two-argument predicate with a passive verb. In Icelandic, Goal-Verb-Theme order in the passive, or promotion of the structurally higher object, is most frequent (Þráinsson 2007:135–136):[5]

(8) a. Ice. *Einhverjum útlendingum var seldur harðfiskurinn*
some.DAT.PL foreigners.DAT.PL was.3SG sold.NOM.M.SG dried.fish-the.NOM.M.SG
'Some foreigners were sold the dried fish.'

b. Ice. *Foreldrunum var skilað börnunum*
parents-the.DAT.PL was.3SG returned.N.SG children-the.DAT.PL
'The kids were returned to the parents.'

The argument occurring to the left of the finite auxiliary in these examples, being neither the highest nor lowest theta role at the level of Semantic Form, bears the abstract case feature [–HR–LR]. However, Spec,TP in Icelandic bears [+HR] positional case at the level of morphosyntax, since it licenses subjects. Moreover, the *item* here (the goal argument) bears dative morphosyntactic case, which here matches abstract but not

[4]See Kiparsky (2001:5–7) for further Finnish evidence of the necessity for both abstract and morphological case, including examples showing that objects in *–n* are morphologically genitive, not accusative.

[5]The nominative masculine singular morphology on the participle *seldur* 'sold' in (8a) shows that there is object agreement with *harðfiskurinn* 'dried fish', whereas in (8b) the neuter singular participle *skilað* 'returned' is default agreement morphology, i.e. non-agreement with either dative argument.

positional case. Finally, the morphological spellout of the case realises the case inflection, not the structural position: the nominative theme bears the morphology that corresponds not to its abstract case nor to its syntactic position, but to its morphosyntactic case inflection. This can be schematised as follows:

(9)

Semantic role	Goal	Theme
Abstract case	[–hr–lr]	[–hr]
Morphosyntactic case: position	[+hr]	[–hr]
Morphosyntactic case: item	[–hr–lr]	[+hr]
Morphological case	[–hr–lr]	[+hr]
Morphology	[dat] → *–um*	[nom] → *–urinn*
Phonology	*útlendingum*	*harðfiskurinn*

As is evident, abstract case and syntactic position cannot be collapsed, since the thematic role of goal or recipient does not correspond to the abstract case of subject position. Likewise, at the level of morphosyntax the case inflection cannot be collapsed into syntactic position, since there are mismatches, e.g. the dative goal argument bearing [–hr–lr] in the position bearing [+hr]. However, this example does not prove that what I am calling morphosyntactic case inflection and morphological case should remain separate. My reasons for maintaining the distinction are that syntactic operations must make reference to case inflection, e.g. whether an argument is a viable target of agreement — and said operations do not depend on the allomorph of the case, i.e. morphology 'proper'.

In Icelandic, nominative objects trigger number agreement with the finite verb, but objects bearing other cases do not:

(10) a. Ice. *Mér líka hestar*
me.dat.sg like.3pl horses.nom.pl
'I like horses'

b. Ice. * *Ég lásu bækurnar*
I.nom.sg read.3pl books-the.acc.pl

c. Ice. * *Hann sakna þeirra*
he.nom.sg miss.3pl them.gen.pl

d. Ice. * *Hún köstuðu boltunum*
she.nom.sg threw.3pl balls-the.dat.pl

Even when subject agreement is unexpected, such as when the subject is accusative, number agreement is not possible with a non-nominative object, showing that the rule is not simply 'agree with the object if subject agreement fails':

(11) a. Ice. *Hana vantar vinnu*
her.acc.sg lacks.3sg work.acc.sg
'She lacks work'

b. Ice. * *Hana vanta vini*
her.acc.sg lack.3pl friends.acc.pl

The relevant property of a potential agreement target in Icelandic therefore seems to be nominative case-marking, not grammatical function. In other words, agreement is sensitive to case inflection, and if agreement also depends on syntactic configuration, there must be some syntactic representation of case inflection (Preminger 2011, *pace* Bobaljik 2008). It turns out to be quite difficult to prove that the level of case being targeted by agreement is morphological, or in OT syntax terms, whether the losing candidates are ruled out at the semantics-syntax evaluation (the position I argue for here), or the syntax-morphology evaluation. Under lexicalist assumptions, the relevant case information is present in the set of input candidates at both levels. However, some pieces of evidence point in the direction of agreement targeting both case-marking and syntactic position, and hence for distinguishing morphosyntactic and morphological levels of case.

Preminger (2011:25–40) presents data relevant to this question from three Kichean languages (a branch of Mayan): Kaqchikel, K'ichee' and Tz'utujil, spoken in Guatemala. Each of these languages has no case morphology on full noun phrases, i.e. makes use of positional licensing, but exhibits an ergative agreement pattern which also indexes case as shown in (12-13):

(12) TRANSITIVES:

a. Kaq. *rat x-**Ø-aw**-axa-j ri achin*
you.SG PFV-3SG.ABS-2SG.ERG-hear-ACT the man
'You (sg.) heard the man'

b. Kaq. *ri achin x-**a-r**-axa-j rat*
the man PFV-2SG.ABS-3SG.ERG-hear-ACT you.SG
'The man heard you (sg.)'

(13) INTRANSITIVES:

a. Kaq. *ri achin x-**Ø**-uk'lun*
the man PFV-3SG.ABS-arrive
'The man arrived'

b. Kaq. *rat x-**at**-uk'lun*
you.SG PFV-2SG.ABS-arrive
'You (sg.) arrived'

There are therefore distinct agreement morphemes for ergative agents of transitive verbs on the one hand, {*-aw-* 2SG, *-r-* 3SG} in (12), and for patients of transitives and subjects of intransitives on the other, {*-a(t)-* 2SG, *-Ø-* 3SG} in (12) and (13). Thus we can see that the verb morphology must have access to the case of the argument(s), which is determined by syntactic position in these languages. Indeed, the kind of indexing of arguments in (12-13) is far from rare cross-linguistically: of the 378 languages listed in the World Atlas of Language Structures for the feature of verbal person marking, 193 mark both agent and patient arguments on the transitive verb, 47 of which also do not have morphological case marking (Siewierska 2013, Iggesen 2013).[6] Some examples from Hixkaryana, Lavukaleve and Nahuatl illustrate this:

[6]Further information available online at <http://wals.info/>, accessed on 6/19/2018. Languages under the heading 'verbal marking of both A and P arguments' include both those in which marking of both arguments is obligatory, and those in which marking of either or both arguments is conditioned on discourse, syntactic or other contextual factors (e.g. topic marking in Tswana or definiteness in Swahili, see Creissels 2006).

(14) **Hixkaryana** (Derbyshire 1977, examples from Kalin 2011:9,11,24):

a. Hix. *kuraha* ***y***- *onyhorye*- *no* *bɨryekomo*
bow 3s.3o- make- IMPPST boy
'The boy made a bow'

b. Hix. *bɨryekomo komo* ***y***- *on*- *yetxkonɨ* *kamara txetxa wawo amnyehra*
child COLL 3s.3o- eat- COLL.DISTPST.CONT jaguar forest in long.ago
'The jaguar used to eat children in the forest long ago'

c. Hix. *yawaka ryhe* ***w***- *ɨm*- *yako*, *Waraka wya*
axe EMPH 1s.3o- give- IND.RECPST.COMPL Waraka to
'It was the axe I gave to Waraka'

(15) **Lavukaleve** (Terrill 2003:227):

a. Lav. *ali na mola ga* ***e***- ***o***- *le*
man ART.M.SG canoe.N ART.N.SG 3SG.N.O- 3SG.S- see
'The man saw the canoe'

b. Lav. *aira la ali na* ***a***- ***o***- *le*
woman ART.F.SG man ART.M.SG 3SG.M.O- 3SG.S- see
'The woman saw the man'

(16) **Nahuatl** (Launey 1981:38, cited in Baker 2008:201):

a. Nah. ***Ø***- ***quim***- *itta cōōhua in pilli*
3SG.S- 3PL.O- see snakes the child
'The child saw (some) snakes'

b. Nah. ***Ø***- ***qu***- *itta in cihuātl in calli*
3SG.S- 3SG.O- see the woman the house
'The woman saw the house'

Not all languages without case marking exhibit positional licensing, e.g. verbal agreement may license arguments via noun class concord (such as in Zulu, see e.g. Henderson 2011, Marten and van der Wal 2014), or the language may make use of extensive noun incorporation (such as Oneida, see e.g. Koenig and Michelson 2015). Nevertheless, the phenomenon of verbal agreement targeting argument positions is consistent with the hypothesis that agreement is dependent on syntax-internal case. By contrast, it is difficult to capture the ergative agreement pattern in Kichean if agreement constraints come into play at post-syntactic Eval, since arguments in such languages do not bear morphological case, and hence are only distinguishable to verbal person marking by their syntactic position.[7]

Another relevant data point is 'dative intervention' in Icelandic: in transitive expletive constructions with a dative argument intervening between the finite verb and the nominative, number agreement is not possible with either the dative intervener or the nominative (17):[8]

[7]Preminger (2011:99–133) provides further argumentation in favour of agreement being a syntactic operation, but presupposes the VP-Internal Subject Hypothesis and movement to canonical subject position in French and English, assumptions not shared by the account proposed in this thesis.

[8]Examples from Holmberg and Hróarsdóttir (2003:1000).

(17) a. Ice. *Það finnst/*finnast; [mörgum stúdentum] [tölvan ljótan]*
EXPL finds.3SG/*PL many.DAT.PL students.DAT.PL computer-the.NOM.SG ugly.NOM.SG
'Many students find the computer ugly'

b. Ice. *Það finnst/*finnast [einhverjum stúdent] [tölvurnar ljótar]*
EXPL finds.3SG/*PL some.DAT.SG student.DAT.SG computers-the.NOM.PL ugly.NOM.PL
'Some student finds the computers ugly'

c. Ice. *Einhverjum stúdent finnast [tölvurnar ljótar]*
some.DAT.SG student.DAT.SG find.3PL computers-the.NOM.PL ugly.NOM.PL
'Some student finds the computers ugly'

If number agreement in Icelandic were evaluated at the syntax-morphology interface, it would be difficult to formulate the generalisation for (17), without referring to syntactic structure. One could state the generalisation informally as 'match the number feature of the finite verb to that of the most prominent nominative argument, unless another oblique argument intervenes'. Minimally, the clausal domain of agreement must be specified, which on an OT framework requires the winning output candidate to include a representation of constituent structure. If the evaluation at which (17b) is the winner did not include argument *positions* in the set of output candidates, it is not clear how to capture the fact that the dative argument is structurally higher than the nominative. Hence, the hypothesis that candidates which fail on agreement constraints are evaluated at phonology involves an additional stipulation, that phonology accesses syntactic positions, not simply linearized items. A simpler solution is to assume that agreement is evaluated at syntax, since there is much stronger empirical support for the necessity for output candidates to contain positional licensing information (*pace* Bobaljik 2008).[9]

Finally, a word on the mapping between these levels of case. I do not adopt a feature unification approach, but rather an identity-based matching of feature values; in other words, [+HR] matches [+HR] only, and fails to match [–HR] or [+HR+LR]. This is possible in a theory of hierarchically ranked, *violable* constraints, in which mismatches are tolerated given the right ranking. Such an account preserves both the apparent universality of constraints such as 'a sentence must have a subject', whilst allowing for exceptions within a language (such as ellipsis or subjectless sentences in English), as well as cross-linguistic variation (e.g. radical pro-drop in Japanese and Korean). Descriptive generalisations of the form 'do X, unless Y, unless Z...' are prime candidates for such an analysis, which recognises the existence of 'elsewhere' cases and a hierarchy of markedness. In the case of Icelandic and Faroese, the bare-bones generalisation is 'subjects are nominative (elsewhere case), unless the verb marks lexical case (marked case)'. This idea is at least as old as the Sanskrit grammarian Pāṇini, who captured the observation that there is a logical ordering to the application of rules. Optimality Theory (Prince and Smolensky 1993) offers a robust framework for implementing these generalisations, as well as a means of testing hypotheses through the generation of factorial typologies of possible output grammars; I discuss the basics of this approach in the following section.

[9] For further discussion and an OT account of dative intervention in Icelandic, see Hrafnbjargarson (2001).

1.2.2 Optimality Theory

The *locus classicus* for Optimality Theory (OT) is Prince and Smolensky (1993). The fundamental concepts behind OT are that 'Universal Grammar consists largely of a set of constraints on representational well-formedness, out of which individual grammars are constructed', and that constraints are 'highly conflicting and make sharply contrary claims about the well-formedness of most representations'; i.e. OT presupposes 'a means for precisely determining which analysis of an input *best satisfies* (or least violates) a set of conflicting conditions' (Prince and Smolensky 1993:2). These elements, namely a set of universal, conflicting, violable well-formedness constraints and a mechanism for evaluating output candidates, form the backbone of OT-based approaches to grammar. In Chapter 8 I lay out in detail the specifics of the OT model of grammar I adopt; here I present a brief summary of why OT is both necessary and sufficient to answer the central case-marking question in Faroese and Icelandic, and give an overview of the OT mechanisms most relevant to my proposal.

One important indicator of the need for a violable constraints model of case-marking is the possibility of mismatches between abstract case, structural position and case inflection discussed in section 1.2.1. In most sentence types in both Faroese and Icelandic, case inflection does track structural position, i.e. subjects occupying Spec,TP are marked nominative and objects occupying V,Comp marked accusative. However, a number of 'unless' statements must be formulated in order to account for instances where the case-marking does not match grammatical function. Furthermore, these statements must be hierarchical, since there are elsewhere cases within subsets of sentence types, i.e. 'unless' statements embedded under other 'unless' statements. For instance, to return to the examples in (3), in Icelandic most monotransitive predicates have a nominative-accusative case frame (18a). In quirky case predicates, the subject is marked with a non-nominative case, and in most instances the object is marked nominative and triggers number agreement on the finite verb (18b). However, a smaller number of quirky case verbs mark *both* the subject and object with accusative case (18c).

(18) a. Ice. *Ég sá stelpan*
I.NOM saw girl-the.ACC.SG
'I saw the girl'

b. Ice. *Mér ógna þau vindaský*
me.DAT terrify.3PL those.NOM.PL winds.NOM.PL
'I am terrified of those winds'

c. Ice. *Hana vantar peninga*
her.ACC lacks.3SG money.ACC.SG
'She lacks money'

The descriptive generalisation here regarding the object case is: the object is accusative, *unless* the subject is non-nominative, *unless* the non-nominative subject is accusative. One reason we should treat the accusative-accusative frame as a sub-type of quirky case predicate rather than a separate generalisation is that the object is also nominative-marked when the subject is genitive (19):[10]

[10] As Þráinsson (2007:170) these genitives are quite restricted, and so it may necessitate a different analysis from other quirky case predicates; however, the genitive argument does behave like a subject with respect to the standard tests, and the key point here is that the object is nominative-marked rather than accusative or dative.

(19) Ice. *Hans er bráðum von*
his.GEN is soon hope.NOM
'He is expected soon'

Therefore, if we formulate a rule for accusative subjects that does not interact with other rules, we are losing the observation that non-nominative subjects in Icelandic always trigger nominative object case and number agreement *unless* the subject is accusative. This interaction can easily be captured via OT constraints. The standard object case inflection in monotransitives is accusative, which matches abstract accusative case and the accusative position V,Comp. The constraint responsible for this could be a MAX faithfulness constraint, which ensures that elements present in the input (here [–HR] abstract case) are realised in the output (here [–HR] morphosyntactic case). Hence we can formulate the constraint MAX[–HR] as in (20):

(20) MAX[–HR]: Assign a violation for each [–HR] abstract case feature on an input argument that is not realised by a [–HR] morphosyntactic case feature on an output argument.

Evidently, there is a constraint conflict behind examples like (18b), since MAX[–HR] is violated by the nominative case inflection on the object. Moreover, there is a mismatch between subject position [+HR] and the dative case inflection [–HR–LR]. This suggests a *higher-ranked* constraint ensuring that lexical case-marking is realised (21):

(21) MAX[LEXCASE] (MAX[LC]): Assign a violation for each lexical case feature on an argument at the level of abstract case that does not correspond to the same lexical feature value on an argument at the level of morphosyntactic case.

Hence, if MAX[LEXCASE] is ranked above a constraint enforcing a match between structural position and case inflection, such as IDENTCASE (22), IDENTCASE will be violated while MAX[LEXCASE] is not; thus the subject case in (18b) is derived.

(22) IDENTCASE (IDC): Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].

However, this does not explain the nominative object case. Some other constraint must be responsible for ensuring that there is some nominative in the clause, which would not be the case if the object was marked accusative. In addition, number agreement is only possible in quirky case predicates when the object is nominative. I hypothesise a constraint AGRNOM, which is violated when no local nominative is agreed with in number:

(23) AGRNOM: Assign a violation if the agreement value of the verb does not match that of a nominative argument in the same clause.

If the Icelandic ranking of these four constraints is MAX[LC] » AGRNOM » MAX[–HR] » IDC, we derive *all* of the observed behaviour for free: since AGRNOM outranks MAX[–HR], nominative object case will be a preferred candidate over accusative object case when there is no other nominative present. Since MAX[LC] is ranked above IDENTCASE, it is possible to derive non-nominative subject case and non-accusative object

case. Finally, provided one assumption is made regarding the accusative-accusative case frame, the constraints we already have also generate the most embedded 'unless' statement: if the accusative object case in the ACC-ACC frame is lexically assigned, it falls under the purview of MAX[LC], and given that MAX[LC] is ranked above AGRNOM on this hypothesis, the pattern falls out from the ranking. It is not possible to use the passive diagnostic to test whether the object bears lexical case in (18c), since such verbs do not passivise in Icelandic, perhaps due to a thematic restriction (Þráinsson 2007:258); nevertheless, given the constrained distribution of accusative co-occurring with non-nominative subjects, lexical accusative object case is a reasonable hypothesis. The three tableaux for (18) are shown below, with simplified notation for the purpose of exposition:

Icelandic NOM-ACC monotransitive

/[+HR], [–HR]/	MAX[LC]	AGRNOM	MAX[–HR]	IDC
☞ a. NOM-ACC				
b. NOM-DAT				*!
c. NOM-NOM			*!	*

Icelandic DAT-NOM monotransitive

/[LC:[–HR–LR],+HR], [–HR]/	MAX[LC]	AGRNOM	MAX[–HR]	IDC
a. NOM-ACC	*!		*	
☞ b. DAT-NOM			*	**
c. DAT-ACC		*!		*

Icelandic ACC-ACC monotransitive

/[LC:[–HR],+HR], [LC:[–HR],–HR]]/	MAX[LC]	AGRNOM	MAX[–HR]	IDC
a. NOM-ACC	*!		*	
b. ACC-NOM	*!		*	**
☞ c. ACC-ACC		*		*

The inputs to these tableaux contain a representation of abstract case, and the constraints here hold of the mapping from abstract to morphosyntactic case; the output candidates contain lexemes already occupying positions in a syntactic tree-structure with case-inflectional features present. My main focus in the thesis is the mapping from abstract to morphosyntactic case, i.e. from semantics to syntax, which involves input-output faithfulness constraints (e.g. MAX[–HR]), markedness constraints (e.g. AGRNOM) and output well-formedness constraints such as IDENTCASE, which penalises output candidates containing a mismatch from position to item case. Clarification of the precise theoretical claims I make with respect to the architecture of grammar is provided in Chapter 8 below. Further information on these tableaux, the constraints and empirical support for my analysis of Icelandic and Faroese quirky case predicates can be found in Chapter 4.

I have presented an example where a hierarchy of violable constraints is both necessary to avoid losing generalisations, and sufficient to generate the correct output forms. Now I show that the central issue of why Faroese marks objects accusative in quirky case predicates also receives a straightforward, principled explanation if the OLG model is adopted. I hypothesised that the range of Icelandic case frames in

monotransitives is explicable by the interaction of four constraints, with the ranking MAX[LC] » AGRNOM » MAX[–HR] » IDC. When we approach the Faroese data, there are only two possible case frames in the contemporary language: NOM-ACC and DAT-ACC.[11] A reasonable hypothesis to explore would be to use the same constraints already proposed for Icelandic, but with the ranking MAX[–HR] » AGRNOM:

Faroese NOM-ACC monotransitive

/[+HR], [–HR]/	MAX[LC]	MAX[–HR]	AGRNOM	IDC
☞ a. NOM-ACC				
b. NOM-DAT				*!
c. NOM-NOM		*!		*

Faroese DAT-ACC monotransitive

/[LC:[–HR–LR],+HR], [–HR]/	MAX[LC]	MAX[–HR]	AGRNOM	IDC
a. NOM-ACC	*!	*		
b. DAT-NOM		*!		**
☞ c. DAT-ACC			*	*

This is an empirical claim, since it entails that the Faroese accusative case in quirky predicates is structural, not lexical: these objects should therefore **behave like regular structural objects**, e.g. with respect to object shift or case non-preservation in the passive, which does turn out to be true. Moreover, it entails that **non-agreement in the Icelandic DAT-NOM predicates should not be possible**, since if AGRNOM is the right constraint, third person singular agreement with a plural nominative object should not satisfy the constraint and therefore be judged unacceptable, another fact corroborated by my fieldwork data. If the ranking MAX[–HR] » AGRNOM is correct for Faroese, and the formulation of each constraint is on the right track, the prediction is that **nominative objects should be impossible across the language, not merely in quirky case predicates.** It turns out that this holds true for the contemporary language, despite some claims that have been made and repeated in the literature (Þráinsson et al. 2012:272–273, Asarina 2011:136). I explore all these empirical predictions with Faroese and Icelandic data, which I provide in Chapters 4-6; I give a brief overview of my findings from fieldwork in section 1.3. An additional way of testing the hypothesis — another advantage of OT — is to generate a factorial typology of the possible grammars with these constraints and violations. In section 4.4.3 I show that the four constraints described in this section generate case frames attested in other languages in addition to the Faroese and Icelandic types under discussion.

While similar versions of OT have been proposed to account for case-marking phenomena with or without the LT framework (see e.g. Kiparsky 2001, Donohue 2004, Deo and Sharma 2006, Woolford 2007), the primary contributions I bring to the discussion include (i) an explicit account of a wider range of Faroese data than heretofore examined, (ii) a specific mapping computation between abstract and morphosyntactic case that generates realistic factorial typologies, and (iii) a competing grammars model which accounts both for lexically/grammatically determined variation *and* the capacity for case selection to convey social

[11] Genitive case has essentially fallen out of use as a structural case in contemporary Faroese. Although ACC-ACC occurs in some fossilised expressions, these are rare and are generally assumed not to be representative of the modern Faroese system (Þráinsson et al. 2004:253).

meaning. I propose a version of OT syntax that generates the range of Faroese sentence types beyond simple transitives; I also present an analysis of object shift that captures Holmberg's Generalisation with reference to adverbial scope and information-structural constraints, without presupposing verb movement. In the next section, I give an overview of the competing grammars model of morphosyntactic variation.

1.2.3 Competing grammars

As stated in the previous section, in Optimality Theory a grammar is effectively a snapshot of a specific constraint ranking. Constraint rankings make predictions that are borne out empirically; it is possible to test whether a hypothesised ranking matches observed data within a language, e.g. the prediction that nominative objects should not be possible in Faroese. However, some phenomena exist which are difficult to capture by a single constraint ranking. One such phenomenon is 'nominative substitution' (Jónsson and Eyþórsson 2005) in Faroese quirky case predicates: it is possible to replace the dative case on the subject with nominative case, yielding a standard monotransitive NOM-ACC case frame. This is effectively an 'overwriting' of lexical case, since the standard variant of the same verbs, e.g. *dáma* 'like', is to mark the subject dative. It is not a question of by-speaker variation, e.g. if one speaker always produced nominative and another always dative; rather, two possibilities coexist within a speaker's competence: one the more cross-linguistically marked but standard and more frequent in corpora (dative subject), the other the less cross-linguistically marked but non-standard and stigmatised (nominative subject). Moreover, use of the nominative variant carries social meaning, being associated with childishness, anti-purism and commonly attributed to Danish influence (Petersen 2010). Indeed, the same speaker can be found using the same verb with a different subject case even within the same text.

This presents a conundrum for the theorist, since there is a discrete binary variable, viz. dative and nominative subject case, which requires a different morphosyntactic analysis. It is of course possible to stipulate two lexemes for the verb in question, one of which marks nominative and the other dative; however, this seems to miss important facts about the diachronic trajectory of the system, and about sociolinguistic meaning. As can be observed more broadly in Faroese, quirky case is gradually being lost over time: accusative subjects have fallen out of usage, and the range of verbs with dative-marked arguments is drastically reduced in comparison to Icelandic. Another interesting observation is that the verbs which allow nominative substitution, such as *dáma* 'like', do have a passive form with a nominative subject, whereas verbs more resistant to nominative substitution in the active, such as *tørva* 'need', do not passivise. This mirrors case-preservation behaviour in dative-object verbs, where some verbs such as *hjálpa* 'help' do not preserve case in the passive (i.e. the subject surfaces as nominative), while others such as *takka* 'thank' do preserve case (i.e. the subject retains dative case). Therefore, it seems that these facts are *systematic*: an *ad hoc* stipulation of a different lexeme for each variant would involve an excessive amount of redundancy, and misses the generalisation that lexical case-marking is being lost in various different constructions. The relevant constraint conflict is between preserving lexical case and marking regular nominative subject case, i.e. MAX[LC] and SNOM which enforces nominative subject case. This requires two rankings: MAX[LC] » SNOM, which yields lexical subject case, and SNOM » MAX[LC] resulting in nominative subject case.

I argue that the most flexible and empirically sound way to model these types of variation is to propose that a given speaker has simultaneous access to multiple competing grammars, where a grammar is activated probabilistically. The probability that a given grammar is accessible depends on factors that bear different weights depending on lexical semantics, grammatical context and socio-pragmatic context. This proposal is somewhat different from the competing grammars hypothesis of previous work such as Kroch (1989), Pintzuk (1999) *i.a.*, in that the focus is on which grammar produces a variant in synchronic usage, rather than diachronic or acquisitional concerns. However, this model is readily compatible with the idea that language change occurs when one grammar wins out over another through both internal and external pressures. The following aspects of the Competing Grammars Model (CGM) put forth in this thesis are particularly important:

i. The number of grammars/rankings accessible to a speaker is not unconstrained: only those rankings that yield actual attested variants are accessible in production.[12]

ii. The selection of a grammar can be modelled statistically, with fixed effects that differ in their significance to the speaker's calculation.

iii. The relative weight of grammatical and social/contextual factors depends on whether the variant conveys indexical meaning in addition to semantic content: when the variable is above the level of consciousness, social factors take on greater significance, whereas when the variation is primarily lexical-semantic, lexeme choice will be the strongest factor.

iv. The model is falsifiable by examining actual data: if the factors claimed to be significant in one sample of the sentence type do not emerge as significant in another sample of the same sentence type, e.g. two comparable subsets of a Faroese corpus with tokens of *dáma*, the hypothesis is rejected.

An advantage of CGM is its compatibility with game-theoretic approaches to pragmatic and social meaning: in section 4.5.3 I discuss a version of the Rational Speech Act model proposed by Goodman and Frank (2016), Burnett (2017) *i.a.*, applied to the nominative substitution phenomenon in Faroese. Moreover, CGM is easily applicable to *systematic* changes in grammar. One pertinent example in Faroese is that nominative substitution in the active of dative-subject verbs and case non-preservation in the passive of dative-object verbs is explicable by the same constraint interaction; i.e. there is a 'preserving' and 'non-preserving' *grammar*, not merely (non-)preserving constructions or lexemes, even if lexeme is the strongest predictor. The loss of lexical case represents increasingly frequent activation of the non-preserving grammar, resulting in an increasing probability over time that learners acquiring the language will hypothesise the non-preserving grammar.

It may be argued that CGM is too unconstrained with respect to the large number of rankings yielding the same output, but if the grammar selection itself is also probabilistic, the search space of reasonable ranking hypotheses is drastically reduced. A speaker is assumed to have knowledge of the whole grammar of the language beyond the specific construction, and therefore is extremely unlikely to hypothesise rankings which would yield unattested forms in other constructions. For instance, both Faroese and Icelandic

[12] I do not make further claims here about listener hypothesised rankings or the probability of selecting a specific ranking among several that result in the same output; such questions are well beyond the scope of this thesis.

are languages which exhibit lexical case-marking. When a Faroese speaker selects the ranking SNom » Max[LC] yielding nominative subject case, it is highly improbable that this ranking also includes a markedness constraint *CaseInfl ranked above Max[LC], since this would result in a language without inflectional case-marking (such a ranking would, however, be reasonable for a language like English or Danish). One can easily imagine a probabilistic approach to CGM that builds on prior work such as Maximum Entropy or Stochastic OT; for further discussion of such approaches, see Boersma (1998), Boersma and Hayes (2001), Goldwater and Johnson (2003), Jäger (2007), Pater (2009) *i.a.*

There is not enough space in this thesis to explore the manifold implications of CGM for morphosyntactic change; my primary aim is to posit the model as a way of understanding intra-linguistic and intra-speaker variation, phenomena which have too often been neglected in the theoretical syntax literature, particularly in the frequent attribution of variation to lexical or language-specific idiosyncrasies. In this way I hope that my proposal bridges a gap between robustly quantitative and abstract representational approaches to morphosyntax, both of which are data-driven, but which have much to benefit from each other in arriving at a deeper understanding of morphosyntactic variation.

1.3 Empirical findings

In this section I summarise the empirical findings from extensive fieldwork I conducted on the Faroe Islands and Iceland, in addition to corpus data. The survey data is available online at the permanent URL <https://purl.stanford.edu/nd533ns7207> (Galbraith 2017). As the focus of this thesis is to explain case-marking patterns in Faroese and Icelandic, I constructed multiple surveys distributed to native speakers of each language, which elicited acceptability judgements on the sentence types most relevant to the phenomena under discussion. Table 1.1 shows details of the surveys; the numbers in parentheses indicate the number of fully complete responses, the remainder providing partial responses. The Stimuli column does not include filler sentences interspersed with the target sentences for judgement, which were included in all surveys except number 1. It is important to note the following: surveys 2 and 6 were conducted as two separate surveys each, one with the sentences embedded in a colloquial and one in a formal context; the groups of speakers for the colloquial and formal surveys did not overlap, and the analysis is based on the combination of the two (i.e. the figure 158 total participants represents a combination of both groups of speakers). Moreover, the two Icelandic surveys 3 and 7 were tested as one single survey with the same group of speakers, and stimuli of each sentence type were interspersed; I split the results for ease of exposition. Finally, the same goes for Faroese surveys 5 and 9, i.e. both passives without agent phrase and *tróta* were tested in the same survey with the same group of speakers. For clarification I indicate which sets of speakers are the same in the column 'Group'.

I ran statistical models on the results of these surveys to establish the significance of grammatical factors affecting the mean acceptability judgements. The sentence stimuli are laid out in full either in the section discussing the data, or in Appendices B1–B5.

The following points summarise the key findings from fieldwork and survey results:

Table 1.1: **Fieldwork surveys**

№	Language	Sentence types	Group	Speakers	Stimuli	Section
1	Faroese	quirky case predicates	A	23 (14)	15	4.3.1
2	Faroese	quirky case predicates	B	158 (46)	28	4.3.2
3	Icelandic	quirky case predicates	C	28 (14)	54	4.3.3
4	Faroese	monotransitive passives, no agent phrase	D	42 (22)	25	5.2.1
5	Faroese	monotransitive passives, with agent phrase	E	37 (15)	45	5.2.2
6	Faroese	passive of 'give'	B	158 (46)	28	6.2.1–6.2.2
7	Icelandic	passive of 'give'	C	28 (14)	54	6.4.1
8	Faroese	ditransitive passives	F	18 (13)	31	6.4.2
9	Faroese	verb *tróta*	E	37 (15)	16	5.2.2

Quirky case predicates

a. In both Icelandic and Faroese, the object of a quirky case verb behaves like a regular object with respect to object shift and negative scrambling:

   i. In Faroese sentences without auxiliaries and with the main verb in T, full DP objects are only accepted when the object occurs in V,Comp, while pronominal objects are accepted with shift (though there is disagreement on whether they may remain in situ); in Icelandic, shift was accepted with pronominal objects and less consistently with full DP objects.

   ii. In Faroese sentences with the finite auxiliary in T and the main verb in V, shift is impossible across the board, but negative scrambling is accepted when the object is negative-quantified; the same results held of Icelandic.

b. In Icelandic, sentences with nominative objects and no number agreement (i.e. third person singular morphology on the verb) were rejected across the board; moreover, sentences with an intervening dative argument were judged significantly worse than those without an intervener. I did not find evidence for a dialect or speaker group which consistently accepted agreement across the intervener in this sample (*pace* Sigurðsson and Holmberg 2008).

Hence, the data are consistent with my hypothesis that these accusative arguments in Faroese are structurally regular objects, and that number agreement with the nominative is a pressure in Icelandic that rules out the possibility of accusative object case. These results also speak against the hypothesis that the difference in object case between the two languages is due to a different object position. I explored my hypothesis further by investigating passives of both mono- and ditransitive predicates in Faroese, in order to verify whether nominative 'objects' ever occur in Faroese.

Passives

a. In Faroese, impersonal passives were judged across the board less acceptable than personal passives; the choice of verb interacts with type of passive, so that the personal improves acceptability over impersonal to differing degrees depending on the verb. Passives were universally judged less acceptable

with an overt agent phrase than without.

b. Mean acceptability of the passive of *geva* 'give' was so low in Faroese as to rule out the construction as ungrammatical; the only word order of a Faroese 'give' passive that approached mean of 3 acceptability was the Theme-Verb-Goal order, i.e. not the order where the argument in object position is nominative.

c. In Icelandic, survey results confirmed the two acceptable orders of the passive of *gefa* 'give' reported in the literature (Þráinsson 2007:134–136), i.e. Goal-Verb-Theme and Theme-Verb-Goal.

d. In Faroese, the acceptability of ditransitive passive is strongly dependent on the verb lexeme, with certain verbs not permitting the construction; additionally, the Theme-Goal and Theme-only word orders were judged significantly better than Goal-Theme, which was rejected across the board.

The important conclusions from the passive surveys are that (i) by far the most significant factor in the availability of passive in Faroese is the verb lexeme, and (ii) the purported 'nominative objects' in passives with Goal-Verb-Theme order were not accepted by any Faroese speakers in the sample, contrary to what has been reported (Þráinsson et al. 2012:272–273). Of course it could be the case that a different sample of speakers would accept this word order, but it would need to be shown that my sample is not representative with respect to this variable.

To conclude this section, the data gathered in extensive fieldwork on the Faroe Islands and Iceland are largely consistent with my central hypothesis: that the object in both Faroese and Icelandic dative-subject predicates behaves just like a regular object with respect to its structural position, and that therefore accusative case-marking in Faroese is expected; in that sense, it is *Icelandic* that needs explanation. Furthermore, the fact that Icelandic speakers rejected non-agreement with the object in these sentences shows that number agreement is a considerable pressure, which I formalise as the constraint AgrNom. Finally, results also show that the supposed nominative objects in Faroese ditransitive passives are not accepted, and that the only possible word orders in Faroese when a three-argument verb can be passivised are those in which the nominative theme occurs in subject position. In each section describing the outcome of the given survey, I present an analysis of the facts using the OLG framework I adopt; I aim to demonstrate that the constraints and implementation I propose not only achieve descriptive adequacy, but also offer a deeper explanation for the patterns observed.

1.4 Structure of thesis

In this section, I give an overview of the structure of the thesis.

In Chapter 2, I present a review of the literature concerning so-called 'quirky' case, starting from the initial work on Icelandic and the subjecthood of the dative arguments, in contrast with preverbal datives in languages such as German. I give an overview of Faroese clause structure, presenting my fundamental starting assumptions regarding the non-quirky case data. Finally, I establish that the Faroese dative experiencers in such predicates are true subjects by the standard tests, confirming the conclusions of Barnes (1986).

Chapter 3 provides an overview of the two main components of the OLG approach I adopt, namely Linking Theory and Optimality Theory. I present the basic starting assumptions of each of these formalisms, thus laying the foundations for my analysis of the data discussed in Chapters 4-6.

In Chapter 4, a summary of Faroese non-nominative subjects is presented, followed by discussion of survey results from the Faroe Islands and Iceland. I discuss the Semantic Form of the relevant verbs and the OLG analysis of the difference in object case-marking between the two languages. I also present my competing grammars model of variation in Faroese dative subject case, which I support empirically via logistic regression with data from the Faroese blog corpus, and propose a Rational Speech Act model of the social meaning conveyed by the case variable.

Chapter 5 discusses the passive of monotransitive verbs in Faroese, with survey data that establishes the dependence of passive acceptability on choice of verb lexeme. I discuss case preservation, and give further support for the competing grammars model by showing the inter-relatedness of the availability of passive and loss of lexical case-marking.

In Chapter 6, I broach the topic of ditransitive verbs in Faroese, and present further data from fieldwork. I examine passives of 'give' in both Faroese and Icelandic, in addition to other triadic verbs in Faroese. I analyse these facts through the same OLG framework, and conclude that nominative objects are in fact not accepted in Faroese; thus ditransitive passives do not threaten the central hypothesis.

Having reviewed the crucial data, in Chapter 7 I interact with some alternative accounts of case-marking in the literature. I discuss one OT-based account, as well as broadly Minimalist approaches. I conclude that while these analyses do provide some insight into the case-marking phenomena in question, ultimately my approach shows that Faroese and Icelandic are predictable from general principles of case systems rather than idiosyncrasies of language-specific syntactic configurations; moreover, OT-based approaches have readily demonstrable cross-linguistic traction due to the ease of generating factorial typologies.

In Chapter 8, I give a detailed exposition of the mechanics of the OLG approach, and work through an English example within OT syntax. I provide extensive argumentation for the ranking I assume for Faroese, in order to account for the non-quirky case sentence types presented in Chapter 2; I also give an illustrative example of how OLG can explain Holmberg's Generalisation, if the right assumptions are made regarding adverb adjunction. I argue that this theory is able to account for a far broader range of data than those phenomena examined in the preceding chapters.

Chapter 9 concludes the thesis.

Chapter 2

Research question

In this chapter, I give a brief introductory overview of the phenomenon of non-nominative subjects, in addition to a summary of prior work on Faroese clause structure. Once these preliminaries have been established, I lay out the research question that is the focus of this thesis, namely how best to account for the observed differences between Icelandic and Faroese theoretically, and hence what we can learn from these languages about case systems more broadly.

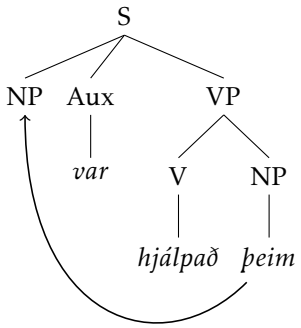
2.1 Non-nominative subjects

2.1.1 Icelandic oblique subjects

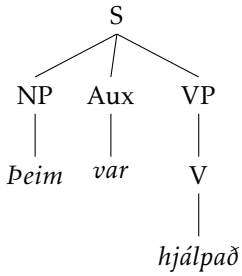
It has long been established that Icelandic features arguments that pass tests for subjecthood, but are marked with some morphological case other than nominative, the unmarked subject case in the language. Zaenen et al. (1985:446) presented the problem as follows: in Icelandic passive sentences with an initial dative argument (24), the structure could either be (25) that of an impersonal passive with a topicalised object, or (26) a true dative subject.

(24) Ice. *Þeim var hjálpað*
them.DAT was.3SG helped
'They were helped'

(25)



(26)



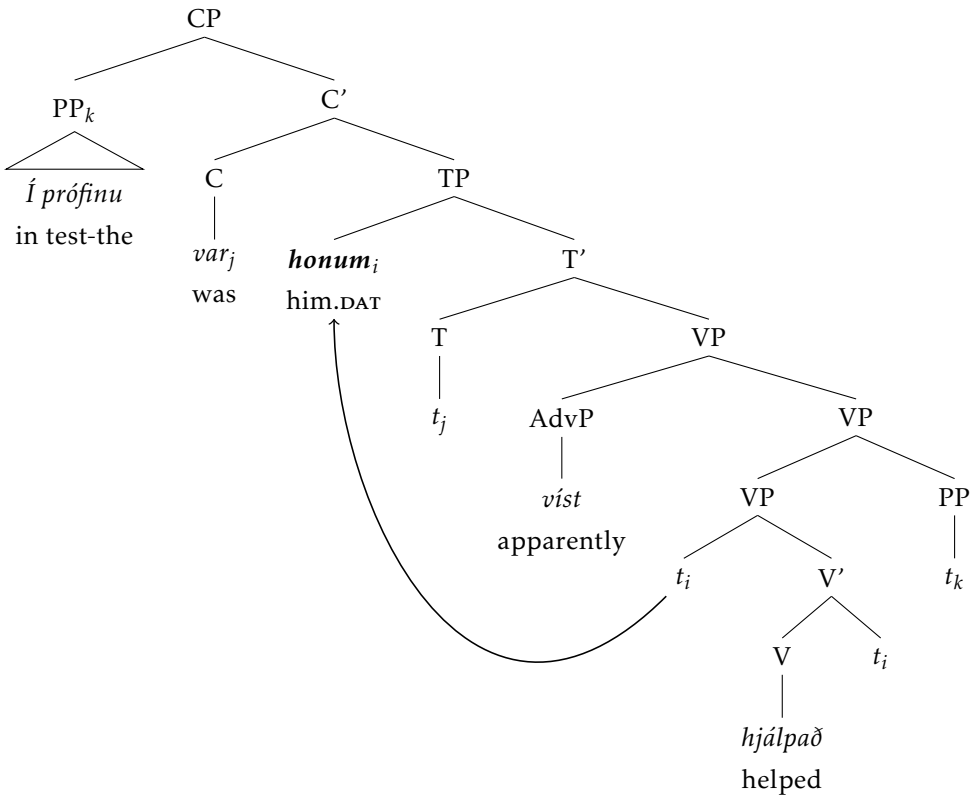
Zaenen et al. (1985) found that hypothesis (26) was consistent with results of diagnostics that pick out a collection of subjecthood properties, both in terms of thematic prominence (e.g. ability to control PRO, being antecedents of reflexives) and structural position (e.g. subject-verb inversion, extraction and subject ellipsis). It has been argued that in Icelandic, transitive subjects are base-generated in Spec,*v*P and may remain there, move to Spec,TP[1] or Spec,CP[2] depending on the construction (Þráinsson 2007:46–64). The structural diagnostics employed to test for subjecthood demonstrate that these dative arguments pattern like subjects, not like topicalised objects, and thus appear in Spec,TP and arguably Spec,CP when sentence-initial. In (27) the subject-verb inversion test is illustrated with a topicalised XP preceding the finite verb and subject following the verb in Spec,TP.[3]

[1] In much of the literature the relevant head is called I or Infl, and it has been proposed that separate heads may be necessary for I(nflection), T(ense) and Agr(eement) (Pollock 1989 *et seq.*); in order to build up a case without presuming such a 'Split-IP' analysis, I will notate this as T without assuming the distinction to be required.

[2] Vikner (1995:138)) proposes that the finite verb in Icelandic main clauses moves to C and the subject to Spec,CP in subject-initial sentences, since V2 appears to be a general property of the language.

[3] In this overview, for passives I present the longstanding analysis where subjects are derived from the active (Chomsky 1957, 1975 *et seq.*), and hence prior to passivisation the object DP originates in the complement of V; I do not adopt this analysis of passive myself, as discussed below in Chapter 8.

(27)



In non-subject-initial sentences with V2, it seems that nominative subjects occur in the same position as the dative argument in (27):

(28) Ice. *Hana hefur* ***hún*** *ekki lesið*
it.ACC has she.NOM not read
'That (one), she hasn't read'

(29) Ice. *Ekki hafa* ***þeir*** *lokið verkinu í dag*
not have they.NOM finished work-the.DAT today
'They have not finished the work today'

(30) Ice. *Það hafa* ***nokkrir kettir*** *verið í eldhúsinu í dag*
EXPL have some.NOM cats.NOM been in kitchen-the.DAT today
'Today some cats have been in the kitchen'

I follow Þráinsson (2007:28, 46) in assuming that the subjects in (28-30) occupy the specifier of T, since there is independent evidence that finite main verbs and finite auxiliaries occupy either the T or C head (depending on whether the subject immediately precedes or follows the verb). Icelandic data show that non-finite verbs must occur after negation or sentence medial adverbs, and finite verbs must precede these elements, both in matrix and subordinate clauses (31-32):[4]

[4]See Angantýsson (2007:238), Þráinsson (2007:58, fn.28). This is somewhat of an oversimplification, since the judgements for Icelandic V3 vary depending on the type of embedded clause, matrix verb, pronominal versus full DP subject, and so forth. See Angantýsson (2007) for a detailed treatment of V3 in Icelandic.

(31) a. Ice. *Jón* ***hefur aldrei*** *(*hefur) lesið bókina*
John.NOM has never has read book-the.ACC
'John has never read the book'

b. Ice. *Jón* ***las aldrei*** *(*las) bókina*
John.NOM read never read book-the.ACC
'John never read the book'

(32) a. Ice. *Ég spurði hvort Jón* ***hefði aldrei*** *(*?hefði) lesið bókina*
I.NOM asked whether John.NOM had never had read book-the.ACC
'I asked whether John had never read the book'

b. Ice. *Ég spurði hvort Jón* ***læsi aldrei*** *(*?læsi) bókina*
I.NOM asked whether John.NOM read never read book-the.ACC
'I asked whether John never read the book'

There is also evidence that a specifier position lower than Spec,TP can also license subjects, which for now I notate is Spec,*v*P. Evidence for this comes from sentences in which the subject follows the sentence-medial adverb (Þráinsson 2007:17, 47):

(33) Ice. *Það höfðu* ***aldrei margir*** *lokið verkefninu*
EXPL had never many.NOM finished assignment-the.DAT
'There were never many people who had finished the assignment'

However, since the adverb *aldrei* could be adjoined higher (say, to T), in which case the finite verb would be in C, the subject in (33) could also be in Spec,TP; this is the analysis I adopt in section 2.2 regarding Faroese subject positions. Nevertheless, expletive constructions in which the subject occurs below the non-finite main verb occur in Icelandic, a position I assume to be V,Comp, as in (34):

(34) Ice. *Það hafa verið* ***nokkrir kettir*** *í eldhúsinu í dag*
EXPL have been some.NOM cats.NOM in kitchen-the.DAT today
'Today some cats have been in the kitchen'

For now, given the possible word orders in (28-34), I assume that minimally Spec,TP and Spec,CP are subject-licensing positions in Icelandic, and that V,Comp also may be occupied by a subject if the right information-structural conditions hold.[5] The working definition of subjecthood I adopt consists of both (a) displaying the binding properties picked out by raising, control, reflexivisation and other tests, and (b) obligatorily occupying subject-licensing positions. Much work subsequent to Zaenen et al. (1985) has proposed that the non-nominative arguments in active sentences with nominative lower arguments, e.g. dative-experiencer verbs, exhibit the same properties as these subjects of passives, in spite of the observed object-agreement pattern (Yip et al. 1987, Sigurðsson 1989, 2004, Jónsson 1997-8 *i.a.*). Barðdal (2001) argues that a construction-based account of dative-nominative predicates is necessary, since either argument can behave as a subject with respect to the subjecthood tests; however, this behaviour is restricted to a subset

[5] My assumptions regarding positional licensing are laid out in detail in section 3.1.

of experiencer verbs with identifiable common lexical-semantic properties,[6] a set that excludes *leiðast* 'find boring' in (35-39).[7]

Reflexivisation

(35) Ice. ***Henni***$_i$ *leiðast bækurnar* ***sínar***$_i$*/*hennar*$_i$
her.DAT bore.3PL books-the.NOM.PL self's.NOM.PL/her
'She finds her (own) books boring'

Subject-Verb Inversion

(36) Ice. *Þá hafa* ***henni*** *líklega leiðst bækurnar*
then have.3PL her.DAT probably bored books-the.NOM.PL
'Then, she has probably found the books boring'

Raising

(37) Ice. ***Henni*** *virðast* [*hafa leiðst bækurnar*]
her.DAT seem.3PL have.INF bored books-the.NOM.PL
'She seems to have found the books boring'

Control

(38) Ice. *Hún vonast til* [*að* **PRO** *leiðast ekki bækurnar*]
she.NOM hopes for to PRO.DAT bore.INF not books-the.NOM.PL
'She hopes not to find the books boring'

Exceptional Case Marking

(39) Ice. *Ég mundi telja* [***henni*** *hafa leiðst bækurnar*]
I.NOM would believe her.DAT have.INF bored books-the.NOM.PL
'I would believe her to have found the books boring'

[6] Barðdal (2001:57) analyses these as several varieties of psych-verb, although her proposal is that the dual-subject behaviour is a property of the construction rather than idiosyncratic verb semantics. The most frequently presented example of the DAT-NOM/NOM-DAT alternation is *henta* 'please', contrasting with *líka* 'like' which always has a dative subject:

(1) a. Ice. ***Mér*** *hefur alltaf hentað* ***þetta***
me.DAT has.3SG always pleased this.NOM
'I have always been pleased with this'
b. Ice. ***Þetta*** *hefur alltaf hentað* ***mér***
this.NOM has.3SG always pleased me.DAT
'This has always pleased me'

(2) a. Ice. ***Mér*** *hefur alltaf líkað* ***Guðmundur***
me.DAT has.3SG always liked Guðmundur.NOM
'I have always liked Guðmundur'
b. Ice. * ***Guðmundur*** *hefur alltaf líkað* ***mér***
Guðmundur.NOM has.3SG always liked me.DAT

[7] Examples adapted from Sigurðsson (2004:141–3). I am aware that some speakers may reject (36) due to dative intervention effects, but judgements vary on this (cf. Sigurðsson and Holmberg 2008); the same sentence with singular 'book' as the object is accepted by all, since third singular agreement may either be an instance of number agreement (with a singular) or default/failed agreement.

Many other tests have been employed which verify the subjecthood of these arguments according to our working definition (see e.g. Sigurðsson 1989:204-5, 1997:302). Hence, most theoretical analyses of the Icelandic facts have been built on the assumption that non-nominative subjects occupy subject positions and co-occur with nominative objects (see Þráinsson 2007:156–172). One corollary of this: if we approach other languages with pre-verbal dative experiencers, e.g. German, and if the diagnostics for Icelandic turn out to be portable to said language, we would expect either: (i) the same results hold and the dative experiencers are subjects by our definition, or (ii) we see different results and the datives are non-subjects.

2.1.2 German pre-verbal dative experiencers

What we find in German is that the same diagnostics can be applied, and that the results are consistent with the relevant datives being *non*-subjects. This was noticed as early as Cole et al. (1978), cited by Zaenen et al. (1985). For instance, in German, subjects of infinitives can be controlled (40a), including nominative-marked subjects of passives (40b), but in the passives of dative-object verbs (40c), the corresponding argument in the active cannot be an understood subject of an infinitival (i.e. arbitrary PRO):

(40) a. Ger. *Im Sommer zu reisen ist angenehm*
in summer to travel is agreeable
'To travel in the summer is nice'

b. Ger. *Aufgenommen zu werden ist angenehm*
admitted to be is agreeable
'To be admitted is nice'

c. Ger. * *Geholfen zu werden ist angenehm*
helped to be is agreeable
'To be helped is nice'

Likewise, EQUI-control is possible in German in both actives and passives (41a-b), but not when the PRO subject would be non-nominative (41c):

(41) a. Ger. *Er hofft weg zu gehen*
he.NOM hopes away to go
'He hopes to go away'

b. Ger. *Er hofft aufgenommen zu werden*
he.NOM hopes admitted to be
'He hopes to be admitted'

c. Ger. **Ihm/*Er hofft geholfen zu werden*
him.DAT/he.NOM hopes helped to be
'He hopes to be helped'

Thus German can be shown to behave differently to Icelandic with respect to subjecthood of these oblique arguments. We draw the same conclusion in German for the pre-verbal oblique arguments of actives (i.e. constructions not derived from passives):

(42) a. Ger. *Mir ist übel*
me.DAT is nasty
'I am nauseated'

b. Ger. * *Mir hofft übel zu sein*
me.DAT hopes nasty to be

c. Ger. * *Ich hoffe übel zu sein*
I.NOM hope nasty to be
'I hope to be nauseated'

d. Ger. * *Übel zu sein ist unangenehm*
nasty to be is disagreeable
'To be nauseated is unpleasant'

Therefore, it seems that we can conduct similar tests in German to those for Icelandic, which do pick out the same control properties. Hence one reasonable hypothesis would be to posit that these arguments also are *not* situated in the German syntactic positions available to subjects, by contrast with Icelandic. This is in fact what one proposal by Haider (2010) suggests: he argues that case in German is not 'positional' in the sense that the base order of arguments is determined by lexical argument structure (i.e. along the lines of a theta-role hierarchy), rather than assuming unique licensing structural positions (Haider 2010:259,267). One piece of evidence for this is the fact that nominatives are licensed in contexts which would require object-to-subject raising in English (43):

(43) a. Ger. *dass man ja Kindern Märchen erzählen muss*
that one.NOM PRT children-DAT fairy.tales-ACC tell must
'that one must tell children fairy tales'

b. Ger. *dass ja Kindern* ***Märchen*** *erzählt werden müssen*
that PRT children-DAT fairy.tales-NOM told be must
'that children must be told fairy tales'

c. Ger. [$_{VP}$ *Märchen erzählt werden*] *muss Kindern heute nicht*
fairy.tales-NOM told be must children-DAT today not
'Children must not be told fairy tales today'

d. Ger. [$_{VP}$ *Märchen erzählen*] *muss man Kindern ja heute nicht*
fairy.tales-ACC tell must one.NOM children-DAT PRT today not
'One must not tell children fairy tales today'

The nominative in (43b) probably occurs in a VP-internal position, in the same place as the accusative in the active. However, to verify this we must consider that the dative could have been scrambled in front of the nominative. One fact that speaks against that hypothesis is that the main verb plus the direct object can be fronted regardless of grammatical function (43c-d). Haider (2010:260) notes that this property of allowing VP-internal nominatives is shared by Icelandic:

(44) a. Ice. *að* ***henni/stelpunum*** *líkuðu hestarnir*
that her.DAT/girls-the.DAT liked horses-the.NOM
'that she/the girls liked the horses'

b. Ger. *dass* ***ihr/den Mädchen*** *die Pferde* *gefielen*
that her.DAT/the girls-DAT the horses.NOM pleased
'that the horses pleased her/the girls'

The claim is that although in both languages the arguments are merged according to some lexical argument structure ranking, i.e. the dative precedes the nominative in sentences like (44), in Icelandic the dative argument raises to the higher Spec,TP subject position — and precisely because German does not have this positional licensing requirement, the dative argument in fact remains in the highest argument position of the verbal projection. However, it should be noted that since in Icelandic the subject may also remain VP-internal in certain constructions, I do not construe occupancy of Spec,TP to be the only subject-defining property in Icelandic; I merely state that Spec,TP is the standard subject position, provided other factors do not hold (such as the subject remaining in V,Comp in presentational constructions). I refer the reader to Haider (2010:259–271) for additional discussion, the conclusion being that 'it is reasonable to continue assuming that a German dative object stays in its object base position just like any other object' (Haider 2010:270).[8]

To summarise thus far, we have seen that Icelandic oblique arguments behave like subjects with respect to binding properties as well as structural position, which I assume to be Spec,TP (and Spec,*v*P when following a sentential adverb or Spec,CP in subject-initial sentences). German, on the other hand, displays the inverse properties, viz. that oblique arguments are not able to control PRO, and if we accept Haider's point regarding German argument structure, are also not occupying standard subject position. With this background in place, that is, having some predictions for what a non-nominative subject language should look like (Icelandic) versus a language without oblique subjects (German), we can approach the Faroese data.

2.2 Faroese clause structure

Relatively little prior work exists on the architecture of the Faroese clause. The main primary source I will draw upon is the grammar by Þráinsson et al. (2012).[9] Most of the basic questions about Faroese clause structure receive preliminary treatment in Þráinsson et al. (2012:236–248); some relevant sentence types are given in (45a-k).

(45) a. Far. *Tey* *hava aldri* *lisið* *bókina*
they.NOM have never read book-the.ACC
'They have never read the book'

[8] It should nevertheless be noted that some have argued against this conclusion: Barðdal (2002) and Barðdal and Eyþórsson (2003), for instance, hold that the at-issue dative arguments do in fact behave as syntactic subjects with reference to reflexives, conjunction reduction and control of infinitival PRO. On the other hand, these behaviours are more restricted than they are in Icelandic, e.g. the subject of a second conjunct can be unexpressed if and only if the first conjunct subject bears the same morphological case (Barðdal and Eyþórsson 2003:757). B&E suggest that the difference between Icelandic and German ought to be viewed as on a gradient rather than categorical. However, they do not discuss or give an explicit account of the syntactic position occupied by the dative argument in these instances. Thus it remains a strong possibility that although the German obliques may display more of the cluster of subjecthood properties than previously claimed, the position they occupy may not be a licensing-position in German like Spec,TP is proposed to be in Icelandic.

[9] First edition 2004, but I will cite here from the updated 2012 edition.

b. Far. *Tá hava tey lisið bókina*
then have they.NOM read book-the.ACC
'Then they have read the book'

c. Far. *Eg haldi, at Jógvan (aldri) hevur (aldri) lisið bókina*
I.NOM think that John.NOM never has never read book-the.ACC
'I think that John has never read the book'

d. Far. *Hon spurdi, hvør (aldri) hevði (?aldri) lisið bókina*
she.NOM asked who.NOM never had never read book-the.ACC
'She asked who had never read the book'

e. Far. *Eg ivist í, um hon (altíð) sigur (?altíð) satt*
I.NOM doubt in whether she.NOM always says always true
'I doubt if she always tells the truth'

f. Far. *Tey lósu aldri bókina (*aldri)*
they.NOM read never book-the.ACC never
'They never read the book'

g. Far. *Tann gamla bilin vil eg ikki hava*
the.ACC old.ACC car.ACC will I.NOM not have
'The old car, I don't want'

h. Far. *Eg las ikki bókina (*ikki)*
I.NOM read not book-the.ACC not
'I didn't read the book'

i. Far. *Eg las (*ikki) hana ikki*
I.NOM read not it.ACC.F not
'I didn't read it'

j. Far. *Eg havi ongan sæð (*ongan)*
I.NOM have nobody.ACC seen nobody
'I haven't seen anyone'

k. Far. *Eg havi ongan næming tosað við (*ongan næming)*
I.NOM have no.ACC student.ACC spoken to no student
'I haven't spoken to any student'

It will be immediately observable that like Germanic languages other than English, Faroese has finite V2 as indicated by the relative position of the auxiliary/finite verb and sentence-medial adverb or negation (45b-g). Moreover, like in Mainland Scandinavian but unlike Icelandic, full-NP objects may not precede negation even though pronominal objects do (45h-i), i.e. Faroese does not exhibit full-NP object shift (Holmberg 1986 *et seq.*); nevertheless, there is a kind of 'negative shift' in that negative objects do precede the non-finite verb, whether direct objects or complements of prepositions (45j-k).

Another important point to note is that unlike in Icelandic, in Faroese non-bridge-verb clausal complements (45d-e), the adverb-finite verb and finite verb-adverb orders are not equally acceptable; there is significant inter- and intra-speaker variation here, as many find the finite verb-adverb order questionable or unacceptable. This is one of the few areas of detailed prior work: Vikner (1991) and Barnes (1992) made

the first proposals that Faroese is not as free as Icelandic with respect to word order in embedded clauses. Rohrbacher (1994) provides the analysis that the verb in Faroese stays low and does not raise to T apart from in 'residual' examples (Rohrbacher 1994:130–135). Likewise, Heycock et al. (2010) and Heycock et al. (2012) show that while Faroese speakers' acceptability judgements do not show a completed change to a Mainland Scandinavian-type system with no V-to-T in embedded clauses (after carefully controlling for embedded V2), they do appear to show that V-to-T is significantly less available than it is in Icelandic. Hence some account of both orders must be made, since although one type of grammar may be significantly preferred over the other, the type in which V-to-T is more available nevertheless represents a stage in the history of Faroese that is documented.[10]

Finally, in order to account for three-argument predicates such as double object constructions, an additional object position must exist below sentence-medial adverbs, and the main verb cannot occur to the left of the adverb (46a-b). Additionally, the order of indirect and direct object cannot be swapped (46c).

(46) a. Far. *Ivaleyst skulu tey ongantíð selja dreingjunum teldurnar*
doubtless shall they.NOM never sell boys-the.DAT computers-the.ACC
'No doubt they will never sell the boys the computers'

b. Far. * *Ivaleyst skulu tey selja (ongantíð) dreingjunum (ongantíð) teldurnar*
doubtless shall they.NOM sell never boys-the.DAT never computers-the.ACC

c. Far. * *Ivaleyst skulu tey ongantíð selja teldurnar dreingjunum*
doubtless shall they.NOM never sell computers-the.ACC boys-the.DAT

Since a finite main verb occurs to the left of all three arguments (47), it is reasonable to posit that in the absence of an auxiliary the finite verb occurs at least as high as T, and possibly as high as C given the post-verbal subject.

(47) a. Far. *Ivaleyst góvu tey ongantíð dreingjunum teldurnar*
doubtless gave they.NOM never boys-the.DAT computers-the.ACC
'No doubt they never gave the boys the computers'

b. Far. * *Ivaleyst góvu (ongantíð) tey dreingjunum (ongantíð) teldurnar*
doubtless gave never they.NOM boys-the.DAT never computers-the.ACC

[10] Lockwood (1977) and Barnes (1986) provide a couple of examples of embedded clause orders with modals and auxiliaries (1-2), cited by Rohrbacher (1994:49):

(1) Far. *Eg segði tað, at hann (skuldi) ikki (skuldi) havt nakað*
I.NOM said it.ACC that he.NOM should not should have anything.ACC
'I said that he shouldn't have anything'

(2) Far. *Tey nýttu fleiri orð, sum hon (hevði) ikki (hevði) hoyrt fyrr*
they.NOM used several words.ACC that she.NOM had heard not heard before
'They used several words that she hadn't heard before'

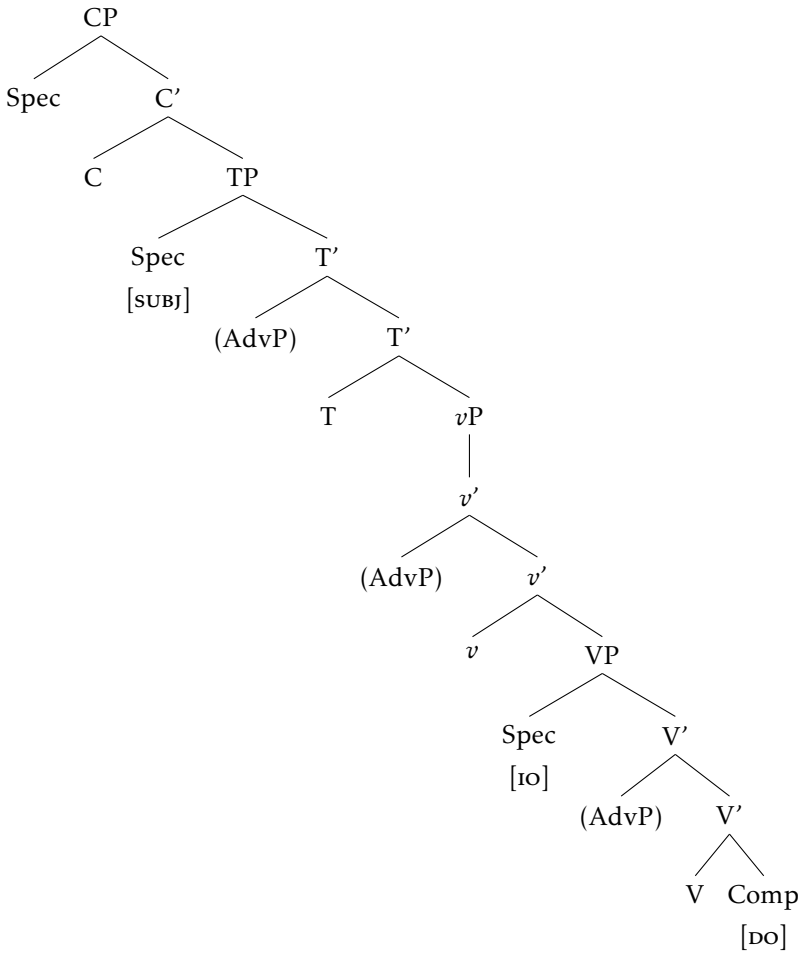
This contrasts with Mainland Scandinavian, e.g. Danish which prohibits the V-Adv order in the embedded clause (Rohrbacher 1994:49 *mutatis mutandis*, citing Vikner 1991):

(3) Dan. *Jeg ved ikke hvorfor koen (*står) altid står inde i huset*
I know not why cow-the stands always stands inside in house-the
'I don't know why the cow always stands inside the house'

Binding facts also support the analysis that the indirect object is structurally higher than the direct object. Since Barss and Lasnik (1986), it has been standardly assumed that the indirect object position precedes the main verb, perhaps by means of a VP-shell (Larson 1988); in examples like (46a) the main verb would therefore move to the left of the indirect object but not across the adverb. However, since I adopt an OT-based approach here, I do not stipulate movement, merely that the verb occurs in a position structurally higher than the two objects, and that the recipient asymmetrically c-commands the theme argument (see section 6.3.1).

Given these facts, I will test the hypothesis that the following basic clause structure holds of Faroese (cf. Þráinsson 2007:17–19 for the Icelandic facts). This is the maximal structure necessary to account for the sentence types discussed in section 2.2; since I adopt an OT-based analysis, usually the optimal output candidate will have all and only the structure necessary for the input, e.g. I do not assume the adverbial adjunct positions will always be present in the winning candidate. This will be discussed in more detail in Chapter 8.

(48)



I found no hard evidence for additional low specifier positions (such as Spec,*vP*) available to subjects in the data presented by Þráinsson et al. (2012), nor in my blog corpus or survey data. Since I derive X-bar

structures from markedness constraints, I do not need to assume that they will be universally instantiated: an input-output faithfulness constraint disfavouring extra null structure can rule out empty specifiers, even when the resulting structure violates the constraint(s) responsible for enforcing X-bar; for fuller discussion, see Chapter 8.[11] Evidence that arguments which bear [+HR] morphosyntactic case can occur in V,Comp comes from unaccusative expletive constructions such as (49), which are reportedly accepted by a majority of speakers:

(49) a. Far. *Tað hava (nakrar mýs) verið (nakrar mýs) í baðikarinum*
EXPL have some.NOM mice.NOM been some.NOM mice.NOM in bathtub-the.DAT
'There have been some mice in the bathtub'

b. Far. *Tað eru (nakrir gestir) komnir (nakrir gestir) úr Íslandi*
EXPL are some.NOM guests.NOM come some.NOM guests.NOM from Iceland.DAT
'Some guests have arrived from Iceland'

It is unclear from examples like (49) alone whether the expletive and finite auxiliary occur at the left edge of TP or CP. It is reasonable to posit that the associate occurs in V,Comp in unaccusatives like (49), but in main clauses the subject position between the auxiliary and could either be Spec,TP (and therefore the expletive and auxiliary must be in Spec,CP and C), or a lower specifier like Spec,*v*P. A quick internet search gives some hints as to where sentence-medial adverbs like *aldri* 'never' occur in such constructions, the subject phrases here indicated by square brackets:

(50) a. Far. *tí tað hava* ***aldri*** *verið* [*so nógvir lokalpolitikkarar*] *í løgtinginum sum*
because EXPL have never been so many local.politicians.NOM in parliament-the.DAT as
nú
now
'...because there have never been as many local politicians in the parliament as now'
<www.oyggjatidindi.com>, 'Trý lokalsjúkrahús ella Sjúkrahús Føroya?', accessed 3/6/17

b. Far. *Tað hevur* ***altíð*** *verið* [*tónleikur*] *í hansara barnaheimi*
EXPL has always been music.NOM in his childhood.home.DAT
'There has always been music in his childhood home'
<www.folkakirkjan.fo>, 'Jóhan Kallsoy, organistur', accessed 3/6/17

c. Far. *Jenis av Rana segði, at tað hevur* ***aldri*** *verið* [*so nógv brúk fyri*
Jenis.NOM of Rana said that EXPL has never been so much.NOM need.NOM for
politikkinum]
policy-the.DAT
'Jenis av Rana said that there has never been such a need for the policy...'
<www.r7.fo>, 'Miðflokkurin havt landsfund', accessed 3/6/17

If we assume that in examples like (50c) the complementiser *at* is occupying C, whether or not we adopt some version of the recursive CP hypothesis (see Vikner 1995), it is at least clear that the subject phrase

[11] In essence, Chomsky (1995) presents a similar view when he posits Bare Phrase Structure, i.e. that category labels are unnecessary since a head functions as the label of its projections, and thus specifiers are defined simply as structural relations to the head. However, the division of labour is starkly different in OLG, since inviolable constraints do not apply to GEN which is a context-free grammar, but are part of EVAL which rules out candidates that do not conform to X-bar principles.

must be occupying a position lower than Spec,TP, and lower than the sentential adverb and participle. This does not clarify whether the subject can also occur between the adverb and participle in (50a-c), however. Native speaker consultants expressed doubts about the possibility of the subject occurring in this position when the adverb is present (unlike Icelandic, where this position is available, see Þráinsson 2007:316):

(51) a. Far. ?? *Tað hava altíð [góðir menn] verið í Føroyum*
EXPL have always good.NOM men.NOM been in Faroes.DAT
'There have always been good men on the Faroes'

b. Far. ?? *Tað hava aldri [innlendsk trø] verið í Føroyum*
EXPL have never native.NOM trees.NOM been in Faroes.DAT
'There have never been native trees on the Faroes'

When a modal is added, the subject occurs below both the non-finite auxiliary and participle; the same judgement holds regarding the position between the adverb and participle, and higher subject positions are impossible (52).

(52) a. Far. *Tað má hava altíð verið [nógv fólk] í húsinum*
EXPL must have always been many.NOM folk.NOM in house-the.DAT
'There must have always been a lot of people in the house'

b. Far. ?? *Tað má hava altíð [nógv fólk] verið í húsinum*
EXPL must have always many.NOM folk.NOM been in house-the.DAT

c. Far. * *Tað má hava [nógv fólk] altíð verið í húsinum*
EXPL must have many.NOM folk.NOM always been in house-the.DAT

d. Far. * *Tað má [nógv fólk] hava altíð verið í húsinum*
EXPL must many.NOM folk.NOM have always been in house-the.DAT

The adverbs *altíð* 'always', *aldri(n)* 'never' and *ongantíð* 'never' may also occur between the finite and non-finite auxiliaries, but in such sentences the subject still cannot intervene between the adverb and auxiliary, nor show up higher than the adverb:

(53) a. Far. *Tað má altíð hava verið [góðir menn] í Føroyum*
EXPL must always have been good.NOM men.NOM in Faroes.DAT
'There must always have been good men on the Faroes'

b. Far. ?? *Tað má altíð hava [góðir menn] verið í Føroyum*
EXPL must always have good.NOM men.NOM been in Faroes.DAT

c. Far. * *Tað má altíð [góðir menn] hava verið í Føroyum*
EXPL must always good.NOM men.NOM have been in Faroes.DAT

d. Far. * *Tað má [góðir menn] altíð hava verið í Føroyum*
EXPL must good.NOM men.NOM always have been in Faroes.DAT

(54) a. Far. *Tað má ongantíð hava verið [innlendsk trø] í Føroyum*
EXPL must never have been native.NOM trees.NOM in Faroes.DAT
'There must never have been trees on the Faroes'

b. Far. ?? *Tað má ongantíð hava [innlendsk trø] verið í Føroyum*
EXPL must never have native.NOM trees.NOM been in Faroes.DAT

c. Far. * *Tað má ongantíð [innlendsk trø] hava verið í Føroyum*
EXPL must never native.NOM trees.NOM have been in Faroes.DAT

d. Far. * *Tað má [innlendsk trø] ongantíð hava verið í Føroyum*
EXPL must native.NOM trees.NOM never have been in Faroes.DAT

Thus the higher subject position in (49) does not seem to be available when a sentence-medial adverb is present, as shown by examples (51-54). It should be noted that these judgements on the availability of subject positions in existential constructions correlate with those for Mainland Scandinavian (Vikner 1995:188, Vangsnes 2002:44), not for Icelandic (Þráinsson 2007:321-22), an indication that Faroese is moving from an Icelandic-type to a more Mainland Scandinavian-type word order overall. Since in (49) the expletive and auxiliary could be occupying Spec,CP and C, there is no reason to hypothesise a different subject position from Spec,TP when the subject precedes the participle. I assume V,Comp for the post-participial subject position in this type of existential construction. Hence there is not as yet any empirical evidence that the subject ever occurs in a specifier lower than Spec,TP and higher than V,Comp, in spite of the standard assumption that it is base-generated in Spec,*v*P.[12] For my purposes, the correct Faroese facts can be generated without Spec,*v*P existing, let alone being a subject-licensing position. It could also be the case that the adverb occupies Spec,*v*P rather than being adjoined, but I have no empirical reason to reject adjunction, which has been a broadly accepted analysis in the literature (Sportiche 1988; see Þráinsson 2010 for Scandinavian data).

In Table 2.1 below I lay out the structural positions I posit for the Faroese sentences in (45, 46a, 47a, 50b, 52a, 54a).

Table 2.1: **Faroese clause structure**

	Spec,CP	C	Spec,TP	T'	T	*v'*	*v*	Spec,VP	V'	V	V,Comp
45a.			*Tey*		*hava*	*aldri*				*lisið*	*bókina*
45b.	*Tá*	*hava*	*tey*			*aldri*				*lisið*	*bókina*
45c′.		*at*	*Jógvan*		*hevur*	*aldri*				*lisið*	*bókina*
45c″.		*at*	*Jógvan*	*aldri*	*hevur*					*lisið*	*bókina*
45d.			*hvør*	*aldri*	*hevði*					*lisið*	*bókina*
45e.		*um*	*hon*	*altíð*	*sigur*						*satt*
45f.			*Tey*		*lósu*	*aldri*					*bókina*
46a.	*Ivaleyst*	*skulu*	*tey*			*ongantíð*	*selja*	*dreingjunum*			*teldurnar*
47a.	*Ivaleyst*	*góvu*	*tey*			*ongantíð*		*dreingjunum*			*teldurnar*
50b′.			*Tað*		*hevur*	*altíð*				*verið*	*tónleikur*
50b″.	*Tað*	*hevur*	*tónleikur*			*altíð*				*verið*	
52a.			*Tað*		*má*		*hava*		*altíð*	*verið*	*nógv fólk*
54a.			*Tað*		*má*	*ongantíð*	*hava*			*verið*	*innlendsk trø*
45g.	*Tann gamla bilin*	*vil*	*eg*			*ikki*				*hava*	
45h.			*Eg*		*las*	*ikki*					*bókina*
45i.			*Eg*		*las*			*hana*	*ikki*		
45j.			*Eg*		*havi*			*ongan*		*sæð*	
45k.			*Eg*		*havi*			*ongan næming*		*tosað*	*við __*

In Chapter 8 I show that these starting assumptions about the Faroese clause structure enable one to generate all of the attested Faroese predicates. Whether or not extra functional material is present (e.g. null *v* or Appl heads, empty specifiers) does not make any different predictions, since my analysis does not rely

[12] I leave it to further work to explore further diagnostics for low subject positions, such as quantifier float (Sportiche 1988, McCloskey 2000 *i.a.*).

on movement, and hence I do not appeal to restrictions on head- or specifier-movement to rule out unacceptable sentence types. Instead, the structural position of clausal elements is determined by the output of the EVAL calculation, i.e. the constraints themselves ensure that unacceptable orders are losing candidates.

A few further notes on the structures posited in Table 2.1: I have not found explicit evidence that the subject moves to Spec,CP and finite verb to C in subject-initial sentences such as (45a), but it cannot be ruled out; for theory-internal reasons, I prefer the analysis that Spec,TP must always be occupied by an argument, a constraint that the expletive satisfies (see section 8.2.0.1 for discussion). There is insufficient evidence to posit a 'split-IP' into Tense and Agreement (Pollock 1989), so I have notated this as a simple unsplit T projection. One important difference between my approach and the standard analysis of Scandinavian clause structure is that ***I do not presuppose the positioning of sentential adverbs higher than the finite verb to be evidence of the finite verb occurring lower than T***.[13] Instead, I assume that *v'*-adjunction is the default adverb position for 'always' and 'never' in main clauses, and pursue the hypothesis that the tensed verb is always in T or C, thus avoiding the complication of affix-hopping should the tensed verb occur below the adverb (45c'',d-e), or having a non-finite verb in T (52a). I assume that the negation word *ikki* has a similar distribution to sentential adverbs, and may be low-adjoined to V' when a shifted object precedes it (45i-k). For a detailed dialectal survey on verb and adverb placement in Faroese, see Bentzen et al. (2009); their conclusion that verb movement in embedded clauses is not readily available in Faroese (apart from in V2 contexts) agrees with my claim that *v'*-adjunction is the default sentential adverb site in main clauses, but that in embedded clauses T'-adjunction is the norm in Faroese; sentence (45c') represents the older 'V-to-I' option. I posit the same VP-internal specifier site for shifted pronominal and negative-quantified objects; I have no explicit evidence that this position differs from that occupied by indirect objects in double object constructions. Indeed, the placement of negation in ditransitives seems consistent with my hypothesis, since Faroese native speaker consultants judged either the *v'*- or V'-adjoined position for *ikki* acceptable, including when both objects are pronominal:

(55) Far. *Eg seldi (ikki) gentuni (ikki) bókina (*ikki)*
I.NOM sold not girl-the.DAT not book-the.ACC not
'I didn't sell the girl the book'

(56) Far. *Eg seldi (ikki) honum (ikki) hana (*ikki)*
I.NOM sold not him.DAT not it.ACC.F not
'I didn't sell him it'

The reader may consult a version of Table 2.1 in Appendix A1 with every possible position elements in the clause could be occupying notated; here I present only my working hypothesis.

To summarise, in this section I have laid out my starting assumptions regarding Faroese clause structure. In Chapter 3, I present the linking theory framework and discuss in greater detail the relation between the tree structure I hypothesised above and the optimality calculation: what constitutes the input, what are the output candidates, what relations hold between semantic form and levels of case, and so forth. Before

[13] This is not a completely novel approach: Svenonius (2002), for example, argues that adverb adjunction interacts with tense, such that adverbs like 'never' may be adjoined as high as T. See Þráinsson (2010) for an overview of the literature on Scandinavian adverb sites, and Þráinsson (2007:79–87) for discussion of adverb sites as a diagnostic for positions of other elements in the clause.

detailing this framework, I present empirical facts regarding Faroese dative experiencer arguments, and the central problem for research that these present, in sections 2.3-2.4 below.

2.3 Faroese dative experiencers

Having established a working hypothesis for the basic Faroese clause structure, we are now in a position to examine the behaviour of the pre-verbal dative experiencers that, on the surface at least, appear similar to Icelandic quirky subjects. Barnes (1986) applied the same diagnostics as Zaenen et al. (1985) to Faroese dative-subject verbs, and found essentially the same results, whether for binding properties or structural position.

2.3.1 Subjecthood tests

2.3.1.1 Reflexivisation

Barnes (1986:19–21) argues that subjects in Faroese control reflexives obligatorily, rather than optionally like objects, as shown in the contrast between (57a-b). I refer the reader to Þráinsson et al. (2012:325–329) for further evidence that this is a property of subjects in Faroese.

(57) a. Far. ***Kjartan***$_i$ *koyrdi nýggja bil sín*$_{i/*j}$*/hansara*$_{*i/j}$
Kjartan.NOM$_i$ drove new car his.REFL$_{i/*j}$/his$_{*i/j}$
'Kjartan drove his new car'

b. Far. *Jógvan*$_i$ *sá* ***Kjartan***$_j$ *á skrivstovu síni*$_{i/j}$*/hansara*$_{*i/j}$
Jógvan.NOM$_i$ saw Kjartan.ACC$_j$ in office his.REFL$_{i/j}$/his$_{*i/j}$
'Jógvan saw Kjartan in his office'

Therefore if the dative arguments are subjects, we expect the non-coindexed reading of the reflexive possessive to be unavailable when they co-occur, which does turn out to be true (58a-e):

(58) a. Far. ***Kjartani***$_i$ *dámar væl nýggja bil sín*$_{i/*j}$*/hansara*$_{*i/j}$
Kjartan.DAT$_i$ likes well new car his.REFL$_{i/*j}$/his$_{*i/j}$
'Kjartan likes his new car a lot'

b. Far. ***Sigmundi***$_i$ *tørvar trygging fyri nýggja bil sín*$_{i/*j}$*/hansara*$_{*i/j}$
Sigmundur.DAT$_i$ needs insurance for new car his.REFL$_{i/*j}$/his$_{*i/j}$
'Sigmund needs insurance for his new car'

c. Far. ***Onnu***$_i$ *manglar trygging fyri nýggja bil sín*$_{i/*j}$*/hennara*$_{*i/j}$
Anna.DAT$_i$ lacks insurance for new car her.REFL$_{i/*j}$/her$_{*i/j}$
'Anna lacks insurance for her new car'

d. Far. ***Rógva***$_i$ *leingist altíð eftir gamla bili sínum*$_{i/*j}$*/hansara*$_{*i/j}$
Rógvi.DAT$_i$ longs always after old car his.REFL$_{i/*j}$/his$_{*i/j}$
'Rógvi always misses his old car'

e. Far. ***Bettu***$_i$ *lukkaðist til hús síni*$_{i/*j}$*/hennara*$_{*i/j}$ *áðrenn klokka 12*
Betta.DAT$_i$ succeeded to house her.REFL$_{i/*j}$/her$_{*i/j}$ before o'clock 12
'Betta made it to her house before 12 o'clock'

2.3.1.2 Subject-Verb Inversion

Topicalised objects cannot occur in immediate postverbal position (Barnes 1986:22).

(59) a. Far. *Hann hitti* ***eg*** *í gjár*
him.ACC met I.NOM yesterday
'I met *him* yesterday'

b. Far. * *Í gjár hitti hann eg*
yesterday met him.ACC I.NOM

c. Far. *Í gjár hitti* ***eg*** *hann*
yesterday met I.NOM him.ACC

I assume that this example indicates no further topicalisation is possible once an object has been preposed (Zaenen et al. 1985:450). By contrast, these dative experiencer arguments can and do occur immediately postverbally, indicating that they pattern like subjects as in (59c) rather than topicalised objects.

(60) a. Far. *Mær dámar sjokulátu eftir døgurða*
me.DAT likes.3SG chocolate.ACC after dinner
'I like chocolate after dinner'

b. Far. *Eftir døgurða dámar* ***mær*** *sjokulátu*
after dinner likes.3SG me.DAT chocolate.ACC

c. Far. *Mær tørvar sjokulátu ov ofta*
me.DAT needs.3SG chocolate.ACC too often
'I need chocolate too often'

d. Far. *Ov ofta tørvar* ***mær*** *sjokulátu*
too often needs.3SG me.DAT chocolate.ACC

e. Far. *Mær leingist ofta eftir friði og náðum*
me.DAT longs.SG often after peace.DAT and quiet.DAT
'I often long for peace and quiet'

f. Far. *Ofta leingist* ***mær*** *eftir friði og náðum*
often longs.SG me.DAT after peace.DAT and quiet.DAT

2.3.1.3 Raising

In the following examples include a phrase such as *í skundi mínum* 'in my haste' to demonstrate that this is not an instance of scrambling, i.e. that the subject argument is in fact in Spec,TP. Example (61) shows that raising is a property of subjects only in Faroese, since a dative-marked object may not raise; the nominative case on *Bárður* in (61b), unlike Icelandic, cannot be mistaken for object case since nominative is unavailable as a monotransitive object case in Faroese.[14] Note also that the verb *tykjast* 'seem' itself can take a dative subject, e.g. when the subject is an experiencer, though in such examples usually a clausal complement ('It seems to Jógvan that...').

(61) a. Far. ***Bárður***$_i$ *tykist í skundi sínum*$_i$ *(at) trúgva Marjuni*
Bárður.NOM seems in haste his (to) believe.INF Marjun.DAT

[14] Example based on Zaenen et al. (1985:448).

b. Far. * *Marjuni tykist í skundi sínum$_i$ (at) trúgva Bárður$_i$*
Marjun.DAT seems in haste his (to) believe.INF Bárður.NOM

In (62) we see that the same facts hold of the dative experiencers:

(62) a. Far. ***Beini*** *tykist í býttleika sínum (at) dáma sjokulátu eftir døgurða*
Beinir.DAT seems.SG in stupidity his (to) like.INF chocolate.ACC after dinner
'Beinir seems, in his stupidity, to like chocolate after dinner'

b. Far. ***Mikkjali*** *tykist í býttleika sínum (at) tørva sjokulátu ov ofta*
Mikkjal.DAT seems.SG in stupidity his (to) need.INF chocolate.ACC too often
'Mikkjal seems, in his stupidity, to need chocolate too often'

c. Far. ***Tórhalli*** *tykist í órógv sínum (at) leingjast ofta eftir friði og náðum*
Tórhallur.DAT seems.SG in unease his (to) long.INF often after peace.DAT and quiet.DAT

d. Far. ***Hjalmari*** *tykist í vansketni sínum ongantíð (at) lukkast heim áðrenn kl. 12*
Hjalmar.DAT seems.SG in carelessness his never (to) succeed.INF home before 12:00
'Hjalmar seems, in his carelessness, never to make it home before 12 o'clock'

Consultants rejected raising constructions with an expletive, even when the subject occurs to the left of the prepositional phrase (ostensibly in Spec,TP) as in (63a):

(63) a. Far. * *Tað tykist* ***hann*** *í býttleika sínum (at) drekka øl ov ofta*
EXPL seems.SG him.ACC in stupidity his (to) drink.INF beer.ACC too often
'He seems, in his stupidity, to drink beer too often'

b. Far. * *Tað tykist í býttleika sínum* ***hann*** *drekka øl ov ofta*
EXPL seems.SG in stupidity his him.ACC drink.INF beer.ACC too often

This behaviour is the same with dative-subject verbs, which do not permit the construction:

(64) a. Far. * *Tað tykist* ***Beini*** *í býttleika sínum (at) dáma sjokulátu eftir døgurða*
EXPL seems.SG Beinir.DAT in stupidity his (to) like.INF chocolate.ACC after dinner
'Beinir seems, in his stupidity, to like chocolate after dinner'

b. Far. * *Tað tykist í býttleika sínum* ***Beini*** *dáma sjokulátu eftir døgurða*
EXPL seems.SG in stupidity his Beinir.DAT like.INF chocolate.ACC after dinner

2.3.1.4 Control

Like nominative-subject PRO (65), a dative-subject PRO can occur in the embedded clauses of control predicates (66).

(65) a. Far. *Álvur vónar,* [*(at)* **PRO** *lesa kinesiskt*]
Álvur hopes to PRO.NOM learn Chinese.ACC
'Álvur hopes to learn Chinese'

(66) a. Far. *Brandur vónar,* [*(at)* **PRO** *mangla ikki kaffi*]
Brandur hopes to PRO.DAT lack not coffee.ACC
'Brandur hopes not to lack coffee'

b. Far. *Bjarni vónar,* [*(at)* **PRO** *lukkast heim áðrenn klokka 12*]
Bjarni hopes to PRO.DAT return home before o'clock 12
'Bjarni hopes to return home before 12 o'clock'

Dative subjects of matrix verbs can also control *nominative* PRO in the embedded clause (67a), but native speaker consultants expressed doubts as to whether a dative matrix subject could control a *dative* PRO in the embedded clause (67b-c). However, this could be due to the pragmatically odd sentences required to test the judgements, given the small number of dative-subject verbs in the language.[15]

(67) a. Far. *Ásmundi brellist eftir,* [*at* **PRO** *eta føroyskan mat*]
Ásmundur.DAT desires after to PRO.NOM eat Faroese.ACC food.ACC
'Ásmundur yearns to eat Faroese food'

b. Far. * *Bárði brellist eftir,* [*(at)* **PRO** *lukkast at gera tað*]
Bárður.DAT desires after to PRO.DAT succeed to do it.ACC
'Bárður yearns to succeed at doing it'

2.3.1.5 Exceptional Case Marking

Finally, in accusative-with-infinitive/ECM constructions, the same observations apply as do for raising: nominative subjects (68) and dative arguments in quirky-case verbs (69) exhibit the same behaviour.

(68) a. Far. *Eg*$_i$ *helt* ***Boga*** *í skundi mínum*$_i$ *trúgva Marjuni*
I thought Bogi.ACC in haste my believe.INF Marjun.DAT
'I thought in my haste that Bogi believed Marjun'

b. Far. * *Eg*$_i$ *helt Marjuni í skundi mínum*$_i$ *trúgva Bogi*
I thought Marjun.DAT in haste my believe.INF Bogi.NOM

(69) a. Far. *Eg helt* ***Súsannu*** *í býttleika mínum mangla ofta sjokulátu*
I thought Susanna.DAT in stupidity my lack.INF often chocolate.ACC
'I thought, in my stupidity, that Susanna often lacked chocolate'

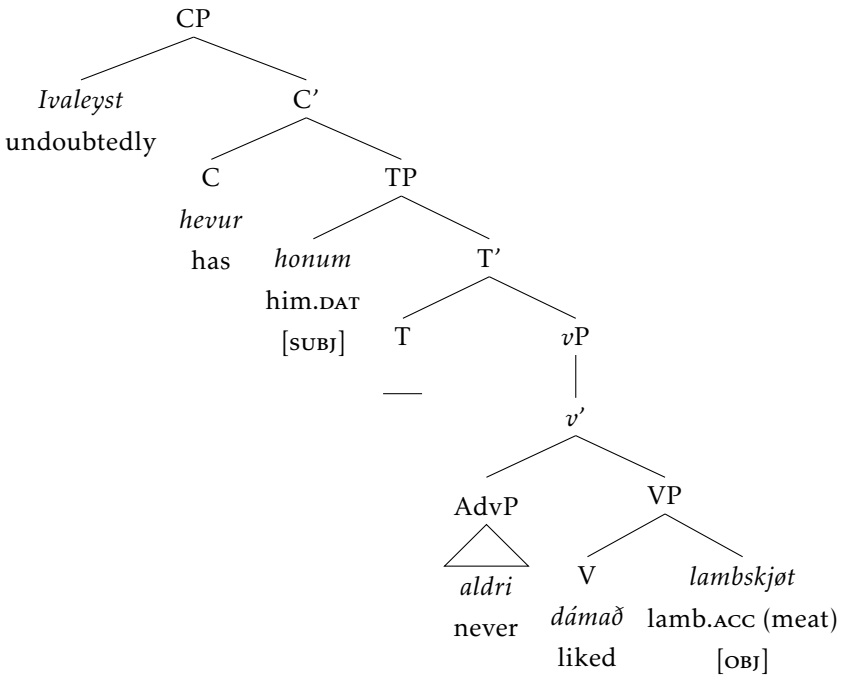
b. Far. *Eg helt* ***Bárði*** *í býttleika mínum dáma sjokulátu eftir døgurða*
I thought Bárður.DAT in stupidity my like.INF chocolate.ACC after dinner
'I thought, in my stupidity, that Bárður liked chocolate after dinner'

c. Far. *Eg helt* ***Tórhalli*** *í skundi mínum leingjast ofta eftir friði og náðum*
I thought Tórhallur.DAT in haste my long.INF often after peace.DAT and quiet.DAT
'I thought, in my haste, that Tórhallur often longed for peace and quiet'

I replicated the results of all the above tests with native speaker consultants, both for when the experiencer is marked dative and when nominative case is substituted. Therefore, it appears that these Faroese dative experiencer arguments are true subjects according to the criteria typically assumed (Zaenen et al. 1985 *et seq.*). We now have enough information to postulate the following structure for a dative-accusative case frame with V2 and a sentence-initial adverb:

[15] The verb *brellast (eftir)* 'desire, crave' does not occur in the blog corpus, but my consultants used it with a dative subject in spoken contexts.

(70)



Given that this structure is very similar to (27) — an analogous Icelandic construction involving a fronted XP, V2 and a dative subject — it is surprising that the object, which is marked nominative in Icelandic, should be accusative in Faroese. If it is correct that the two arguments in such dative-subject predicates occupy the same positions in both languages, it remains to be explained why there is a difference in object case-marking.

Two obvious possibilities for the surprising accusative object case are (i) that it is *lexically* assigned, or (ii) that it is *structural* case (i.e. regular transitive object case), the position for which I argue here. The first option can be ruled out via diagnostics for lexical case, the main one being preservation under passivisation. If an object promoted to subject of the passive surfaces in the active with regular subject case, this constitutes one piece of evidence that the case on the object in the active is structural (Zaenen et al. 1985:445). On the other hand, if the object case is preserved when promoted to subject in the passive, we conclude that it is the result of some lexical rule applying. This contrast is illustrated in (71-72):[16]

Structural object case — Non-preservation

(71) a. Far. *Málmaðurin sparkaði* ***bóltin*** *út*
goalkeeper-the.NOM kicked ball-the.ACC out
'The goalkeeper kicked the ball out'

b. Far. ***Bólturin*** *varð sparkaður burtur*
ball-the.NOM was kicked.NOM.SG.M away
'The ball was kicked away'

[16] When the tests for subjecthood are conducted on the dative arguments in passives of the same type as (72b), the result is that they behave like true subjects, not fronted objects. The same goes for passives of regular nominative-accusative monotransitives, and for those verbs with dative objects that do not preserve the dative case in the passive.

Lexical object case — Preservation

(72) a. Far. *Tey trúðu* ***henni*** *kanska ongantíð*
they.NOM believed her.DAT perhaps never
'Perhaps they never believed her'

b. Far. ***Henni*** *bleiv kanska ongantíð trúð*
her.DAT was perhaps never believed
'She was perhaps never believed'

It should be noted, however, that not all Faroese dative-object verbs behave like (72); in fact, only a subset of verbs with quirky object case exhibit preservation in the passive. I believe this is related to the nominative substitution property of dative subject case, and is an indicator that quirky case as a system is being lost in contemporary Faroese. These issues will be discussed in further detail in Chapter 5; at this point it suffices to say that in those cases where passive is available with dative-subject verbs, the accusative never preserves, but behaves like typical object case:

(73) a. Far. *Mær dámar hasar hestarnar*
me.DAT likes.3SG those.ACC horses-the.ACC
'I like those horses'

b. Far. ***Hasir*** ***hestarnir*** *blivu væl dámdir*
those.NOM horses-the.NOM were well liked.NOM.PL
'Those horses were well liked'

A secondary, weaker argument that these accusatives are structural rather than lexical is from lexical distribution. Simply put, accusative is the standard object case, and occurs on direct objects in the vast majority of the verbal lexicon. Nominative is completely ungrammatical for these objects, and there is no discernible semantic generalisation that can be made, nor alternation with another object case.[17] In Chapter 4, I explore the hypothesis that the Faroese accusative object bears standard structural case by investigating object shift behaviour in survey data.

2.4 Summary

As noted above, the main theoretical issue I wish to disentangle is why the Faroese quirky case predicates have accusative rather than nominative objects, unlike Icelandic. Previous analyses, such as the Case in Tiers model (Yip et al. 1987 *et seq.*), suggest that in Icelandic the lexical or idiosyncratic case is in some sense a more specific rule, and (following some version of Pāṇini's Principle) applied before structural or default case.[18] Hence in Icelandic, lexical subject case is associated with the highest argument, and as a result the subject becomes unavailable as a target for the structural case-marking tier; this is the explanation

[17] I am talking here only of the dative-accusative case frame; it is possible that some semantic factor could be affecting the alternation where certain verbs which take dative objects may also take accusative objects.

[18] I attempt to use the terms lexical, structural and default case in as theory-neutral a manner as possible: by 'lexical' I simply mean associated with a particular verb or subset of verbs, i.e. associated with arguments by lexical rule (however this is instantiated configurationally, such as by a head-complement or head-specifier relation); by 'structural' I mean the standard case assigned to a verb's arguments by means of their structural position; and by 'default' I mean the elsewhere case or last resort when all more specific cases are unavailable.

for nominative object case, since accusative is hierarchically lower on the structural case tier (cf. Yip et al. 1987:223). Subsequent accounts may have adopted different notation or assumptions regarding the mapping of grammatical relations to syntax (e.g. the dependent case literature could be seen as developing the same idea), but the basic intuition is that accusative object case is blocked in Icelandic due to nominative being more prominent on a case-marking hierarchy. However, it is immediately clear that this cannot be true for Faroese, where accusative case is the norm across the board for objects when co-occurring with a dative subject, and nominative object case across the board ungrammatical (see Chapter 7 for discussion of purported nominative objects).

Given this research question, in the following chapters I explore my main hypothesis, viz. that the accusative case is unavailable in Icelandic due to some requirement that a nominative-marked argument must be agreed with. In Chapter 3, I lay out the mechanisms of the variety of linking theory and OT framework I adopt in order to account for the data. In Chapters 4-6, I discuss the dative-subject predicates, passive, ditransitives and passives of ditransitives, including new data from surveys I conducted on the Faroe Islands. I demonstrate that linking theory implemented in OT, in addition to the clause structure I assumed in section 2.2 and constraints already proposed in the literature, is flexible enough to account for all the discussed Faroese and Icelandic sentence types, while also generating a realistic factorial typology. In Chapter 7 I investigate some alternative hypotheses, concluding that while they can be altered to achieve empirical coverage, they miss generalisations that my approach captures. Finally, in Chapter 8, I present the OLG framework in much greater detail, along with my analysis of the basic Faroese sentence types in section 2.2.

Chapter 3

Theoretical framework

In this chapter, I give an overview of the fundamental components of the theoretical framework I adopt, i.e. Linking Theory and Optimality Theory. In section 3.1, I present the basic apparatus of LT, and provide examples of how quirky case predicates in Icelandic and Faroese are represented, while in section 3.2 key aspects of OT syntax are summarised.

3.1 Linking Theory

Here I will lay out the basic assumptions made under the Linking Theory (LT) framework (Kiparsky 1997, 2001). The relevant 'linking' between levels concerns a thematic representation of argument structure, which is mapped to syntax; within syntax, structural position and case inflection also undergo a mapping computation in languages that have both; and finally, the mapping from morphosyntax to morphology (largely beyond the scope of this thesis).

3.1.1 From Conceptual Structure to Semantic Form

First, following Bierwisch (1986) and Lexical Decomposition Grammar as proposed by Wunderlich (1997), we assume a level of Semantic Form (SF), represented as expressions in which theta-roles are lambda-abstractors over variables. This provides a hierarchy of theta-roles, where the ranking of roles is determined by depth of embedding. An example of an SF representation for the verb 'show' is given in (74):

(74) show: $\lambda z \lambda y \lambda x$ [x CAUSE [CAN [y SEE z]]]

As Wunderlich (1997:29) argues, lexical decomposition yields an argument structural representation that captures properties of a subclass of lexemes, without going beyond computation of the argument hierarchy into further granularity; in other words, SF does not represent conceptual semantics subject to contingent knowledge. SF rather is a restructuring of conceptual information into an argument structure that can be straightforwardly linked to syntax. Some further relevant aspects of this approach to the semantics-syntax interface are given below (Wunderlich 1997:30–33):

i. **Two-level semantics**: Conceptual Structure (CS) and Semantic Form are distinguished (Bierwisch 1983), so that SF cannot be infinitely decomposed, but represents a level of sublexical semantics that feeds the input to syntax. CS will distinguish *cat* and *dog* using contingent knowledge, while SF will concern the lexical properties shared by *cat* and *dog* relevant to syntax.[1]

ii. **SF is expressed in a type-categorial language**: We assume a version of Categorial Grammar (Oehrle et al. 1988) restricted to SF, with only two basic types, *individuals* and *propositions*, which combine to form more complex types; all predicates can be defined in terms of their logical type. This is represented by λ-expressions over variables.

iii. **SF is restricted**: The possible decomposition templates of a predicate are drawn from a finite, universal set, the combination of which is further constrained by principles of composition. I assume that an OT evaluation also applies to the mapping from CS to SF with domain-specific constraints, such that only well-formed SF representations are permitted to feed syntax.

iv. **SF determines argument linking**: The thematic-role hierarchy provided by SF is expressed in terms of abstract case, which is accessible to syntax, and determines syntactic argument realisation.

For further information on Lexical Decomposition Grammar as it relates to Linking Theory, see Kiparsky (2001) and Wunderlich (2002).[2] With these starting assumptions, we can represent dative-subject verbs as a class in both Faroese and Icelandic by the same template as two-argument verbs, but with lexical features inherited from CS that feed argument structure. The relevant lexical features are derived from the thematic role information specified by the verb lexeme, not solely the level of embedding in the argument structure; for instance, verb lexemes specifying an experiencer role are represented at SF with a feature associated with the variable that is instantiated at the level of abstract case as dative case. This is a way to capture the empirical observation that verbs with lexical case tend to form subclasses in which certain case-marking patterns reflect thematic information (see Þráinsson 2007:198–232 for a detailed overview of Icelandic and Faroese case frames with respect to theta-roles). I assume that the OT evaluation on the mapping from SF to abstract case instantiates thematic-role features as lexical cases, for example a constraint conflict between ExpDat ensuring that experiencer roles receive lexical dative case, and *LexCase penalising lexical case. In this way, the universality of thematic information is retained, but the language-specific instantiation of lexical cases is a result of a particular ranking. I assume that the theta-role features are always present at SF, but that constraints such as *LexCase are highly ranked in languages without inflectional case. Examples of the SF of lexical case-marking predicates are given below:[3]

(75) **Icelandic**:
líka 'like': $\lambda y_{<\text{Th}>}\ \lambda x_{<\text{Exp}>}\ [x \text{ LIKE } y]$
vanta 'lack': $\lambda y_{<\text{Th}>}\ \lambda x_{<\text{Exp}>}\ [x \text{ LACK } y]$

[1] For further evidence of the need for Semantic Form, see the analysis of causatives provided by Wunderlich (1997:53–65), or more recently Wunderlich (2012).

[2] See also Wunderlich (2008) for an LDG-based account of dative-nominative predicates in Icelandic.

[3] The crux of my proposal does not rest on the specific semantic decompositions laid out in (75-76); the important information is that specific theta-roles are instantiated as specific lexical cases, e.g. Experiencer → Dative, a mapping that is subject to the relevant OT evaluation.

hjálpa 'help': $\lambda y_{<\text{Go}>}\ \lambda x_{<\text{Agt}>}$ [x HELP y]
stríða 'tease': $\lambda y_{<\text{Exp}>}\ \lambda x_{<\text{Agt}>}$ [x TEASE y]
úthluta 'assign': $\lambda z_{<\text{Th}>}\ \lambda y_{<\text{Go}>}\ \lambda x_{<\text{Agt}>}$ [x CAUSE [BE OBLIGATED [y HAVE z]]]
svipta 'deprive': $\lambda z_{<\text{Th}>}\ \lambda y_{<\text{Src}>}\ \lambda x_{<\text{Agt}>}$ [x CAUSE [y NOT HAVE z]]

(76) **Faroese**:
dáma 'like': $\lambda y_{<\text{Th}>}\ \lambda x_{<\text{Exp}>}$ [x LIKE y]
tørva 'need': $\lambda y_{<\text{Th}>}\ \lambda x_{<\text{Exp}>}$ [x NEED y]
vaska 'wash': $\lambda y_{<\text{Exp}>}\ \lambda x_{<\text{Agt}>}$ [x WASH y]
takka 'thank': $\lambda y_{<\text{Exp}>}\ \lambda x_{<\text{Agt}>}$ [x THANK y]
spyrja 'ask': $\lambda z_{<\text{Th}>}\ \lambda y_{<\text{Src}>}\ \lambda x_{<\text{Agt}>}$ [x CAUSE [CAN [y SAY z]]]

These SF representations feed abstract case, a level of argument structure that itself feeds the input to syntax. Therefore, given the divisions of labour described in this section, our model of grammar thus far can be schematised as in Figure 3.1:

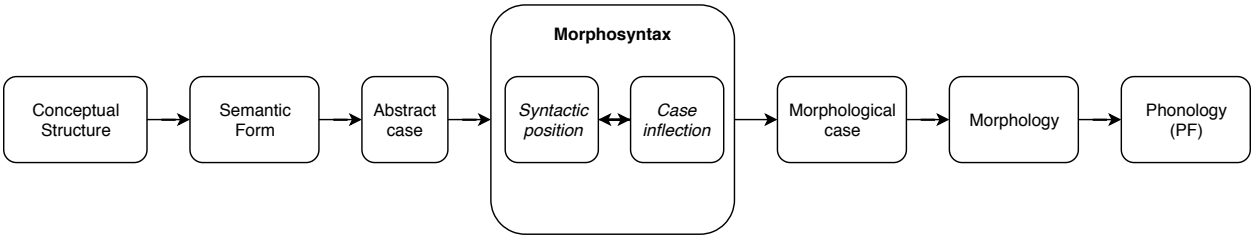


Figure 3.1: Grammar model

I assume that each arrow in the chart in Figure 3.1, excluding the relation between syntactic positions and items occupying those positions, represents an OT constraint evaluation with sets of constraints appropriate to the information accessed by the component of grammar in question. Therefore this is a highly stratal OT model which presupposes strong inter-relatedness between levels. Although on the surface this appears to be a large number of derivational steps, 'abstract case' and 'morphological case' are really formalisms that represent the interfaces between semantics and syntax, and syntax and morphology respectively; all theories must adequately explain this flow of information, and the necessary linking computations are too often left implicit, or collapsed into a single level of structure, which as I argued in Chapter 1 presents problems for languages such as Finnish or Icelandic.

3.1.2 From Semantic Form to syntax

An advantage of LT is that the information at SF relevant to case-assignment can be captured via abstract features [±H(ighest) R(ole)] and [±L(owest) R(ole)], which operate at *all* levels of grammatical structure that refer to case (i.e. argument structure, syntax and morphology). Abstract case corresponds to grammatical relations, traditionally 'subject', 'object' etc., which yield four abstract structural cases, defined featurally in (77). Here S = intransitive subject, O = object, A = transitive subject and D = dative (see Dixon 1979).

(77) **Abstract case**:

S: [+HR+LR]

O: [–HR+LR]

A: [+HR–LR]

D: [–HR–LR]

Since intransitive predicates have only a single theta-role, [+HR] alone is sufficient to define the abstract case for the constraints I propose, although in principle the role borne by the subject is simultaneously highest and lowest in the hierarchy. Moreover, the abstract case for the object of a monotransitive can be defined simply as [–HR], which logically entails [+LR] in a two-argument predicate; likewise, [+HR] for transitive subjects entails [–LR]. (For these reasons, MAX constraints which ensure that abstract case is present in the output are satisfied by a [+HR] feature borne by the S or A argument, [–HR] borne by an O argument, and [–HR–LR] borne by a D argument.) Abstract case, then, is analogous to f-structure in Lexical-Functional Grammar frameworks (Kaplan and Bresnan 1982, Bresnan 2001), in that it represents abstract grammatical functions defined by feature values, subject to constraints on how feature values are mapped between linked levels of structure. Abstract case feeds the input to syntax, which generates phrase structures with lexical and functional items inserted, and therefore is less of a 'level', but more an interface requirement that Semantic Form information be readable to syntax. The input to syntax is therefore not strictly abstract case by itself, but lexical items bearing syntactically relevant features that include abstract case features on arguments (see section 8.1.3 for further discussion); information from the entire lexical branch from CS→SF→abstract case is represented in the input to the syntax evaluation. This is similar to the Numeration of items fed to syntax in some Minimalist approaches (see Chomsky 1995:225). Thus the mapping from CS to SF and SF to abstract case can be construed as successive harmonisation cycles that take place within one pre-syntactic component of grammar.

The same binary [±HR±LR] features define morphosyntactic case, which corresponds to syntax-internal inflectional morphemes and/or structural position,[4] and morphological case, which corresponds to surface forms; both of these have the same inventory of structural cases:

(78) **Morphosyntactic case**:

NOM/ABS: [+HR]

ACC: [–HR]

ERG/GEN: [–LR]

DAT: [–HR–LR]

As Kiparsky (2001:14) mentions, the glosses of morphosyntactic features (e.g. [–HR] as 'accusative') will differ between and within languages, as the instantiation of morphology is subject to a language-specific ranking of morphological constraints. It is also noteworthy that the traditional syntactic categories of

[4]Moreover, in some languages without morphological case but with verbal person agreement (e.g. Swahili), agreement morphemes assign [+HR] morphosyntactic case to the subject and/or [–HR] case to the object, as mentioned in section 1.2.1.

internal and external arguments are encoded by the [±HR] feature value: the VP-external position bears [+HR], VP-internal positions are [–HR] and the higher internal object position additionally [–LR].[5]

As discussed in Chapter 1, I follow Kiparsky (2001) in adopting an OT implementation of the mapping between abstract and morphosyntactic case, which makes straightforwardly defined predictions about the space of possible grammars generated by a given set of constraints. Here I propose two kinds of constraints on output candidates that govern this mapping: MAX and IDENT constraints. It is important from the outset to clarify that MAX constraints ensure that ***input features/items are present in the output***, while IDENT constraints ***penalise mismatches of features within the output candidate***. Both families of constraints are defined not by featural unification, but *identity*: e.g. MAX[–HR] is violated by a [+HR] feature, an unspecified case feature or absence of a feature, and IDENTCASE is violated by a mapping such as [–HR]:[–HR–LR]. However, since OT constraints are ranked and violable, some winning output candidates will incur violations thereof. Another distinctive feature of this framework is positional licensing of arguments; I formalise this as a feature-matching constraint (79):

(79) IDENTCASE (ID): Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].

Crucially for Faroese and Icelandic, I am assuming that the level of morphosyntactic case is instantiated by structural position as well as case suffixes. Mismatches between positional case and case inflection may be licensed when a lexical case feature is present, which I express via a higher-ranked 'express lexical case in inflectional morphology' constraint, MAX[LEXCASE]. This is why it must be established where the subject and object in quirky case predicates are sitting, since positional case features partly determine which output candidate is optimally chosen. By way of illustration, (81) and (82) show hypothesised tree structures for the Icelandic sentences in (80a-b).

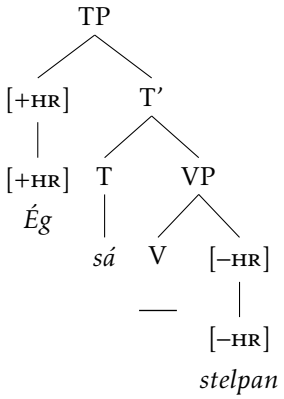
(80) a. Ice. *Ég sá stelpan*
I.NOM saw girl-the.ACC.SG
'I saw the girl'

b. Ice. *Mér líkar hundurinn*
me.DAT likes.3SG dog-the.NOM.SG
'I like the dog'

[5]This does not assume the classic transformational analysis of unaccusatives often associated with these terms (see Perlmutter 1978, Burzio 1986 *et seq.*). Rather, 'internal/external' argument positions are descriptive properties of syntactic structures present in output candidates.

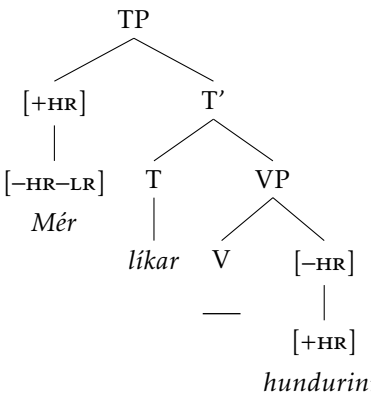
Icelandic:

(81)



Icelandic:

(82)

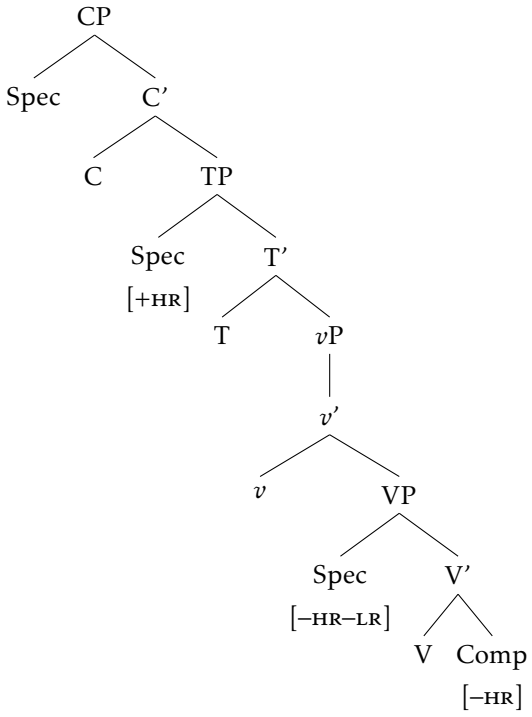


In (81), neither IdentCase nor Max[LexCase] is violated since each positional case feature matches that of its occupying item, and there is no lexical case feature in the input. In contrast, (82) shows a mismatch between the subject position case feature [+HR] in Spec,TP and the dative subject, in violation of IdentCase, but satisfying Max[LexCase] by expressing the lexical dative case.[6]

Given the data discussed in section 2.2, I propose the basic licensing positions in Faroese to be as shown in (83). I refer the reader to Þráinsson (2007) for detailed discussion of possible argument positions in Icelandic.

Faroese:

(83)



[6]There is also a mismatch between the object position feature [–HR] and the nominative case on the object [+HR], which I argue to be a consequence of AgrNom outranking Max[–HR] in Icelandic, as discussed in section 4.4.1 below.

Therefore IdentCase is violated if the output candidate contains a position-item feature mismatch, e.g. the winning candidate for a predicate with a dative subject necessarily incurs a violation of IdentCase, since the [–hr–lr] argument is occupying Spec,TP, a position bearing [+hr]. The reason non-nominative subjects are possible at all is that a constraint enforcing realisation of lexical case, Max[LexCase], is ranked higher than IdentCase in those languages that have this phenomenon. In that sense, IdentCase is really about the mapping of structural position to inflectional features, i.e. a purely syntactic constraint. In languages with case morphology but no evidence of positional licensing, I assume IdentCase to be ranked low, and thus there is a greater tolerance of mismatches between structural position and case inflection.

In summary, recognising the distinction between conceptual knowledge and the argument structure of a predicate, as well as the fact that arguments may be licensed either by structural position or by case inflection, yields a system flexible enough to account for a wide range of languages, provided the information available to each component of grammar is appropriately restricted.

3.2 Optimality-Theoretic syntax

In this section I lay out my assumptions regarding the OT architecture of grammar I propose. A far more detailed presentation of the framework is given in Chapter 8.[7] I adopt the basic hypotheses presented in Legendre et al. (2001:3):

(84) a. Universal Grammar is an optimizing system of universal well-formedness constraints on linguistic forms.

b. Well-formedness constraints are simple and general. They routinely come into conflict and are (often) violated by the surfacing form.

c. Conflicts are resolved through hierarchical rankings of constraints. The effect of a given constraint is relative to its ranking, which is determined on a language-particular basis.

d. Evaluation of candidates by the set of constraints is based on strict domination. For any two constraints C_1 and C_2, either C_1 outranks C_2 or C_2 outranks C_1.

e. Alternative structural realizations of an input compete for the status of being the optimal output of a particular input. The most harmonic output — the one that best satisfies, or minimally violates, the full set of ranked constraints in a given language — is the optimal one. Only the optimal structure is grammatical.

f. Every competition yields an optimal output.

These hypotheses yield an architecture of grammar minimally consisting of the following components: an Input, Gen which generates a candidate set for a given input, Con the set of universal well-formedness constraints, Eval the mechanism for evaluating the output candidates on the basis of the hierarchically ranked constraints of Con, and the optimal Output. This can be visualised as in Figure 3.2:[8]

[7] The *locus classicus* for Optimality Theory is Prince and Smolensky (1993); early OT analyses of syntactic phenomena include Grimshaw (1997) and Legendre et al. (1998). For a detailed overview of OT-based approaches to syntax, I refer the reader to Legendre et al. (2001). Representative OT approaches to case phenomena include Kiparsky (2001), Wunderlich (2000), Woolford (2001), de Hoop and Malchukov (2008) *i.a.*; see also references in Müller (2009).

[8] Diagram based on similar version in Müller (2009).

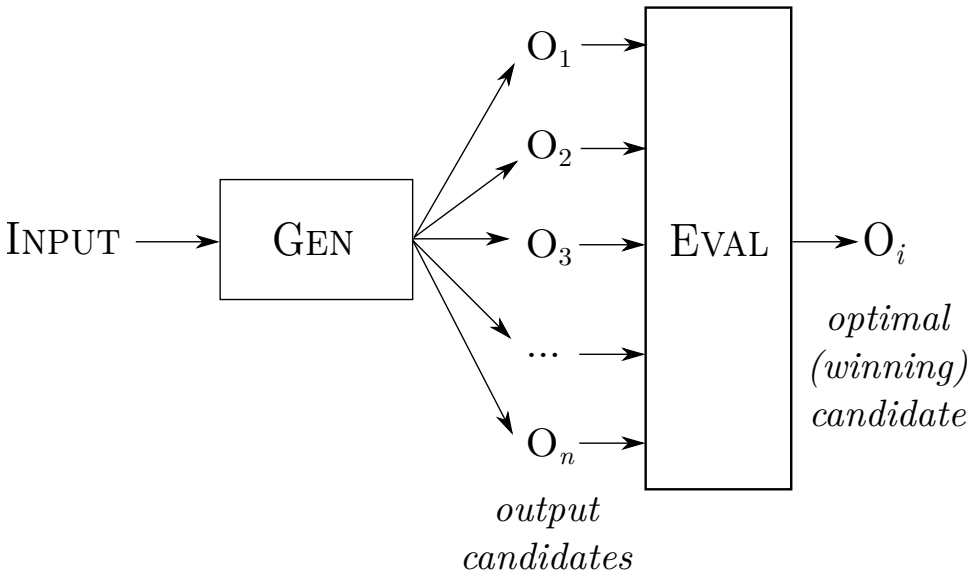


Figure 3.2: Architecture of the OT grammar

As noted in section 3.1, I assume a modular architecture of grammar, i.e. that the passing of information between each component is subject to harmonisation; for instance, the optimal output candidate O_i of the syntactic evaluation is sent on to phonology, which has its own evaluation mechanism and domain-specific set of constraints. The main focus of this thesis is the syntactic component.

On this theory of syntax, both GEN and CON are universal, and grammar-particular variation is located in EVAL which evaluates candidates against the given ranking of CON. GEN consists of a mechanism which generates output candidates consisting of tree structures with lexical and functional items already inserted; this is formally defined as a context-free grammar in section 8.1.1. Hence many malformed trees will be ruled out at EVAL, which not only contains a set of ranked violable constraints, but also *undominated* (inviolable) constraints, ensuring that candidates which do not conform to X-bar principles are harmonically bounded and can never win. Thus, this approach is strikingly different from that proposed by Chomsky (1995), in which structure-building is attributed to a Merge operation. In OLG, trees are not built bottom-up, but are the result of free combination of primitives in all possible ways, even though a large number of these candidates will be harmonically bounded. It may be objected that this adds complexity by stipulating losing candidates with malformed structures. However, most Minimalist approaches also stipulate inviolable constraints, such as c-selection, which do the same work as the undominated constraints at EVAL. In fact, OLG is in one sense more 'minimalist' than the Merge-based theory, in that the entirety of the component which rules out ill-formed structures is restricted to the harmonisation, rather than involving sets of inviolable constraints that operate at different stages of the derivation. For instance, c-selection (which holds of external Merge), the EPP (a property of features that trigger movement during the derivation), and the Phase Impenetrability Condition (which prevents operations on previously derived structure) are accounted for by constraints: SUBCAT, ARGSP and an interaction between DEP and IDENTDIS respectively.[9]

[9]For further discussion of SUBCAT, see section 8.1.1; for discussion of how information-structural and argument licensing constraints interact to derive both the EPP and the kinds of expletive constructions that motivate the PIC, see section 8.2.

Furthermore, the set of output candidates at the semantics-syntax interface will not undergo further applications of Merge or other transformations: the constraints at Eval in principle should account for all elements that appear in a different position than that which satisfies subcategorisation.

I assume that the evaluation window of the input consists of the smallest constituent necessary for all features present in the argument structure of the predicate to be discharged, typically the clause (CP or TP); therefore, the only serious contender candidates will have sufficient structure for all case and information-structural features to be realised (see Grimshaw 1997, Legendre et al. 1998 *i.a.*). Trees with additional empty structure beyond that required to express the input fully, are ruled out by markedness constraints corresponding to X-bar principles; faithfulness constraints ensure that all and only the input items are represented in the output, i.e. no extra material absent from the input, nor omission of input material (exceptions to this are filler-gap dependencies and ellipsis, see section 8.1.4 for discussion). The power of OT is that even highly ranked constraints can be violated, yielding highly marked structures such as a phrase with more than one specifier, an empty head position, or a unary branch. Crucially, this is not unconstrained, but only possible with a ranking in which a faithfulness constraint dominates one of the constraints contributing to the enforcement of X-bar structure. In this way, long-established generalisations about phrase structure have a principled genesis, but are not completely unviolated in every structure in every language, thus accounting for language-specific variation through a constraint ranking, yielding an optimal output which minimally violates those same principles.

Table 3.1 reiterates the precise formulations of the constraints relevant to case-marking, which are central to my analysis of the data in Chapters 4-6:

Table 3.1: **Case constraints**

Constraint	Formulation
Faithfulness constraints	
Max[–hr]	Assign a violation for each [–hr] abstract case feature on an input argument that is not realised by a [–hr] morphosyntactic case feature on an output argument.
Max[–lr]	Assign a violation for each [–lr] abstract case feature on an input argument that is not realised by a [–lr] morphosyntactic case feature on an output argument.
Max[LexCase] (Max[LC])	Assign a violation for each lexical case feature on an argument at the level of abstract case that does not correspond to the same lexical feature value on an argument at the level of morphosyntactic case.
Parse	Assign a violation for a null parse of the input (i.e. if the output is zero).
Markedness constraints	
IdentCase (IdC)	Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].
AgrNom	Assign a violation if the agreement value of the verb does not match that of a nominative argument in the same clause.

SubjNom (SNom)	Assign a violation for each subject position (Spec,TP) not occupied by a nominative argument.
SubjHI$_\theta$	Assign a violation for each argument in subject position (Spec,TP) that does not bear the highest theta-role.

These constraints, combined with the LT and OT starting assumptions laid out in this chapter, are sufficient to account for the range of case-marking phenomena explored in this thesis, and make predictions that are borne out empirically, as I argue in the chapters which follow. Many further questions are raised by OT approaches to syntax: What material must be present at the input? How are output candidates generated? How are movement phenomena accounted for? How are syntactic features evaluated? These and other issues are discussed in detail in Chapter 8. What is essential for my analysis of the Faroese and Icelandic data is the adoption of Linking Theory, and the constraints which hold of the mapping from argument structure to syntax.

3.3 Summary

In this chapter, the basic Linking Theory and Optimality Theory apparatus has been presented. The adoption of a three-level approach to case, combined with a system of ranked violable constraints, enables us to explain the Faroese and Icelandic data in a consistent way, that also extends beyond Insular Scandinavian. Chapter 8 gives a thorough overview of the OLG framework I adopt, expanding upon the aspects of the theory mentioned in this section. In Chapters 4-6, I discuss new data from surveys conducted on the Faroe Islands and Iceland, and argue that OLG provides a cogent analysis thereof.

Chapter 4

Faroese dative subjects

4.1 Introduction

In this chapter, I discuss the core 'quirky case' data presented in sections 2.3-2.4, and present my analysis. I find that the crucial difference between Icelandic and Faroese, that which results in a DAT-NOM case frame in the former and DAT-ACC in the latter, is a different ranking of a markedness constraint enforcing agreement with a nominative argument within the clause, and a faithfulness constraint ensuring realisation of structural object case.

As presented in Chapter 2, it has long been established that non-nominative subjects exist in languages such as Icelandic, at least in one broadly accepted definition of subjecthood (Zaenen et al. 1985), while acknowledging the caveat that properties associated with subjects vary cross-linguistically (Keenan 1976 *i.a.*). In Icelandic, such subjects tend to co-occur with nominative-marked objects (85a), which also exhibit number, but not person, agreement with the finite verb (85b-c).

(85) a. Ice. *Mér líkar fiskur*
me.DAT likes.3SG fish.NOM.SG
'I like fish'

b. Ice. *Mér líka hundar*
me.DAT like.3PL dogs.NOM.PL
'I like dogs'

c. Ice. * *Honum líkum/-ið við/þið*
him.DAT like.1PL/2PL us/you.NOM.PL
'He likes us/you (pl.)'

In Faroese, those verbs which mark subjects with non-nominative case, almost exclusively dative in the contemporary language, do not occur with a nominative lower argument, but an accusative, as shown in (86), which standardly does not permit object agreement at all.

(86) a. Far. *Mær dámar fisk*
me.DAT likes.3SG fish.ACC
'I like fish'

b. Far. * *Mær dáma hundar*
me.DAT like.3PL dogs.ACC.PL
'I like dogs'

On the surface this pattern should be surprising if previous analyses of Icelandic are to be extended to Faroese. This is partly because Icelandic was the first such language to be explored in depth in the generative literature, and has long been viewed as the classic 'quirky case' language. However, there is no *a priori* reason to assume that Icelandic should be normative, nor that the Faroese phenomenon should therefore be treated as an odd variant of the Icelandic. Instead, I argue that this Faroese pattern is readily explained by the interaction between markedness and faithfulness constraints. In section 4.2 I review the Faroese experiencer-subject verb data, and in section 4.4 present my analysis. I also account for the variation observed in realisation of the dative subject case as well as similar variation in dative object case, which I argue is a result of competing grammars.

4.2 Overview of data

The central data I examine here involve a small subset of psychological predicates in Faroese with a dative-marked experiencer argument ('quirky case') and an accusative-marked stimulus argument, with some optionality as to whether the experiencer is nominative or dative. It should be understood from the outset that Faroese is widely considered to be in the process of changing from an Insular to a Mainland Scandinavian morphosyntax, which manifests itself in the loss of rich morphology, including quirky case (Barnes 1986, Jónsson and Eyþórsson 2005, Þráinsson et al. 2012). Nevertheless, a 2.5 million word corpus of Faroese blog texts[1] reveals that speakers are still readily producing dative subjects with the relevant verbs, in addition to some generalisations: (i) nominative subjects are encountered for almost all the verbs albeit only rarely with *tørva*,[2] and (ii) nominative subjects are reportedly more 'informal' or 'colloquial', despite some examples also occurring in more formal registers. Examples given below are taken from the blog corpus unless otherwise noted.[3]

A. *dáma* 'like'

Dative subject with third person singular agreement represents the standard written and spoken form, which is available in the majority of contexts.

(87) Far. *Mær dámar so væl myndirnar hjá Frits Johannesen*
me.DAT likes.3SG so well pictures.DEF.ACC by Frits Johannesen
'I like Frits Johannesen's pictures so much'

(88) Far. *Eti fiskafrikadellur. Tað dámar mær ordiliga væl :)*
eat.1SG fish-croquettes it likes.3SG me.DAT really well [emoji]
'I'm eating fish croquettes. I like it (eating them) a lot. :)'

[1] Texts accessible at <https://purl.stanford.edu/qt590wf1460> (Scannell 2011).

[2] This is unsurprising given the results in Jónsson and Eyþórsson (2005), who find some measure of acceptability for nominative subjects with all the relevant verbs, and increasing acceptability rates of nominatives among the younger generation.

[3] The verb *tykja* 'seem' can occur with a dative subject (see Jónsson and Eyþórsson 2005), but the patterns are very complex; for this reason I have left this verb for further study.

(89) Far. *Magnu dámdi allarbest agurkina hjá Hansinu*
Magna.DAT liked.3SG above-all cucumber.DEF.ACC of Hansina
'Magna liked Hansina's cucumber most of all'

Nominative subjects with full verbal person agreement sometimes occur, mostly with first person singular pronouns in informal contexts;[4] also found rarely in other contexts:

(90) Far. *Mamma heldur, at eg dámi skógvar alt for væl*
Mamma thinks that I.NOM like.1SG shoes.ACC all too well
'Mama thinks that I like my shoes far too much'

(91) Far. *nakrir støddfrøðingar dáma betur ikki at skoða talið 0 sum eitt*
some.NOM mathematicians.NOM like.3PL better not to look.at number-the zero as a
teljital
natural.number
'Some mathematicians prefer not to look at the number zero as a natural number'[5]

B. *tørva* 'need':

Dative is by far the most frequent subject case for this verb; only four occurrences of nominative subjects with this verb are found in the corpus, and nominative subjects were rejected by a consultant:[6]

[4]This is as rare as 7 tokens of first person singular with *dámi* 'I like' in the entire 2.5 million word corpus.

[5]From Faroese Wikipedia article 'Teljital', accessed 3/2/2018.

[6]In an earlier version of the thesis, it was erroneously stated that there are zero tokens of nominative subjects with this verb in the blog corpus. This was based on incomplete data: of the 35 examples of finite forms of *tørva* in the corpus, as noted four occur with a nominative subject. Three of those four have a third person plural subject:

(1) Far. *Sendingin kom sum heilt vítt um, og sjálvur fekk eg væl av plássi, men hóast hetta eru* ***nakrar***
shipment-the came as quite wide around and self got I well of place but although these are some.NOM.PL
útsagnir, *ið møguliga* ***tørva*** *ein neyvari samanhang.*
statements.NOM.PL that possibly need.PL a more-precise context
'The shipment turned out to be quite spacious all around, and I myself got a good deal of space, but on the other hand these are statements that possibly need a clearer context.'

(2) Far. *Júst* ***hesir báðir samfelagsbólkar tørva*** *eina 'saltvatnsinnspræning', um hesi fólkini skulu*
just these.NOM.PL both.NOM.PL community.groups.NOM.PL need.PL a salt.water.injection if these folks should
tíma at búgva í Føroyum.
bother to live in Faroes
'Indeed, both of these community groups need a 'boost', if these folks are going to trouble themselves to live in the Faroes.'

(3) Far. *...at* ***tey fyrstu kristnu*** *vóru heilt óskipa og* ***tørvaðu*** *førleikar at varveita*
...that the.NOM.PL first.NOM.PL Christians.NOM.PL were quite disorganised and needed.PL competence to maintain
informatión og ikki høvdu ynski um at gera so...
information and not had wish that to do so...
'...that the first Christians were quite disorganised and needed the ability to preserve information and didn't have the desire to do so...'

There is one example of third person singular *tørvar* occurring with a nominative subject (footnote cont'd on next page):

(4) Far. *Millum annað kann vísast á at tørvur á samvitsku tiltíðir kann stava, frá ávísum stoffum sum*
between other can be.shown on that need on conscience sometimes can spell.out from certain stuff that
kroppur *okkara* ***tørvar***.
bodies.NOM.PL our need.SG
'Among other things it can be shown that the need for conscience can sometimes be derived from certain stuff that our bodies need.'

(92) Far. *Okkum tørvar at síggja aðra list enn føroyska*
us.DAT needs.3SG to see other.ACC art.ACC than Faroese.ACC
'We need to see other art than (just) Faroese'

(93) Far. *Eg svaraði, at mær ikki tørvaði lokabrøgd*
I answered that me.DAT not needed.SG schemings.ACC
'I answered that I didn't need to scheme'

C. *mangla* 'lack, be short on' (Dan. loan)

This verb is of Danish origin and more colloquial. It is not present in Old Norse[7] and was borrowed into Danish from German *mangeln* 'lack', which itself was borrowed from Latin *mancare* 'be missing' (cognate with *mancus* 'maimed'). Dative subject is available:

(94) Far. *Á nei, vit kunnu ikki, tí vit hava onki og okkum manglar ....*
oh no we can not because we have nothing and us.DAT lacks.3SG
'Oh no, we cannot, because we have nothing, and we are lacking ....'[8]

However, a nominative subject is far more widespread with this verb than with *dáma*; most tokens in the blog corpus have nominative subjects:

(95) Far. *Ungdómurin undir 18 ár manglar eisini eitt stað at fara í vikuskiftinum*
youth.NOM under 18 years lacks.3SG also a.ACC place.ACC to go on weekend.DEF
'Young people under 18 also lack a place to go on the weekend'

(96) Far. *Mangli bæði bor og skrúvur, so eg mátti út at keypa*
lack.1SG both drill.ACC and screws.ACC so I must.PST out to buy
'I lack both a drill and screws, so I had to go out to buy (them)'[9]

D. *lukka(st)* 'succeed'

This verb is rare in the corpus with only three tokens, all of which have *–st* medio-passive morphology, and two of which co-occur with the expletive *tað*, though both dative and nominative occur:

(97) Far. *...lukkast tað Sáru at bjarga beiggjanum?*
succeeds.3SG it Sára.DAT to save brother.DEF.DAT
'Does Sára succeed in saving her brother?'

These data points do not falsify the competing grammars hypothesis (discussed in section 4.5), since the ranking which yields a nominative subject for dative-subject verbs is hypothesised to be accessible to speakers, albeit statistically unlikely to be activated. It is interesting that three of these four examples involve plural subject-verb agreement and relatively 'heavy' phrasal subjects with determiners preceding the head noun: it could be that these two factors add weight to the likelihood of the nominative-subject grammar being activated, even for verb lexemes which otherwise strongly favour dative subjects such as *tørva*. In the case of the third person singular example, the Danish or English loanword *stoffum* 'stuff' may bias towards the nominative ranking in this context. Given the paucity of examples of *tørva* with nominative subjects, combined with native speaker consultants' reticence to judge such examples acceptable, it is reasonable to posit the 'preserving' grammar as the most likely, but that other factors may occasionally lead to selection of the 'non-preserving' grammar (see section 5.3.1 for explanation of these terms). Any other references in the thesis to non-occurrence of *tørva* with nominative subjects in the blog corpus are corrected in this version.

[7] Absent from the Old Norse poetic *Lexicon Poeticum* (1931) and prose lexicon *Ordbog over det norrøne prosasprog*, <http://onp.ku.dk>, accessed 3/21/18.

[8] Part of a paragraph where several objects are elided as indicated orthographically.

[9] I assume the tense here to be an historic present.

(98) Far. *Nei. Hvar fór hon so, lukkast tað at hitta Sáru í í USA...*
no where went she so succeeds.**3SG** it to meet Sára.**DAT** in in USA
'No. So where she went, Sára managed to meet (her son) in in [sic] the USA'[10]

(99) Far. *Og Øskufía lukkaðist akkurát heim áðrenn 12*
and Øskufía.**NOM** succeeded.SG barely home before 12
'And Øskufía barely managed to get home before 12'

E. *leingja(st) eftir* +DAT 'long for'[11]

Nominative and dative subjects are attested in the corpus:

(100) Far. *...og eg longdist upp aftur meir eftir kavanum*
and I.**NOM** longed.SG up after more after snow.DEF.DAT
'and I longed more for snow once again'

(101) Far. *Mær leingist at síggja teg*
me.**DAT** longs.SG to see you.**ACC**.SG
'I long to see you'

Nominative subjects occur in some informal contexts, e.g. reporting what children are thinking in baby blogs:

(102) Far. *Og nú leingist eg eisini eftir teimum :(*
and now longs.SG I.**NOM** also after them.DAT [emoji]
'And now I miss them too (Grandma and Grandpa) :('

It should also be noted that there are a small number of rare instances of accusative subjects in fossilised expressions, e.g. *Meg lystir at dansa* 'I'm raring to dance'; however, these are far from productive, and I assume they are not representative of the current system.

Very little prior work exists on these Faroese dative-subject verbs, in spite of a huge literature on similar phenomena in Icelandic. Jónsson and Eyþórsson (2005) conducted two surveys assessing the acceptability of dative versus nominative case-marking on the subject arguments of the relevant verbs, the first interviewing children and the second adults. Jónsson and Eyþórsson report that every one of the small set of Faroese verbs which still occur with dative-marked subjects in the spoken language are accepted with 'nominative substitution', i.e. the subject is marked nominative and exhibits full person and number agreement with the verb. However, they found that acceptability of nominative subjects varied both by verb and by context. Jónsson (2009) supplements this with further survey data, and presents a theoretical account of the dative-accusative pattern, discussed in Chapter 7 below. Þráinsson et al. (2012) also offer a fairly comprehensive descriptive overview of the quirky case facts in their grammar, including which verbs admit nominative substitution.

[10] I assume this is a topicalised phrase *lukkast tað at hitta*, with a postposed dative experiencer, rather than *Sára* being the object of *hitta* which normally takes accusative objects. The son, *sonin*, is mentioned in the next sentence fragment: *lukkast tað at finna sonin Italia*, '(she) succeeds in finding her son (in) Italy'.

[11] It should be noted that dative is the expected case with this meaning of the preposition *eftir*, and therefore a typical example of a lexically specified prepositional case.

4.3 Surveys on quirky case

I conducted two surveys on the Faroe Islands in which acceptability judgements on quirky case predicates were elicited.

4.3.1 Faroese quirky case survey 1

4.3.1.1 Participants

The first survey was conducted at *Tilhaldið*, a community activity centre in Tórshavn. The survey was distributed on paper at a folksong meeting attended by locals aged 50+. There were 23 participants, 14 of whom answered every question, and the remaining 9 gave partial responses. No further demographic information is available for the participants.

4.3.1.2 Materials

Table 4.1 shows the 15 sentences presented for judgement. In this survey, possible object positions were tested with respect to negation *ikki* 'not', the adverb *altíð* 'always' and the participle *dámað* 'liked'. In addition, the verbs *dáma* 'like' and *tørva* 'need' were tested in sentences with plural agreement on the verb, singular or plural dative subject, and nominative or accusative plural object. Due to time limitations and the means of distribution, it was not possible to include filler sentences nor to test further combinations of case and agreement in this survey. In Table 4.1 I show the actual mean (μ) and standard deviation (σ) of the responses for each sentence, as well as providing the mean judgement in the standard notation for linguistic examples. If the histogram of judgements for the sentence suggests that the distribution is bimodal, i.e. that there is evidence for two response groupings, one in which the sentence was rejected (mean 1–2) and one in which it was accepted (mean 4–5), I indicate such patterns with the symbol $\mathfrak{B}$ (for bimodal) preceding the sentence.[12] My criterion for bimodality is a mean between 2.5–4 with a standard deviation of more than 1, since a mean of ∼3 without a relatively high standard deviation does not indicate bimodality but broad speaker agreement on a medial judgement. I conducted these tests for all the surveys presented in this thesis.

Key to judgements: * = mean acceptability < 2.5, ?? = 2.5–3, ? = 3–4, no mark = mean > 4

[12] Thanks to Seth Greenstein and Rob Mina for drawing my attention to this possibility.

Table 4.1: **Faroese quirky case verbs: survey 1**

№	μ	σ	Faroese sentence	Gloss
1	3.7	1.5	Ƀ *?Mær hevur ikki altíð dámað bókina*	Me.DAT has.SG not always liked book-the.ACC
2	1.3	0.9	**Mær hevur bókina ikki altíð dámað*	Me.DAT has.SG book-the.ACC not always liked
3	4.5	0.7	*Mær hevur ikki altíð dámað hana*	Me.DAT has.SG not always liked it.ACC
4	1.2	0.9	**Mær hevur hana ikki altíð dámað*	Me.DAT has.SG it not always liked
5	1.3	0.9	**Mær hevur ikki bókina altíð dámað*	Me.DAT has.SG not book-the.ACC always liked
6	2.6	1.6	Ƀ *??Teimum man bókina ikki altíð hava dámað*	Them.DAT must.SG book-the.ACC not always have liked
7	1.6	1.2	**Teimum man ikki bókina hava altíð dámað*	Them.DAT must.SG not book-the.ACC have always liked
8	1.8	1.2	**Teimum man ikki bókina altíð hava dámað*	Them.DAT must.SG not book-the.ACC always have liked
9	1.8	1.2	**Teimum man ikki altíð hava bókina dámað*	Them.DAT must.SG not always have book-the.ACC liked
10	3.1	1.9	Ƀ *?Mær dáma bátarnar*	Me.DAT like.PL boats-the.ACC.PL
11	1.7	1.4	**Honum dáma bátarnir*	Him.DAT like.PL boats-the.NOM.PL
12	3.6	1.7	Ƀ *?Okkum dáma bátarnar*	Us.DAT like.PL boats-the.ACC.PL
13	2.6	1.6	Ƀ *??Tykkum dáma bátarnir*	You.DAT.PL like.PL boats-the.NOM.PL
14	2.2	1.4	**Okkum tørva bátarnir*	Us.DAT need.PL boats-the.NOM.PL
15	3.7	1.6	Ƀ *?Teimum tørva bátarnar*	Them.DAT need.PL boats-the.ACC.PL

4.3.1.3 Procedure

Participants were handed a sheet of paper with the 15 sentences printed in bold font. At the top of the page the following rubric was printed:

Tú mást hava føroyskt sum móðurmál, fyri at taka lut í hesari kanning. Metið um, hvussu natúrligir hesir setningarnir eru á føroyskum. "Natúrligt" her merkir, at ein føroyingur hevði kunnað sagt tað.
'You must have Faroese as your native language to take part in this survey. Judge how natural these sentences are in Faroese. "Natural" here indicates that a Faroese could have said that.'

Directly beneath each sentence, a five-point scale was shown with empty boxes for check marks. The scale rubric was as follows: from left to right, *Als ikki natúrligt* 'Not at all natural', *Ikki sera natúrligt* 'not very natural', *Eg veit ikki* 'I don't know', *Heldur natúrligt* 'Rather natural', and *Púrasta natúrligt* 'Completely natural', with 'I don't know' in the middle of the horizontal. Participants were told to mark their judgement on the sentence by putting a cross in the appropriate box, and that they should only mark one box per sentence.

4.3.1.4 Results

Figure 4.1 shows mean acceptability of sentences 1–9 in Table 4.1 by word order, more specifically, the order of negative *ikki*, adverb *altíð* and the object. As can be seen in Table 4.1, the only unequivocally accepted sentence (mean acceptability > 4) is *Mær hevur ikki altíð dámað hana*, with the order Negative-Adverb-Object. As shown in Figure 4.1, this order is the only possibility with a mean acceptability approaching of more than 3, i.e. the object may only be located in its standard V,Comp position. The notation

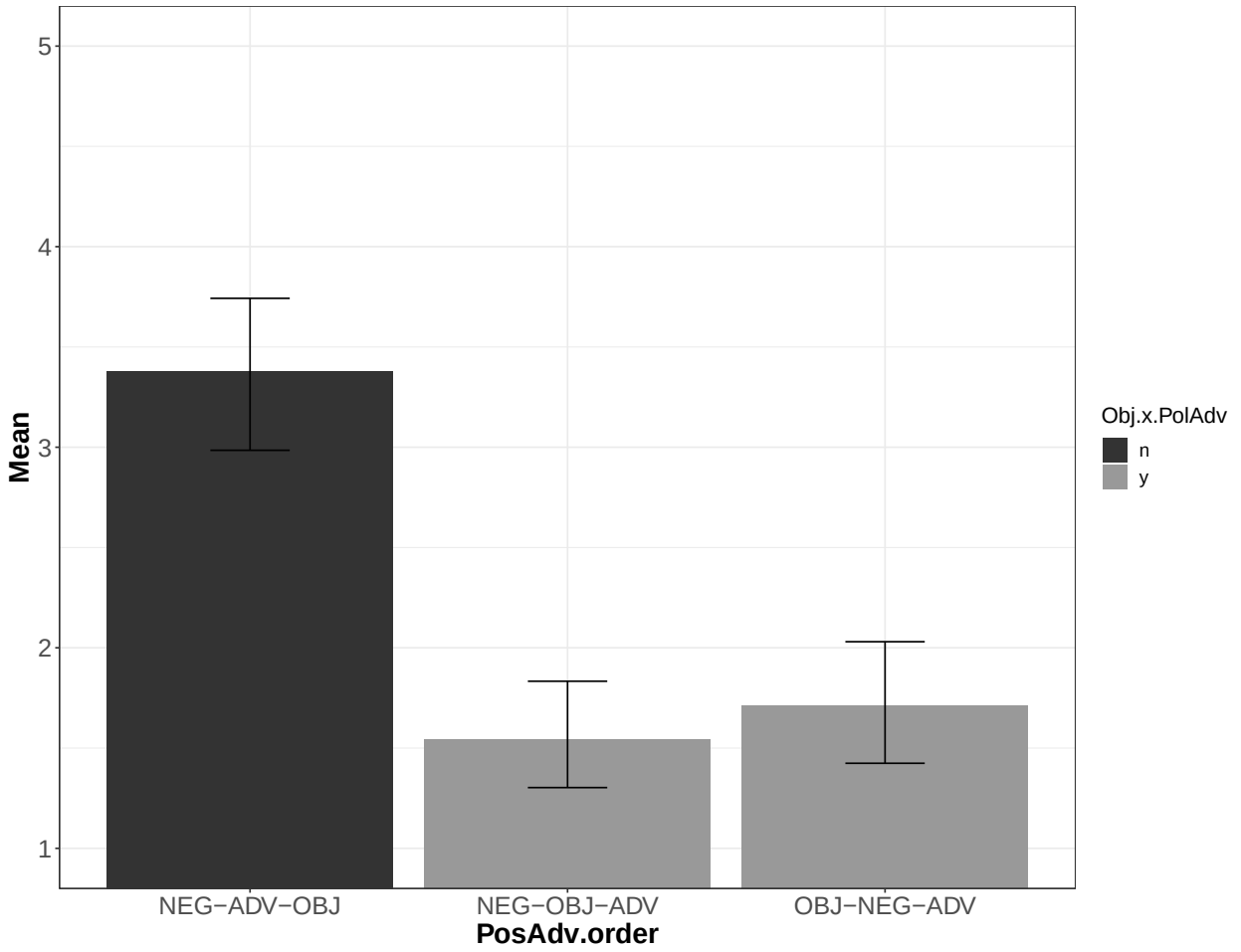


Figure 4.1: **Faroese quirky case survey 1: mean acceptability by word order**

'Obj.x.PolAdv' indicates whether the object precedes the polar adverb (here 'always') or not: as evident from the plot, only the order in which the object follows the adverb is possible. It should also be noted that these data are expected on my analysis of object shift (section 8.2.3), since when the finite auxiliary is in T and the main verb in V as in these examples, the adverbs are hypothesised to be adjoined to T' or *v*', and so shifting the object to Spec,VP does not remove the IdentDis violation.

Figure 4.2 shows mean acceptability of sentences 10–15 in Table 4.1 plotted against object case and subject number. All the sentences had plural verb morphology, plural objects and dative subjects, and so agreement and non-agreement cannot be compared in this survey. However, as can be seen in Figure 4.2, the mean acceptability of singular subjects is across the board lower than that of plural. I ran an ordered logit regression model using R (R Core Team 2012, same for all references to R hereafter) and *ordinal* (Christensen 2018) to test the significance of this. An ordinal regression model is appropriate for these kinds of Likert scales with ordinal responses; the proportional odds assumption, that the log of the odds

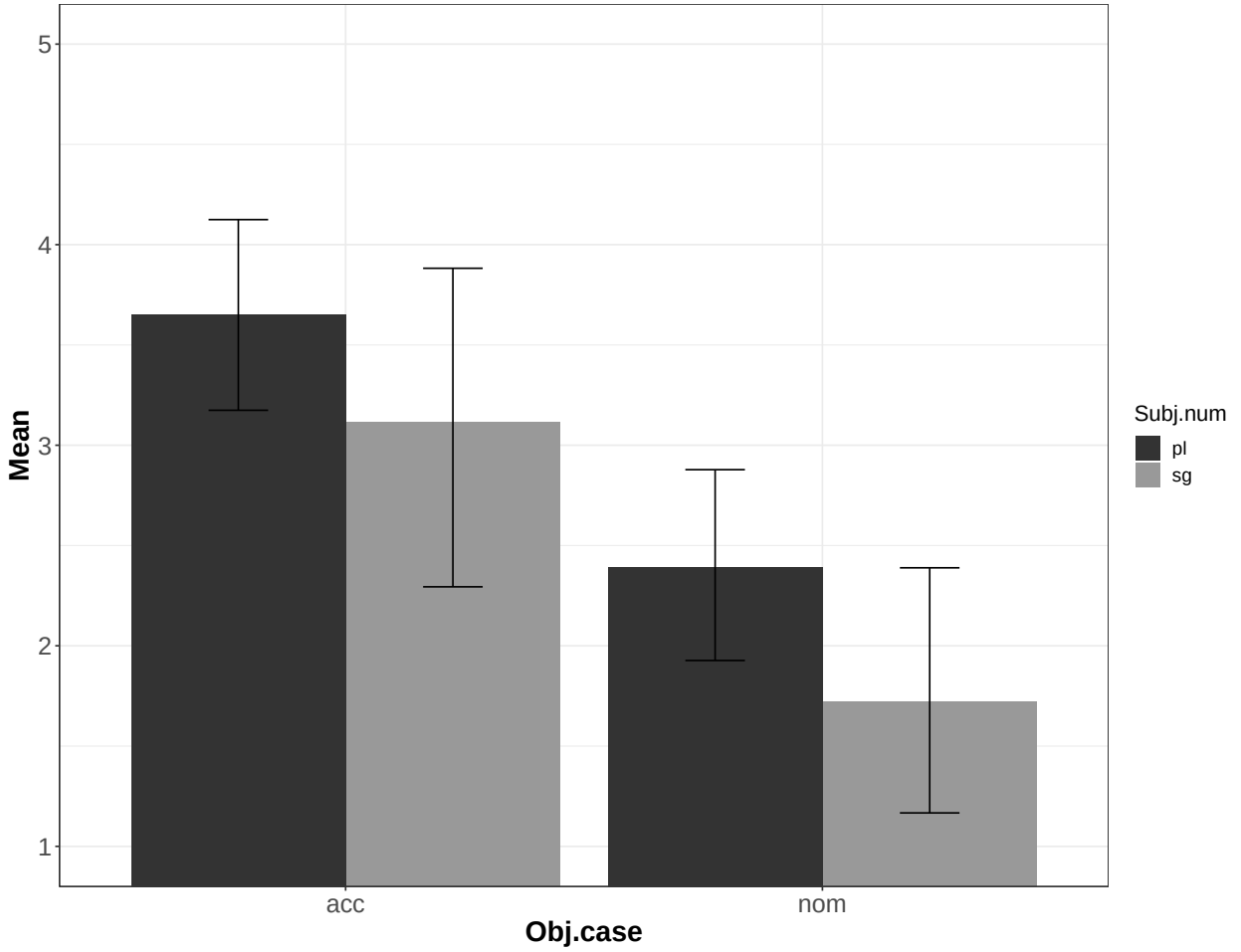


Figure 4.2: **Faroese quirky case survey 1: mean acceptability by object case and subject number**

of responses form an arithmetic sequence, is met for scales ranging from 'poor' to 'excellent', 'strongly disagree' to 'strongly agree', or in this case, 'not at all natural' to 'completely natural' (McCullagh 1980). Random intercepts were included for Speaker and Item. I did include the bimodal sentences for this model, since the contrast is clearly between whether the sentence was completely unacceptable ($\mu \sim 1–2.4$, $\sigma < 1.5$), or there was disagreement ($\mu \sim 2.5–4$, $\sigma > 1.5$). The striking result is that nominative object case is strongly rejected compared to accusative, with a significantly worse mean than that of accusative object case (β=-1.6, p<0.01). Interestingly, although the verb morphology was plural in all of sentences 10–15, some speakers wrote in a final *–r* by hand on the verb, indicating that it should have been *dámar* 'likes.3SG' or *tørvar* 'needs.3SG'. Therefore some speakers at least seem to have a preference for non-agreement with the dative subject, which is what we expect to be standard.

4.3.1.5 Discussion

While this first survey is limited in scope and grand conclusions may not be drawn from a small sample such as this, nevertheless it is clear that, as predicted, object shift is judged unacceptable with quirky case verbs when the adverbs are adjoined to T' or *v*', i.e. when the main verb occurs in V. This suggests that when object shift is precluded, the argument in V,Comp in quirky case predicates behaves as any other object bearing structural case. If the base object position in these predicates was some other site than V,Comp, or if the accusative argument were a subject and the dative argument a topicalised object, we might expect different behaviour. In other words, as far as object shift is concerned, the theme argument with 'like' in Faroese seems to be a typical object.

The second tentative conclusion we may draw from this survey is that nominative object case is judged unacceptable across the board with the quirky case verbs *dáma* 'like' and *tørva* 'need' in Faroese. When the verb bears plural morphology, it looks like a plural subject improves the judgement over a singular subject. This suggests a preference for agreement with the subject over the object, or at least an assumption on the native speaker's part that subject rather than object agreement is intended, since otherwise the mean acceptability would be predicted to be similar for both singular and plural subjects. However, this does not say anything about the acceptability of agreement versus non-agreement.

4.3.2 Faroese quirky case survey 2

The second survey on Faroese quirky case predicates was combined with the surveys on 'give' passives (see sections 6.2.1 and 6.2.2). The discussion here is based on the combined results from both surveys. In this survey, object position was tested in quirky case predicates with respect to negation with *ikki*, negative adverbs *aldri* and *ongantíð* both meaning 'never', and the polar quantifiers *eingin* 'no' and *nakar* 'any'. If the theme argument in such predicates exhibits typical object behaviour, i.e. occurs to the left of the main verb in shift contexts and in V,Comp in non-shift contexts, the evidence will be consistent with the analysis that the theme is a regular object.

4.3.2.1 Participants

The participants were the same as those for the surveys described in sections 6.2.1 and 6.2.2, a total of 158, though only 46 of these fully completed their respective survey; the remaining 112 gave partial responses. I refer the reader to sections 6.2.1.1 and 6.2.2.1 for further information about the participants.

4.3.2.2 Materials

Participants were presented with the following 28 sentences for judgement. These were interspersed with the 'give' passive sentences tested in the surveys described in sections 6.2.1 and 6.2.2. The sentences were presented in the same manner as those in the Faroese 'give' passive surveys, interspersed with filler and embedded in a formal or colloquial context.

Table 4.2: **Faroese quirky case verbs: survey 2**

№	μ	σ	Faroese sentence	Gloss
1	4.9	0.2	*Mær dámdi ikki bókina*	Me.DAT liked not book-the.ACC
2	1.6	0.9	**Mær dámdi bókina ikki*	Me.DAT liked book-the.ACC not
3	4.1	1.1	*(?)Mær dámdi ikki hana*	Me.DAT liked not it.ACC
4	4.9	0.3	*Mær dámdi hana ikki*	Me.DAT liked it.ACC not
5	4.4	0.8	*Sigmundi tørvar ikki klaverið*	Sigmund.DAT needs.SG not piano-the.ACC
6	1.5	0.9	**Sigmundi tørvar klaverið ikki*	Sigmund.DAT needs.SG piano-the.ACC not
7	3.6	1.2	Ɓ *?Evu tørvar ikki hann*	Eva.DAT needs.SG not him.ACC
8	4.1	1.0	*Evu tørvar hann ikki*	Eva.DAT needs.SG him.ACC not
9	4.7	0.5	*Honum leingist ikki eftir henni*	Him.DAT longs not for her.DAT
10	1.3	0.7	**Honum leingist eftir henni ikki*	Him.DAT longs for her.DAT not
11	4.5	0.8	*Honum leingist ikki eftir sólini*	Him.DAT longs not for sun-the.DAT
12	1.1	0.4	**Honum leingist eftir sólini ikki*	Him.DAT longs for sun-the.DAT not
			Áðrenn eg hoyrdi Eivør...	Before I heard Eivør...
13	3.4	1.3	Ɓ *... ?hevði mær ongan sangara dámað*	...had me.DAT no singer.ACC liked
14	1.5	0.7	*... *hevði mær dámað ongan sangara*	...had me.DAT liked no singer.ACC
			Síðani eg flutti til Lissabon...	Since I moved to Lisbon...
15	3.8	1.2	Ɓ *... ?hevur mær onga troyggju tørvað*	...had me.DAT no sweater.ACC needed
16	1.6	0.7	*... *hevur mær tørvað onga troyggju*	...had me.DAT needed no sweater.ACC
			Áðrenn eg hoyrdi Eivør...	Before I heard Eivør...
17	1.6	0.8	*... *hevði mær aldri nakran sangara dámað*	...had me.DAT never any singer.ACC liked
18	4.3	0.9	*... hevði mær aldri dámað nakran sangara*	...had me.DAT never liked any singer.ACC
19	1.1	0.4	*... *hevði mær nakran sangara aldri dámað*	...had me.DAT any singer.ACC never liked
20	1.2	0.4	*... *hevði mær dámað aldri nakran sangara*	...had me.DAT liked never any singer.ACC
			Síðani tey fluttu til Lissabon, hevur teimum ivaleyst...	Since they moved to Lisbon has them.DAT doubtless...
21	2.0	1.0	*... *ongantíð nakrar troyggjur tørvað*	...never any sweaters.ACC needed
22	4.1	1.0	*... (?)ongantíð tørvað nakrar troyggjur*	...never needed any sweaters.ACC
23	1.1	0.4	*... *nakrar troyggjur ongantíð tørvað*	...any sweaters.ACC never needed
24	1.1	0.4	*... *tørvað ongantíð nakrar troyggjur*	...needed never any sweaters.ACC
			Hóast tey nú skulu flyta til Lissabon, man teimum...	Though they now will move to Lisbon must them.DAT...
25	1.1	0.3	*... *hava aldri nakrar sólbrillur tørvað fyrr*	...have never any sunglasses.ACC needed before
26	1.5	0.9	*... *hava aldri tørvað nakrar sólbrillur fyrr*	...have never needed any sunglasses.ACC before
27	3.0	1.5	Ɓ *... ??aldri hava tørvað nakrar sólbrillur fyrr*	...never have needed any sunglasses.ACC before
28	1.5	0.7	*... *aldri hava nakrar sólbrillur tørvað fyrr*	...never have any sunglasses.ACC needed before

4.3.2.3 Procedure

Participants were asked to provide acceptability judgements on each of the 28 Faroese sentences, presented in a different random order for each trial. A sentence would display in the Stanford Qualtrics online application[13] as in (103), excluding the English translation:

(103) Vit tosaðu stillisliga við konurnar, tá ið brádliga Hjalmar rópti, "**Mær dámdi ikki bókina.**"
'We were talking quietly to the women, when suddenly Hjalmar shouted, "I didn't like the book".'

Participants were told to evaluate acceptability of the embedded sentence displayed in bold font; the surrounding contextual sentence was either colloquial or formal register (see section 6.2.1 below). The question *Hvussu natúrligur er hesin setningurin á føroyskum?*, 'How natural is this sentence in Faroese?' displayed above the judgement buttons for each sentence. Acceptability was rated on a five-point scale with the following descriptions:[14]

	Faroese	English translation
1	***Als ikki natúrligt.*** *Ein føroyingur kundi ongantíð sagt hetta.*	**Not at all natural.** A Faroese could never say this.
2	***Ikki sera natúrligt.*** *Tað hevði verið løgið, um ein føroyingur segði hetta.*	**Not very natural.** It would be strange if a Faroese said this.
3	***Eg veit ikki,*** *um ein føroyingur natúrliga hevði sagt hetta.*	**I don't know** if a Faroese could naturally say this.
4	***Heldur natúrligt.*** *Ein føroyingur hevði kunnað sagt hetta.*	**Rather natural.** A Faroese could have said this.
5	***Púrasta natúrligt.*** *Ein føroyingur hevði lættliga kunnað sagt hetta.*	**Perfectly natural.** A Faroese could easily have said this.

These judgement descriptions were displayed on discrete forced-choice buttons, i.e. it was only possible to select one of the above options. The buttons were displayed horizontally with *Eg veit ikki* in the centre; it could be argued that some speakers interpreted 'I don't know how natural' differently from 'a judgement between "not very natural" and "rather natural"', but I argue that stating uncertainty about naturalness is equivalent to a judgement between 'not very natural Faroese' and 'rather natural Faroese', and avoids having to notate point 3 on the scale as either the positive 'natural' or negative 'unnatural', or leaving the description blank which could cause confusion. It was possible to leave an answer blank, and therefore some participants reached the end of the survey without providing responses to every question. At the end of each trial participants were given the opportunity to provide additional comments in a text box, and voluntarily to provide anonymised demographic information: age, gender and where they were from. This same format was used for all the online surveys conducted.

[13] <https://stanforduniversity.qualtrics.com/>, accessed 4/4/18; requires Stanford University login.
[14] I chose to express the notion of acceptability as 'naturalness' on advice from native speaker linguists, as this seemed to be the best translation of the concept.

4.3.2.4 Results and discussion

As can be seen in Table 4.2, the sentences with the highest mean acceptability are those in which the object behaviour conforms to that of typical objects. In the simple sentences 1–12, the examples with full DP objects are judged acceptable (mean > 4) when the object occurs in V,Comp, as expected. In the sentences with pronominal objects, those with shift are accepted with a higher mean in each case than the equivalent sentence without shift, apart from those with PP complements, which is expected with pronouns (see Þráinsson et al. 2012:247). Moreover, examples 13–16 show a higher mean acceptability for examples in which the negative quantified object occurs left of the verb, compared to those where it occurs in V,Comp. This is also expected since negative scrambling of this type occurs with negative quantified objects, unlike regular object shift (see Þráinsson 2007:83). Finally, the mean judgements on sentences 17–28 are greater for the examples without shift, which conforms to the observation that shift is not permitted when the finite auxiliary is in T and the main verb in V. Moreover, those examples in which the adverb is adjoined at least as high as *v'* have a greater mean acceptability (sentences 18, 22, 27), contrasting with examples in which it appears to be adjoined lower: on my analysis of object shift, this correlates with the scope of the adverb prohibiting shift by containing the Spec,VP position.

4.3.2.5 Summary of Faroese quirky case surveys

To summarise this section, we have seen two surveys which provide evidence that the theme argument in Faroese quirky case predicates behaves like a typical object with respect to object shift. This is consistent with my analysis, which attributes object shift behaviour to an interaction between discourse-structure and argument-structure constraints. Objects in predicates with non-nominative subjects essentially behave the same way as they do in those with the default nominative-accusative case frame, and so it should not be surprising if they also bear standard structural object case. Furthermore, nominative object case is rejected across the board by the native speakers sampled. It seems then that Icelandic object case requires some additional explanation, rather than Faroese. As I will argue in section 4.4.1 and following, the additional factor is a preference in Icelandic for some nominative argument to be a target of agreement, which in Icelandic outranks the constraint enforcing the realisation of structural object case.

4.3.3 Icelandic quirky case survey

In order to explore the differences between the Icelandic and Faroese patterns further, I also conducted a survey which tested dative-subject verbs in Icelandic. The Icelandic 'give' passives and quirky case predicates were tested within the same survey (see section 6.4.1).

4.3.3.1 Participants

There were 28 respondents, recruited via a shared link on Facebook by native speaker consultants; no compensation was offered to participants.[15] 14 respondents fully completed the survey, while the other 14 gave partial responses. All participants were required to declare that Icelandic is their native language

[15] Thanks to Einar Freyr Sigurðsson and Jóhannes Gísli Jónsson for help with the survey.

before taking part in the survey. 13 participants voluntarily provided demographic information: of this subset, 10 were female and 3 male, with a mean age of 44.8 years (σ=15.6 years, range 24–71); 7 were from Reykjavík or the capital region, 3 from Sauðárkrókur (north Iceland), 2 from Keflavík, one from Djúpivogur (east Iceland), and one simply said they were from the northern region (*að norðan*).

4.3.3.2 Materials

Participants were presented with 54 sentences for judgement, laid out in full in Appendix B4. These were interspersed with the 'give' passive sentences tested in the survey described in section 6.4.1, as well as filler sentences whose judgements were known beforehand.

4.3.3.3 Procedure

Participants were asked to provide judgements on the sentences in Table 9.8, in the same manner as that described in section 4.3.2.3 above. The Icelandic instructions and judgement descriptions were the same as those described in section 6.4.1.3. Unlike the Faroese surveys, the Icelandic surveys did not have the target sentences for judgement embedded in a larger context.

4.3.3.4 Results

Figure 4.3 shows mean acceptability rating plotted against plural or singular agreement on the finite verb, and whether a dative argument intervenes between the finite verb and target of agreement. As is evident, the only mean acceptability approaching 4 on the scale is plural agreement with no intervening dative. Singular agreement is generally disliked across the board, and the presence of an intervening dative reduces the overall acceptability considerably. I ran an ordered logit regression model, summarised as the following:

$$\text{Response} \sim \text{Agreement} * \text{Dative intervener} + (1 \mid \text{Speaker}) + (1 \mid \text{Item})$$

On this model, the fixed effect of dative intervener is very significant, with the presence of an intervener reducing acceptability (β=-4.8, p<0.01). Singular agreement was also judged significantly worse on average than plural agreement (β=-3.6, p<0.03). Finally, there was a significant interaction between these factors: the effect on acceptability of a dative intervener was significantly greater in plural agreement contexts than in singular agreement contexts (β=4.0, p<0.02), i.e. the absence of an intervening dative improved the acceptability in the plural significantly more than it did in the singular.

The results with respect to object shift in Icelandic are as predicted: as can be seen in Table 9.8 in Appendix B4, the only acceptable examples (mean > 4) with the finite verb in T and main verb in V are those where the object is postverbal (in V,Comp, i.e. no shift). Likewise, the examples when the main verb is in T were accepted with shift when the object was a pronoun, without shift when the object was a full DP, and accepted (albeit less consistently) with a shifted full DP object, all of which is expected given prior work.

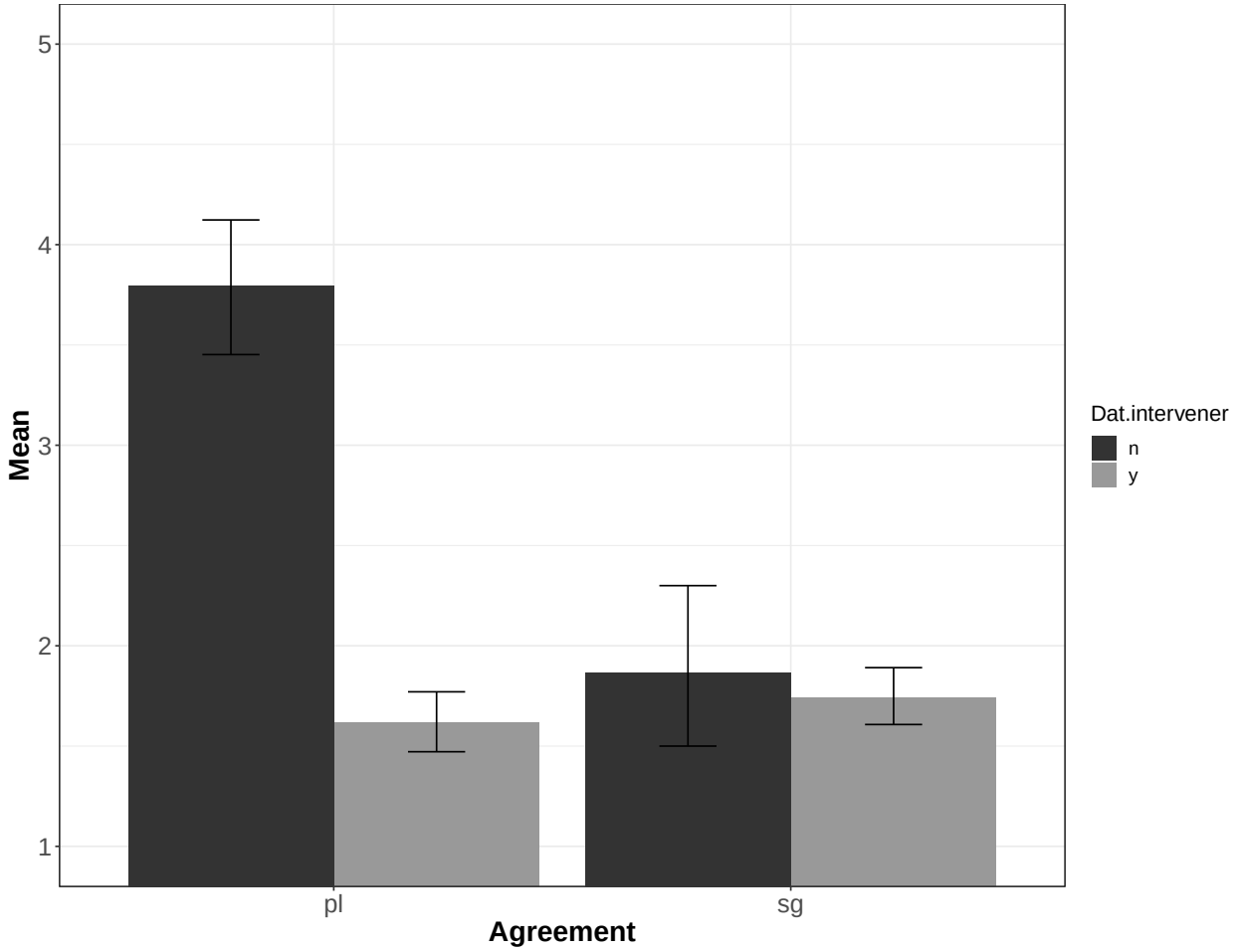


Figure 4.3: **Icelandic quirky case survey: mean acceptability by agreement and dative intervener**

4.3.3.5 Discussion

We may draw two conclusions from the Icelandic survey on quirky case verbs: (i) that Icelandic native speakers do show evidence of preferring number agreement with a nominative object over non-agreement (singular/default), and these speakers at least disprefer sentences where a dative argument intervenes between the finite verb and agreement target; and (ii) that the Icelandic nominative objects are true objects with respect to object shift behaviour, i.e. they pattern the same way as do accusative objects in standard nominative-accusative case frames. Therefore, the question remains as I framed it in Chapter 2: the Icelandic nominative theme arguments in quirky case predicates trigger number agreement, and undergo object shift; therefore, the question of why they are marked with nominative case cannot be answered by proposing that they are not really objects. Furthermore, my suggestion that there is a preference for agreeing with a nominative argument in Icelandic (formalised as the AgrNom constraint) finds empirical

support. Since only number agreement and not full person agreement is possible with nominative objects in Icelandic, this suggests that AgrNom is satisfied by number agreement alone.

4.4 Faroese and Icelandic case frames

An empirically adequate theory of case-assignment in Faroese must minimally account for the following case frames:

Monotransitive cases: Subj-Obj	Subj. case in passive	Ditransitive cases: Subj-IO-DO	Subj. case in passive
(α) nom-acc	nom	(θ) nom-dat-acc	none
(β) dat-nom (Icel.)	dat	(ι) nom-acc-acc	none
(γ) dat_S-acc	nom		
(δ) dat_W-acc	nom		
(ϵ) nom-dat_S	dat		
(ζ) nom-dat_W	nom		
(η) acc-acc (Icel.)	acc		

In this table, subscript W indicates 'weak' dative case and subscript S 'strong' dative. I posit these two varieties of dative case based upon their behaviour with respect to nominative substitution; this phenomenon will be discussed in section 4.5 below. By 'weak/strong' I mean whether the dative case borne by the subject of an active monotransitive is replaceable by nominative ('weak') or not ('strong'); I adopt the same terminology for whether the single argument of a passive bears nominative ('weak') or dative ('strong') when the counterpart active has a dative object, discussed further in Chapter 5. Passives of ditransitives will be discussed in Chapter 6. For the moment, I leave the nominative substitution question aside and solve the simplest part of the problem, namely how to derive dat-nom in Icelandic versus dat-acc in Faroese.

4.4.1 Case and agreement constraints

I pursue the hypothesis that the key difference between Faroese and Icelandic is a different ranking of constraints that enforce two conflicting pressures: (i) that there must be a nominative argument in the clause that is flagged by agreement morphology on the finite verb, and (ii) that transitive object case must be reflected in the output when there are two input arguments. I propose the following constraints relevant to the domain of case-marking and agreement (with IdentCase repeated here):

(104) Max[–hr]: Assign a violation for each [–hr] abstract case feature on an input argument that is not realised by a [–hr] morphosyntactic case feature on an output argument.

(105) AgrNom: Assign a violation if the agreement value of the verb does not match that of a nominative argument in the same clause.

(106) IdentCase (IdC): Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].

(107) MAX[LEXCASE] (MAX[LC]): Assign a violation for each lexical case feature on an argument at the level of abstract case that does not correspond to the same lexical feature value on an argument at the level of morphosyntactic case.

MAX[–HR] and MAX[LEXCASE] differ from IDENTCASE, in that MAX-type constraints ensure faithfulness to the input by penalising non-realisation of input features, while the IDENT-type constraint penalises output candidates with feature mismatches, without directly referring to the input. In other words, MAX deals with input-output faithfulness, whereas IDENT targets a specific kind of feature-mapping within the output candidate. Nevertheless, IDENT constraints will indirectly ensure faithfulness, since the maximally faithful output candidate will also tend to have minimal feature mismatches, depending on the interactions with other constraints. MAX constraints alone do not penalise mismatches of features, but only presence/absence of a feature in the output;[16] therefore, IDENT constraints are also necessary in languages with positional licensing, in order to yield the correct position-item mapping. For instance, in a predicate with two arguments and the input features [+HR] and [–HR], MAX[–HR] will not be violated even if the item bearing [–HR] occurs in a [+HR] position such as Spec,TP, since [–HR] is still present in the output. However, IDENTCASE will be violated by the mismatch [+HR]:[–HR]. Thus the combination of positional licensing and faithfulness to abstract case rules out sentences with unacceptable argument structure.

I hypothesise the following rankings for Faroese and Icelandic. The pair {AGRNOM, MAX[–HR]} are differently ranked in each language, while {AGRNOM, IDENTCASE} in Faroese and {MAX[–HR], IDENTCASE} in Icelandic are left unranked:

(108) **Icelandic**: MAX[LC] » AGRNOM » {MAX[–HR], IDENTCASE}

(109) **Faroese**: MAX[LC] » MAX[–HR] » {AGRNOM, IDENTCASE}

In section 4.4.2 I lay out the tableaux for the basic case frames, here ignoring nominative substitution.

4.4.2 OT analysis

Regarding notation, the input to the computation is at the level of abstract case, so the [+HR], [–HR] and [–HR–LR] features in the input refer to abstract nominative, accusative and dative respectively. As for the output, the case feature matrix on the left of the colon refers to positional case, and the right matrix denotes the features on the item occupying that position. For instance, the notation {$\text{NOM}_{[+\text{agr}]}$ [+HR]:[+HR]} indicates that an agreed-with nominative argument is occupying Spec,TP; the positional feature is [+HR] and the item's feature is also [+HR]. Likewise, {DAT [–HR]:[DAT_{LC}[–HR–LR]]} indicates that a dative-marked argument occupies the position bearing [–HR], i.e. V,Comp; the item bears lexical dative case with the feature matrix [–HR–LR]. I construe lexical case, notated by subscript LC, as an abstract case variable present in the input; the value of the variable is still encoded using the inventory of abstract case features (i.e. lexical dative case 'comes with' a [–HR–LR] value). The outputs on the left of the tableaux represent morphosyntactic case,

[16] I formulate the MAX constraints relating to case such that they refer to features borne by arguments, in order that an empty position bearing the correct feature does not satisfy MAX (i.e. the mere existence of an 'object position' does not satisfy MAX[–HR], only the presence of an accusative argument in the output). Positional features are hence different from features borne by arguments, since they do not fully 'realise' case unless occupied by an argument of a matching case-feature specification.

the intermediate level between abstract and morphological case; I assume a separate computation of the mapping from morphosyntactic to purely morphological case, which happens at PF.

(α) **Icelandic regular monotransitive**

arg_1[+HR] arg_2[−HR]	MAX[LC]	AGRNOM	MAX[−HR]	IDC
☞ a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[−HR]				
b. NOM$_{[+agr]}$ [+HR]:[+HR], DAT [−HR]:[−HR−LR]				*!
c. NOM$_{[+agr]}$ [+HR]:[+HR], NOM [−HR]:[+HR]			*!	*

(α) **Faroese regular monotransitive**

arg_1[+HR] arg_2[−HR]	MAX[LC]	MAX[−HR]	AGRNOM	IDC
☞ a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[−HR]				
b. NOM$_{[+agr]}$ [+HR]:[+HR], DAT [−HR]:[−HR−LR]				*!
c. NOM$_{[+agr]}$ [+HR]:[+HR], NOM [−HR]:[+HR]		*!		*

(β) **Icelandic monotransitive with dative subject**

arg_1[DAT$_{LC}$[−HR−LR],+HR] arg_2[−HR]	MAX[LC]	AGRNOM	MAX[−HR]	IDC
a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[−HR]	*!		*	
☞ b. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], NOM$_{[+agr]}$ [−HR]:[+HR]			*	**
c. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], ACC [−HR]:[−HR]		*!		*

As can be seen in tableau (β), in Icelandic object agreement satisfies AGRNOM, which requires only that a nominative argument be marked by verbal agreement, not specifically the subject. The ranking AGRNOM » MAX[−HR] enables us to rule out the DAT-ACC case frame for Icelandic, unless the accusative object case is also lexically specified.[17] As for Icelandic predicates with two accusative arguments, e.g. *Mig vantar hníf* 'me.ACC lacks knife.ACC', MAX[LEXCASE] enforces the accusative on the theme as well as that on the experiencer; otherwise we would predict that nominative would surface on the theme in order to satisfy AGRNOM:

(η) **Icelandic monotransitive with accusative subject, accusative object**

arg_1[ACC$_{LC}$[−HR],+HR] arg_2[ACC$_{LC}$[−HR]]	MAX[LC]	AGRNOM	MAX[−HR]	IDC
a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[ACC$_{LC}$[−HR]]	*!		*	
b. ACC [+HR]:[ACC$_{LC}$[−HR]], NOM$_{[+agr]}$ [−HR]:[+HR]	*!		*	**
☞ c. ACC [+HR]:[ACC$_{LC}$[−HR]], ACC [−HR]:[ACC$_{LC}$[−HR]]		*		*

By contrast, in Faroese the ranking MAX[−HR] » AGRNOM ensures that standard accusative object case occurs on the theme argument, in spite of incurring an AGRNOM violation by not agreeing with a nominative argument:

[17] Examples of this exist in Latvian and Lithuanian, in which verbs of pain mark the experiencer argument with dative and stimulus with accusative case, the latter displaying properties of lexical rather than structural case assignment (Seržant 2013).

(γ,δ) **Faroese monotransitive with dative subject**

arg_1[DAT$_{LC}$[−HR−LR],+HR] arg_2[−HR]	MAX[LC]	MAX[−HR]	AGRNOM	IDC
a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[−HR]	*!	*		
b. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], NOM$_{[+agr]}$ [−HR]:[+HR]		*!		**
☞ c. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], ACC [−HR]:[−HR]			*	*

The basic pattern for dative-object verbs in Faroese is captured by the ranking MAX[LC] » MAX[−HR] which enforces the expression of lexical object case in the output. By formulating the constraints and feature matrices such that dative object case satisfies MAX[−HR], we ensure that the inverse of the DAT-ACC frame does not occur in dative-object predicates, since an additional violation of MAX[−HR] when the object is dative would result in the winner ACC-DAT:

(ϵ,ζ) **Faroese monotransitive with dative object**

arg_1[+HR] arg_2[DAT$_{LC}$[−HR−LR]]	MAX[LC]	MAX[−HR]	AGRNOM	IDC
a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[−HR]	*!			
☞ b. NOM$_{[+agr]}$ [+HR]:[+HR], DAT [−HR]:[DAT$_{LC}$[−HR−LR]]				*
c. ACC [+HR]:[−HR], DAT [−HR]:[DAT$_{LC}$[−HR−LR]]			*!	**

Finally, we generate the correct output for regular Faroese ditransitives with the constraint IDENTCASE alone, since swapping the order of the objects will incur additional violations thereof. The proposed ranking MAX[LC] » IDC covers those few examples of double-object verbs with accusative indirect objects, which I assume to be a lexically specified case.

(θ) **Faroese regular ditransitive**

arg_1[+HR] arg_2[−HR−LR] arg_3[−HR]	MAX[LC]	MAX[−HR]	AGRNOM	IDC
☞ a. NOM$_{[+agr]}$ [+HR]:[+HR], DAT [−HR−LR]:[−HR−LR], ACC [−HR]:[−HR]				
b. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR−LR]:[−HR], DAT [−HR]:[−HR−LR]				**!
c. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR−LR]:[ACC$_{LC}$[−HR]], ACC [−HR]:[−HR]				*!

(ι) **Faroese ditransitive with two accusative objects**

arg_1[+HR] arg_2[ACC$_{LC}$,−HR−LR] arg_3[−HR]	MAX[LC]	MAX[−HR]	AGRNOM	IDC
a. NOM$_{[+agr]}$ [+HR]:[+HR], DAT [−HR−LR]:[−HR−LR], ACC [−HR]:[−HR]	*!			
b. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR−LR]:[ACC$_{LC}$[−HR]], DAT [−HR]:[−HR−LR]				**!
☞ c. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR−LR]:[ACC$_{LC}$[−HR]], ACC [−HR]:[−HR]				*

4.4.3 Factorial typology

For the sake of clarity I exclude genitive case from the candidate set and focus on the possible combinations of nominative, accusative and dative case; the same constraints would also predict Icelandic predicates with genitive subjects to be possible with a ranking of MAX[LC] » IDENTCASE. I hypothesised the ranking for Faroese in (110) and included the inputs shown in (111).

(110) **Faroese:**

MAX[LC] » MAX[−HR] » {AGRNOM, IDENTCASE}

(111) a. NOM-ACC: /{*arg1*[+HR] *arg2*[-HR]}/

b. DAT-ACC: /{*arg1*[DAT_{LC},+HR] *arg2*[-HR]}/

c. NOM-DAT: /{*arg1*[+HR] *arg2*[DAT_{LC},-HR]}/

d. ACC-ACC: /{*arg1*[ACC_{LC},+HR] *arg2*[ACC_{LC},-HR]}/

e. NOM-DAT-ACC: /{*arg1*[+HR] *arg2*[-HR-LR] *arg3*[-HR]}/

f. NOM-ACC-ACC: /{*arg1*[+HR] *arg2*[ACC_{LC},-HR-LR] *arg3*[-HR]}/

With 4 constraints, the number of logically possible grammars is 24. 5 distinct output languages were generated:

(112) **Output languages**

No.	a.	b.	c.	d.	e.	f.	Example language
1	NOM-ACC	DAT-ACC	NOM-DAT	ACC-ACC	NOM-DAT-ACC	NOM-ACC-ACC	Faroese
2	NOM-ACC	DAT-ACC	NOM-ACC	ACC-ACC	NOM-DAT-ACC	NOM-DAT-ACC	(*Faroese without quirky objects*)
3	NOM-ACC	NOM-ACC	NOM-ACC	NOM-ACC	NOM-DAT-ACC	NOM-DAT-ACC	English, Danish
4	NOM-ACC	DAT-NOM	NOM-DAT	ACC-ACC	NOM-DAT-ACC	NOM-ACC-ACC	Icelandic
5	NOM-ACC	DAT-NOM	NOM-DAT	NOM-ACC	NOM-DAT-ACC	NOM-ACC-ACC	German

Thus we correctly predict, in addition to Faroese and Icelandic, an output type with the same case-frames as Icelandic apart from ACC-ACC, i.e. German, though as argued in section 2.1.2 these arguments do not exhibit the same subjecthood properties as do those in Icelandic; I follow Wunderlich (2008) in assuming that the differing behaviour with respect to raising and control is determined by the lexical representations of the relevant verbs. The German case-marking pattern in DAT-NOM predicates is generated by the same set of constraints as Icelandic, but with a different ranking: if the German ranking is AGRNOM » MAX[LC], accusative subjects are precluded. This captures the fact that the difference seems to be systematic, in that Icelandic licenses arguments bearing lexical subject case positionally in Spec,TP, whereas German does not appear to do so. We also generate a type without any lexical case-marking (English, Mainland Scandinavian). Output 2 could reasonably represent a hypothetical future stage of Faroese as lexical case-marking is lost. However, as noted above, this picture is incomplete, since we must account for the substitution behaviour of the lexically-marked cases in Faroese, the differences in preservation under passivisation in Faroese and Icelandic, and the issue of the passive of ditransitives. In section 4.5, I present a competing grammars model to explain the observed nominative substitution behaviour of Faroese dative subjects. In Chapter 5, I present results of surveys I conducted on the Faroe Islands, and my analysis of the passive. Chapter 6 explores survey results on the passive of ditransitives, and integrates the data into the model I adopt.

4.5 Two kinds of dative: competing grammars

As mentioned in section 4.4, it has been noted that Faroese verbs that typically occur with dative subjects may also occur with nominative subjects, the object remaining accusative either way (Barnes 1986, Þráinsson et al. 2012). It has not been thoroughly investigated under what circumstances this 'nominative

substitution' behaviour may occur, but it has been associated with 'informal register' and 'young people's speech' (Petersen 2010); Jónsson and Eyþórsson (2005) note that nominative subjects are judged acceptable by native speakers of Faroese with all the verbs they tested, and the younger generation is more likely to accept nominative. As presented above, I found examples of nominative subjects with all the dative-subject verbs I searched for in the corpora, albeit only rarely with *tørva* 'need'. Some examples are repeated here:

(113) Far. *Mamma heldur, at* ***eg*** *dámi skógvar alt for væl*
Mamma thinks that I.NOM like.1SG shoes.ACC all too well
'Mama thinks that I like my shoes far too much'

(114) Far. *Mangl**i** bæði bor og skrúvur, so eg mátti út at keypa*
lack.1SG both drill.ACC and screws.ACC so I must.PST out to buy
'I lack both a drill and screws, so I had to go out to buy (them)'

(115) a. Far. *Eg svaraði, at* ***mær*** *ikki tørvaði lokabrøgd*
I answered that me.DAT not needed.SG schemings.ACC
'I answered that I didn't need to scheme'

b. Far. * *Eg svaraði, at* ***eg*** *ikki tørvaði lokabrøgd*
I answered that I.NOM not needed.SG schemings.ACC

Jónsson (2009) proposes a 'covert nominative' analysis of this, suggesting that Faroese dative subject case, unlike that of Icelandic, is an instance of both dative and nominative case assigned to the same argument, with dative surfacing by default, but with the option of nominative, though no claim is made as to when each variant may occur. Asarina (2011), building on Jónsson's account, suggests that a higher functional head is necessary to license quirky dative case in Faroese, and that this head is responsible for number agreement, in order to capture the purported optionality of number agreement with dative subjects in Faroese; however, again the variation is not accounted for, and unfortunately some of the Faroese data presented are inconsistent with corpora and survey results. I discuss these alternative accounts in Chapter 7; to my knowledge, these are the only attempts in the literature to account for the Faroese data reviewed in this section.

4.5.1 Accounting for 'weak' and 'strong' dative case

In order to explain the variation observed in (113-115), I propose that multiple grammars (i.e. rankings) co-exist and are accessible to Faroese speakers. I argue that such an account captures the observed parallel between nominative substitution on dative subject case, and non-preservation in the passive of dative-object verbs, which I construe as reflexes of the same mechanism, i.e. persistent dative subject case and preserving dative object case are products of the same constraint interaction. What marks my account as different from those mentioned above is that, although a ranking is categorical in the sense that only one optimal output candidate will be selected for a given input, multiple grammars co-exist for each native speaker: thus there is no 'speaker of Icelandic A, speaker of Icelandic B', since 'Icelandic A' and 'Icelandic B' are generated by different rankings that are simultaneously accessible to one speaker. Similar conclusions have already been drawn with respect to Icelandic and Faroese data by Þráinsson (2016), who found that

speaker judgements on dative substitution did not neatly fall into separate dialect groups, and that the same speaker may produce two case-marking variants even within the same text. At any rate, the hypothesis that two grammars co-exist within a speaker is worth exploring further.

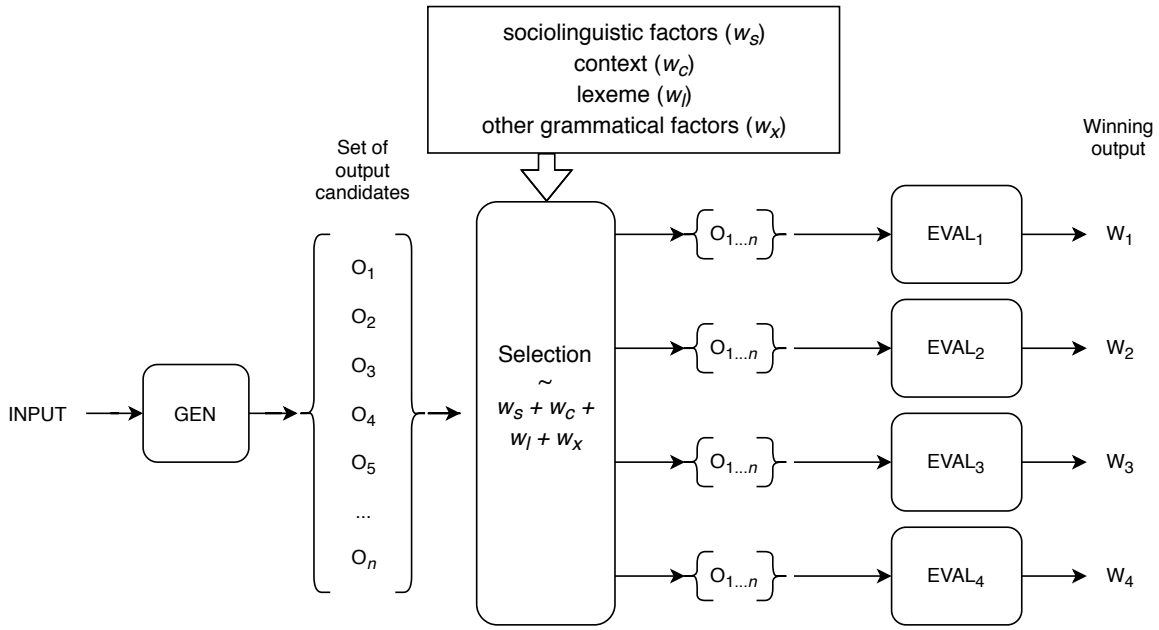


Figure 4.4: Competing grammars model

Figure 4.4 shows a diagram of the proposed model. The claim is that a grammar (ranking) is *probabilistically activated*, where grammar selection is determined by multiple weighted factors. These weights can be approximated through empirical investigation: corpora, judgement survey data and experimental results can be brought to bear on the question of how grammatical variants are selected. The same set of output candidates is produced by Gen, but the ranking at Eval differs for each variant, resulting in different winning outputs. It is possible to model competing grammars by a logistic regression, in which grammatical and contextual effects contribute to an increased or decreased probability of a grammar being selected, and therefore a particular output candidate surfacing. This makes for a more accurate model of grammar for three reasons: (i) it makes sense of the fact that one speaker may produce two variants, each of which requires a distinct analysis, within the same text, paragraph or even utterance; (ii) it better accounts for morphosyntactic change, since if this is viewed as constraint reranking, an account can be formulated in which several factors conspire to produce a diachronically increasing probability of one grammar being preferred over another; and (iii) it offers a cogent explanation for the loss of marked morphosyntactic features (such as 'quirky case') in acquisition, as the child's inferred grammar will decreasingly include the marked feature as the conditions change. In this section I lay out my analysis of the nominative substitution facts in Faroese dative-subject predicates, and formulate an explicit statistical model of the variation.

I analyse the nominative substitution behaviour of Faroese active dative-subject predicates to be a different ranking of the constraints relevant to the case-marking domain. For actives, we must only add one extra constraint to those already adopted in section 4.4.1, following Kiparsky (2013):

(116) SubjNom (SNom): Assign a violation for each subject position (Spec,TP) not occupied by a nominative argument.

With this simple constraint, the 'non-preserving/weak' grammar can be captured by the ranking SNom » Max[LC], and the 'preserving/strong' one by the ranking Max[LC] » SNom. This makes predictions about case preservation behaviour in the passive, which I show in Chapter 5 to be borne out. For now, I first demonstrate that the addition of this constraint captures the correct behaviour, and second present my model for the grammar competition.

4.5.2 Competing grammars model of nominative substitution

As shown in tableaux (117-118), in OT the difference can easily be accounted for by a straightforward reranking of a pair of constraints. The diachronic story is therefore that through increased probability of the ranking represented in (118) over time, the 'strong dative' grammar becomes less and less frequently activated, and consequently the lexical case-marking is lost.

(117) **Faroese 'strong' dative subject**

arg_1[DAT$_{LC}$[−HR−LR],+HR] arg_2[−HR]	Max[LC]	Max[−HR]	SNom	AgrNom	IdC
a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[−HR]	*!				
b. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], NOM$_{[+agr]}$ [−HR]:[+HR]		*!	*		**
☞ c. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], ACC [−HR]:[−HR]			*	*	*

(118) **Faroese 'weak' dative subject**

arg_1[DAT$_{LC}$[−HR−LR],+HR] arg_2[−HR]	SNom	Max[LC]	Max[−HR]	AgrNom	IdC
☞ a. NOM$_{[+agr]}$ [+HR]:[+HR], ACC [−HR]:[−HR]		*			
b. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], NOM$_{[+agr]}$ [−HR]:[+HR]	*!		*		**
c. DAT [+HR]:[DAT$_{LC}$[−HR−LR]], ACC [−HR]:[−HR]	*!			*	*

In Chapter 5, I show that these rankings also account for case (non-)preservation in the passive, with the addition of a constraint ruling out a null parse of the input (Parse).

In order to construct our model, we must first decide upon which effects to include. The factors in (119) have been claimed to contribute to morphosyntactic variation in Faroese:

(119) a. **Register**: I assume register to be a contextual feature, determined by genre and level of formality of the surrounding lexemes and constructions. In order to construct a linear model, I adopt a five-point scale for register: Least formal < Less formal < Neutral < More formal < Most formal. The features I consider in this calculation include: use of vocabulary tagged as 'written language' or 'spoken language' in the most detailed Faroese dictionary *Sprotin*, genre (poetry, baby speech, political discourse, diary entries etc.), use of 'older' morphology such as the genitive case, use of Danish and/or English words and constructions, and use of emoji or non-standard spelling that reflects pronunciation. Of course these measures can be challenged in the specifics, but a broad categorisation of register is helpful as a way of capturing the intuition often commented on by native speakers that *talumálið* 'spoken language' and *skrivimálið* 'written language' are systematically distinct.

b. **Lexeme**: I assume the relevant feature of a lexeme to be its age, which depends on whether the term is considered a Danish loan or a vocabulary item directly inherited from Old Norse. To approximate this, I adopt three categories: confidence in Old Norse origin, confidence in Danish loan origin, and uncertain origin.

c. **Danish loan words and constructions**: It has been claimed that vocabulary items and constructions borrowed from Danish constitute a pressure on Faroese grammar towards a more 'Mainland Scandinavian'-type system. Since Danicisms are often reflected in the register of the text, in that a preponderance of Danicisms indicates an informal register, I exclude this factor from the model to avoid collinearity effects. It is also difficult to determine at what point Danish loanwords entered the language, or whether the word happens to have a Danish cognate, given the two languages' common origin; therefore it is difficult to devise an uncontroversial measure of how many 'Danish loans' occur in the context.

d. **Speaker age**: It has been claimed that nominative substitution is both more prevalent among young people (Jónsson 2009), and judged more acceptable by the younger generation (Jónsson and Eyþórsson 2005). Since speaker age is not generally known with precision for blog authors, I also adopt a five-point scale here of estimated age group: Youngest < Younger < Middle < Older < Oldest. I exclude tokens where nothing at all is known about the author's age.

e. **Dialect**: I exclude dialect variation since not enough is currently known about the effects of this on Faroese morphosyntax; see Þráinsson et al. (2012) for an overview. Additionally, the blog author's location or dialect background is often unknown.

In order to test this, I looked at a sample of tokens of quirky case verbs from the blog corpus. The types were *dámi* 'like.1SG', *dámar* 'likes.3SG', *tørvar* 'needs.3SG', *mangli* 'lack.1SG', and *manglar* 'lacks.3SG'. All tokens of *dámi* and *mangli* occurred with nominative subjects. Both cases were attested for *dámar* and *manglar*; only dative subjects with *tørvar* were included. Figures 4.5-4.7 show subject case plotted against register, lexeme and speaker age respectively.

As can be seen in Figure 4.5, dative subjects are overwhelmingly preferred in the more formal registers, though nominative subjects are still possible. Interestingly, dative subjects are still possible in even the most informal register represented by baby blogs. Figure 4.6 shows that the lexeme known to be a relatively recent Danish loan, *mangla* 'lack', is almost exclusively used with a nominative subject, whilst the Old Norse stock lexemes *dáma* 'like' and *tørva* 'need' still tend to occur with datives, even though nominatives are possible with *dáma* (and rarely with *tørva*, the latter not included in the sample). Finally, Figure 4.7 indicates that speakers in the oldest two age brackets are far more likely to use dative subjects with these verbs, though again nominatives are attested with the older speakers, and even the youngest age bracket still uses datives (though it should be noted that this 'youngest' bracket is represented by words put into the mouths of children on baby blogs by their parents, and hence some influence of prescriptivism cannot be discounted).

I adopt a logistic regression model for the grammar selection, represented by subject case here. The model can be summarised thus:

Subject case ~ Register + Lexeme + Speaker age

As noted above, I exclude the effect of dialect, though it may also play some role in grammar selection. I exclude Speaker and Item from the model since there will be collinearity with the other factors. I split the data (272 tokens in total) into a training and test set; the training set contained 204 tokens and the test set 68 tokens. I ran the model using the Python package *scikit-learn* (Pedregosa et al. 2011). This yielded the confusion matrix shown in (120), with an accuracy rate of 0.88 on the test set, i.e. 8 incorrect predictions and 60 correct predictions. In (121) additional measures of the model's predictive accuracy are given: 'precision' is the ratio of true positives over the sum of true positives and false positives, in other words the ability of the classifier not to label a sample incorrectly as nominative if it is dative. 'Recall' is the ratio of true positives over the sum of true positives and false negatives, i.e. the ability of the classifier to find the nominatives. The F-beta score can be interpreted as a weighted harmonic mean of the precision and recall, where an F-beta score reaches its best value at 1 and worst at 0. Finally, 'support' is the number of occurrences of each class in the test set.[18] Since this is such a small dataset, we cannot draw very definite conclusions as to whether the same results would hold of a larger sample, but this is currently the largest corpus in existence of Faroese quirky case verbs in non-elicited data. With this model, I did not test the significance of the fixed effects individually, although the confusion matrix indicates that categorising the data in this way enables fairly accurate predictions.

(120) **Logistic regression model 1: confusion matrix**

	Predicted DAT	Predicted NOM
Actual DAT	51	0
Actual NOM	8	9

(121) **Logistic regression model 1: accuracy measures**

	Precision	Recall	F1 score	Support
DAT	0.86	1.00	0.93	51
NOM	1.00	0.53	0.69	17
Avg./Total	0.90	0.88	0.87	68

I reproduced similar results with a generalised logistic regression model which I ran in R using *glm2* (Marschner 2011). This model included the fixed effects of Speaker age, Lexeme and Register, with random effects for Speaker and Item. Due to the small number of tokens, the effects of Speaker age and Register had to be coded as binary for the model to converge, i.e. 'Older vs. Younger' and 'High vs. Low'. All three of these factors emerged as significant: by far the most significant was Lexeme, where Old Norse origin (*dáma* and *tørva*) was significantly less likely to occur with nominative (β=-8.6, SE 2.0, p<0.01); interestingly, the Low register was a significantly less likely context for nominative than High (β=-3.8, SE 1.7, p=0.03); and the age group Younger was significantly more likely to select nominative than Older (β=3.6, SE 1.6, p=0.02). This result is somewhat weakened by the collinearity of Lexeme and Register, since it is known that Danish loanwords are more colloquial. The fact that there is a lower likelihood estimate for nominative in the Low

[18] Definitions taken from <http://scikit-learn.org/stable/modules/generated/sklearn.metrics.precision_recall_fscore_support.html>, accessed 3/14/18.

register can be explained by relative frequency of the lexemes: the verb *dáma* 'like' occurs with far greater frequency than *mangla* 'lack' (19 tokens of *mangla* versus 75 of *dáma* in the less formal register), which is simply a consequence of 'like' being generally more frequent than 'lack' in personal blogs. Since the 'Old Norse versus Danish origin' factor is by far the most significant, it is actually expected that the higher frequency of 'like' in the informal register will bias the case selection to dative.

This second model also predicted the data with reasonable accuracy:

(122) **Logistic regression model 2: confusion matrix**

	Predicted DAT	Predicted NOM
Actual DAT	212	2
Actual NOM	17	41

(123) **Logistic regression model 2: accuracy measures**

	Precision	Recall	F1 score	Support
DAT	0.92	0.99	0.96	214
NOM	0.95	0.70	0.81	58
Avg./Total	0.94	0.85	0.88	272

Thus, it is possible to model case selection using a logistic regression, where the grammar that outputs nominative case is significantly less likely when the verb lexeme is of direct Old Norse stock rather than a recent Danish loan, and significantly more likely when the speaker is younger. One major factor not discussed so far is how speakers exploit this case selection to convey social meaning; in the following section, I explore a rational speech act model of how speakers access sociolinguistic knowledge in grammar selection.

4.5.3 Competing grammars and social meaning

It has been reported in the literature on Faroese that the nominative substitution behaviour in active quirky case verbs may indicate both language change in progress, and socio-cultural associations with child speech, colloquial register and anti-purism (Jónsson and Eyþórsson 2005, Petersen 2010, Þráinsson et al. 2012). I posit that the best way to approach the sociolinguistic question is to assume that speakers are not making a blind, random selection of one form over another, but actually have access to knowledge of style that they manipulate in order to convey social meaning. This type of grammar competition is not merely a statistical 'black box', but is known to and commented on by speakers; it is therefore an instance of a stereotype in traditional variationist terms (Labov 1972). Nominative substitution, like dative substitution in Icelandic, is a stigmatised variable: speakers are reported to describe it as 'bad Faroese' or 'Danish influence'. However, it is also a variable with indexical value (Silverstein 2003, Eckert 2008): a pertinent example is that of the baby bloggers, in which parents put words in the mouth of their child that convey cuteness and childlikeness. Conscious of register and the indexical field evoked by the variable, these bloggers' use of nominative with quirky case verbs is a stylistic act intended to engage the addressee, what Bell (1984) describes as audience design. The blogger engages in 'initiative shift' by triggering a switch to the

non-standard variant when the child is the feigned speaker (Bell 1984:182): they construct a 'child' identity for the speaker as a kind of accommodation to the imagined listener (here, the blog reader).

This style shift can be modeled probabilistically with Bayesian reasoning in a version of the Rational Speech Act model (Goodman and Frank 2016), as exemplified by Burnett (2017) in her approach to Kiesling's study on the –ING/–IN' variable in English among speakers in a fraternity (Kiesling 1998). Burnett (2017:256–257) formalises the construction of personae or identities as the combining of ideological properties that pattern together, for example {competent, incompetent, casual, delicate, masculine, feminine}; it is assumed that only some combinations of these properties can form personae, e.g. 'competent' and 'incompetent' cannot be indexed simultaneously. Burnett (2017:257) construes the indexical field as equivalent to a set of personae that it is possible to construct with a given variant (Montague 1973, Eckert 2008). The properties associated with the nominative and dative variants are given in (124). I construe 'colloquial, Danish' as elements of a persona that is young, rebellious or anti-purist, internationally-minded and more influenced by Denmark and broader European culture than local Faroese culture. By contrast, dative is the unmarked or standard form, and so the indexical properties can be decomposed into elements of seriousness or maturity, a prescriptivist or puristic attitude to language, and a locally or Faroese-oriented mindset over against Danish influence. Nominative also indexes cuteness, as evinced by the use of nominative by baby bloggers; since dative is an elsewhere case with respect to this, I do not construe it as indexing 'non-cuteness' but merely as not indexing cuteness.

(124) **Indexical field: nominative versus dative case**

VARIANT	ECKERT FIELD
DAT	{mature, purist, Faroe-centric}
NOM	{childish, cute, anti-purist, cosmopolitan}

I assume that the set of possible personae generated by these properties contains every possible non-contradictory combination of those indexed by the given variant, e.g. a persona defined by {childish, cosmopolitan} can be indexed by use of nominative, but not {Faroe-centric, cosmopolitan} (contradictory) nor {childish, purist} (indexed by different variants). Moreover I assume that a persona consists of more than one indexed property, i.e. {purist} is not a persona but {purist, Faroe-centric} is.

Follwing Burnett (2017:258), I assume that the speaker makes a hypothesis about the listener's prior beliefs, which can be represented as a probability distribution over the set of available personae Pr. This information may contain assumptions about the individual speaker (e.g. 'Jógvan is young and Danish-influenced') or more general stereotypes (e.g. 'people from Suðuroy are Faroe-centric'). We assign probability weights to the personae based on these hypothesised beliefs:

(125) **Listener prior beliefs:** Jógvan, teenager

Persona	Pr(persona)
{mature}	0.025
{purist}	0.025
{Faroe-centric}	0.025
{mature, purist}	0.019̇4
{purist, Faroe-centric}	0.019̇4
{mature, Faroe-centric}	0.019̇4
{mature, purist, Faroe-centric}	0.019̇4
{childish}	0.1
{cute}	0.1
{anti-purist}	0.1
{cosmopolitan}	0.2
{childish, cute}	0.05
{childish, anti-purist}	0.05
{childish, cosmopolitan}	0.05
{cute, anti-purist}	0.025
{cute, cosmopolitan}	0.025
{anti-purist, cosmopolitan}	0.05
{childish, cute, anti-purist}	0.019̇4
{childish, cute, cosmopolitan}	0.019̇4
{childish, anti-purist, cosmopolitan}	0.019̇4
{cute, anti-purist, cosmopolitan}	0.019̇4
{childish, cute, anti-purist, cosmopolitan}	0.019̇4

Once the listener hears the variant used by the speaker, they adjust their beliefs according to the restricted set of personae available for that variant; for instance, if they hear the dative variant, they assign probability 0 to the persona {childish, cute}. For the speaker's part, we assume following Burnett (2017:259) that there is some utility function for them to use a variant m to construct a given persona P, formalised in (126):

(126) $U_s(P, m) = \ln(Pr(p|m))$

In other words, when the speaker wishes to construct persona P, the utility of them using variant m is the natural log of the probability of P given the indexical fields of m. For example, if we assume that teenager Jógvan wishes to construct an {anti-purist, cosmopolitan} persona, we run the model using the probability distribution in (125), which in this case predicts that he will select the nominative variant with a probability of 1.0 when constructing this persona, and the dative variant also with a probability of 1.0 when constructing the persona {mature, Faroe-centric}. A more complex example would be a blogger writing about Faro-Danish politics: in this case, there would be the conflicting pressure to use standard forms like the dative, represented by a persona {mature, purist}, but there may also be pressure to appear cosmopolitan, for example the persona {anti-purist, cosmopolitan}. One assumes that any persona with the properties {childish} or {cute} would have a very low probability in this context. An example probability distribution for this case is given in (127):

(127) **Listener prior beliefs:** Einar, political blogger

Persona	*Pr*(persona)
{mature}	0.1
{purist}	0.1
{Faroe-centric}	0.1
{mature, purist}	0.05
{purist, Faroe-centric}	0.05
{mature, Faroe-centric}	0.05
{mature, purist, Faroe-centric}	0.025
{childish}	0.048
{cute}	0.048
{anti-purist}	0.1
{cosmopolitan}	0.1
{childish, cute}	0.048
{childish, anti-purist}	0.01
{childish, cosmopolitan}	0.01
{cute, anti-purist}	0.01
{cute, cosmopolitan}	0.01
{anti-purist, cosmopolitan}	0.025
{childish, cute, anti-purist}	0.005
{childish, cute, cosmopolitan}	0.005
{childish, anti-purist, cosmopolitan}	0.01
{cute, anti-purist, cosmopolitan}	0.048
{childish, cute, anti-purist, cosmopolitan}	0.048

This time the calculation yields a probability of 1.0 for the dative variant when constructing the persona {mature, Faroe-centric} and 1.0 for the nominative when constructing {anti-purist, cosmopolitan}. The reason the probabilities are all 1.0 for this variable comes from an assumption behind Burnett's model that a variant is either compatible or incompatible with a persona. In other words, social meaning is treated as equivalent to descriptive meaning: use of nominative to convey childishness would then be the same as asserting 'I am childish'. However, this is not the only possibility for modeling social meaning, and there may be good reasons to see social meaning as use-conditional (Qing and Cohn-Gordon 2018). The RSA model presented here only concerns social meaning, and therefore can only explain the sociolinguistic pressures on the variable, not the grammatical or lexical-semantic pressures: it may be, for example, that the persona {anti-purist, cosmopolitan} is unlikely to be conveyed via nominative case with *tørva* 'need', since this verb strongly favours the dative and only occurs four times in the blog corpus with nominative; in fact, this persona favours the Danish phrasal construction *hava brúk fyri* 'have need of' which is common in colloquial Faroese. Nevertheless, the RSA model provides a way of quantifying when a particular variant is more or less likely to be chosen given socio-pragmatic priors.

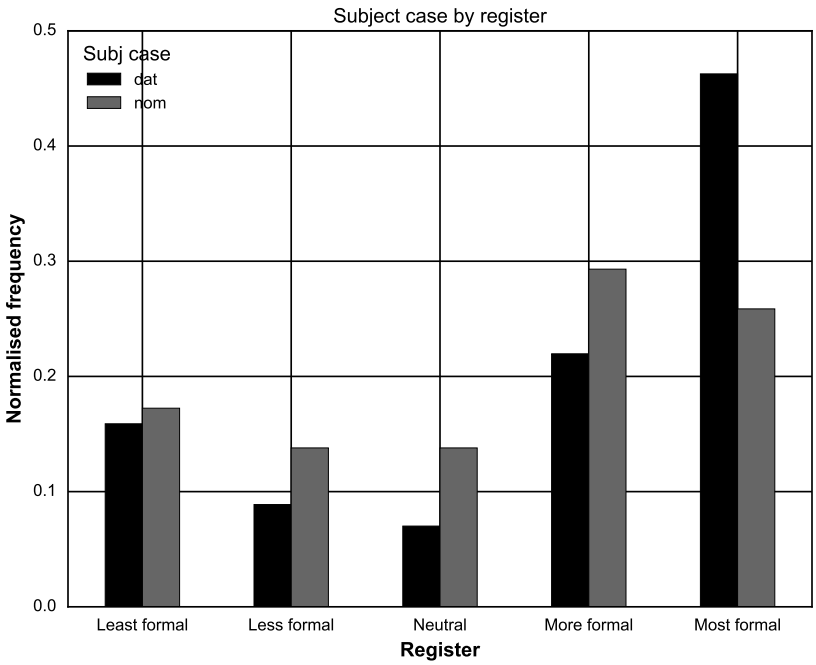


Figure 4.5: Subject case by register

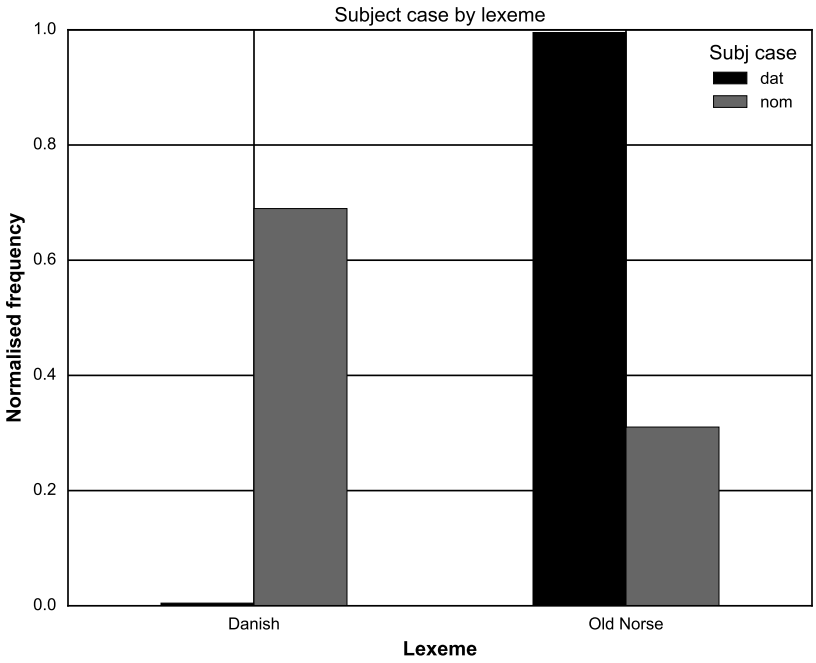


Figure 4.6: Subject case by lexeme

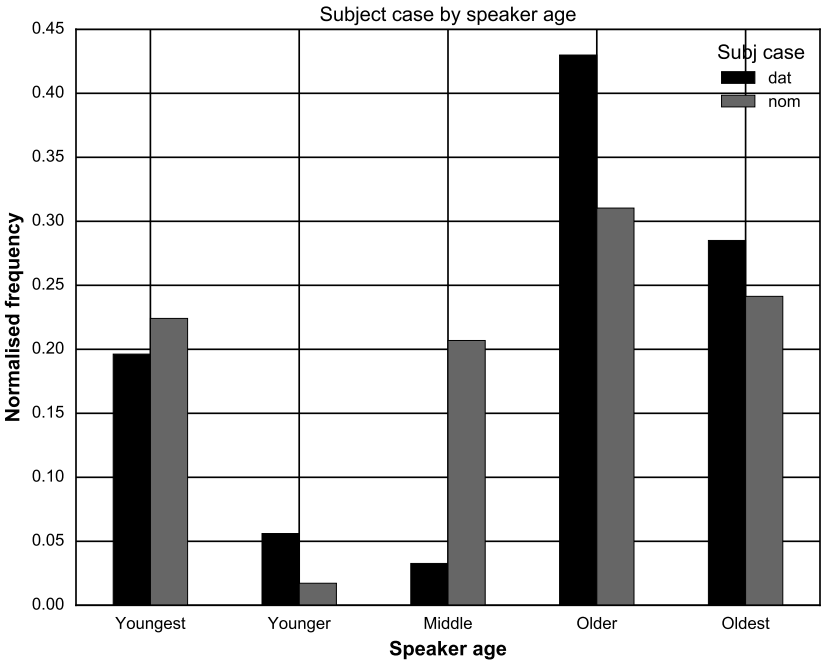


Figure 4.7: Subject case by speaker age

4.6 Summary

To conclude, in this section I have argued that the observed difference between Icelandic and Faroese quirky case predicates, namely a nominative object case with object agreement in Icelandic versus accusative object case and default third person singular agreement in Faroese, can be captured by a different ranking of the pair of constraints {AgrNom, Max[–hr]}, i.e. a constraint enforcing agreement with a nominative argument and one enforcing the realisation of structural object case. In order to account for the observed variation in Faroese subject case with the relevant verbs, that is, the possibility of substituting nominative case on the subject with full person agreement on the verb, I argued that Faroese speakers have access to two competing grammars, with a different ranking of the pair {SubjNom, Max[LC]}, i.e. one constraint enforcing realisation of lexical case, and another ensuring that a nominative subject occurs in Spec,TP. Moreover, the same constraint Max[LC] conflicts with other constraints enforcing structural case such as Max[–hr] to derive the possibility or impossibility of lexical object case. Finally, I argued that the Faroese competing grammars can be modelled probabilistically: they are discrete in the sense that only one winning output candidate exists for a given input per grammar, but each grammar may be more or less likely to be activated contextually, assuming some relevant grammatical and extra-grammatical factors. I formulated a simple explicit model of this by performing a logistic regression on data taken from the Faroese blog corpus. A potential avenue for future work is to expand and improve upon such models of grammar competition in order to account for morphosyntactic variation.

In Chapter 5, I demonstrate how the same constraint interaction, with the addition of a domain-specific constraint, accounts for case preservation in the passive, arguing that competing grammars again offers a consistent explanation for the observed variation. I present data from surveys conducted on the Faroe Islands in support of my hypothesis. In Chapter 6 I extend the OT model to ditransitives and passives of ditransitives in Faroese and Icelandic, again drawing upon extensive survey data collected on the Faroes and Iceland. I make the case for the constraint-based theory I present, arguing that it achieves both empirical coverage and explanatory adequacy.

Chapter 5

Faroese passive

5.1 Introduction

In this chapter, I present data from surveys conducted on the Faroe Islands, and present an analysis of the passive consistent with the theory I have adopted, that accounts for the patterns observed in the Faroese data, and explains both typological and intra-linguistic variation.

5.2 Data

Þráinsson et al. (2012:69–70,265–277) provide some basic information about the passive in Faroese:

- the agent is 'more frequently left out than in English' but can 'often be mentioned in a prepositional phrase with *av*, "by"';
- dative case on an object of a monotransitive is 'sometimes "preserved" in the corresponding passive subject', e.g. with the verbs *takka* 'thank' and *trúgva* 'believe', but not with other verbs like *hjálpa* 'help' or *bjóða* 'invite';
- impersonal passive 'can be formed with certain intransitive verbs such as *dansa* 'dance', *syngja* 'sing", as well as with "optionally transitive" verbs whose objects can be left out such as *eta* 'eat', *drekka* 'drink'.

To my knowledge, no other prior work exists on the Faroese passive; therefore, many questions remain regarding the agent phrase, case preservation and impersonal passive. To investigate further, I conducted two acceptability judgement surveys on the Faroe Islands asking participants to rate various kinds of passive sentences. In one survey the sentences included an agent PP with *av* 'by'; in the other this phrase was absent.

5.2.1 Faroese passive survey 1: no agent phrase

5.2.1.1 Participants

42 participants were recruited using a link to a Qualtrics survey posted in the Faroese-language Facebook group, *Føroysk rættstaving*;[1] no compensation was offered for participation. 22 of the participants fully completed the survey; the remaining 20 gave partial responses. All participants were required to declare that Faroese is their native language before taking part in the survey. 21 participants voluntarily provided demographic information: of this subset, 7 were male and 14 female, with a mean age of 41.6 years (σ=13.2 years, range 25–67); 11 were from towns *norðanfjørðs* (Northern dialect region), 7 were from Tórshavn or the area surrounding the capital, and 3 from Suðuroy.

5.2.1.2 Materials

Participants were asked to provide judgements on 25 sentences. The order of the target sentences presented for judgement was randomized, and interspersed with filler sentences whose judgements were known to me prior to the survey. The stimuli sentences are listed in Appendix B1. Table 5.1 shows the verbs tested; both the *verða* and *blíva* auxiliaries were included, although not for every verb. A variety of argument structures were tested with respect to transitivity, i.e. verbs which obligatorily take an object such as 'hit', impersonal passives of obligatorily objectless verbs like 'dance' (excluding cognate objects), and ambitransitive verbs like 'eat'.

Table 5.1: **Faroese passive sentences**

No.	Verb	English	Aux.	Subject	Argument structure
1	*elska*	love	*verða*	pron.3sg.f.nom	subj-verb, no complement phrase
2	*síggja*	see	*blíva*	pron.3sg.m.nom	subj-verb, no complement phrase
3	*eta*	eat	*verða*	bread-the.nom	subj-verb, no complement phrase
4	*gloyma*	forget	*blíva*	pron.3sg.f.nom	subj-verb, no complement phrase
5	*mála*	paint	*verða*	wall-the.nom	subj-verb, no complement phrase
6	*sláa*	hit	*blíva*	pron.3sg.m.nom	subj-verb, no complement phrase
7	*sparka*	kick	*verða*	pron.3sg.f.nom	subj-verb, no complement phrase
8	*eygleiða*	watch	*blíva*	pron.3sg.f.nom	subj-verb, no complement phrase
9	*lesa*	read	*verða*	book-the.nom	subj-verb, no complement phrase
10	*dansa*	dance	*verða*	impersonal	*har* expletive + temporal phrase
11	*syngja*	sing	*blíva*	impersonal	*har* expletive + locative phrase
12	*drekka*	drink	*verða*	impersonal	*har* expletive + locative phrase
13	*eta*	eat	*blíva*	impersonal	*har* expletive + locative phrase
14	*mála*	paint	*verða*	impersonal	*har* expletive + locative phrase
15	*sláa*	hit	*blíva*	impersonal	*har* expletive, no complement phrase
16	*sparka*	kick	*verða*	impersonal	*har* expletive, no complement phrase
17	*lesa*	read	*blíva*	impersonal	*har* expletive, no complement phrase

[1] A discussion group on Faroese grammar and linguistic topics, which can be found at <https://www.facebook.com/groups/1859327380870 33/>, accessed 4/2/18. At the time of writing the group had approximately 13,000 members.

5.2.1.3 Procedure

The procedure was identical to that of the survey in which quirky case sentences were tested, laid out in section 4.3.1.3 above.

5.2.1.4 Results

In Figure 5.1 mean acceptability is plotted against verb item, in addition to whether the passive was personal or impersonal (i.e. whether the expletive *har* is present).[2] As is evident, relatively high mean acceptability was elicited for the personal passives, all of which had a mean above 4 on the 5-point scale. Impersonal passives were less consistently accepted, though that of 'dance' had a mean acceptability over 4. Less certainty was expressed for judgements of impersonal passives with 'eat', 'kick', 'paint', 'read' and 'sing', with 'hit' as the only verb consistently judged as completely unacceptable in the impersonal construction. In all cases the personal passive of a given verb was judged on average more acceptable than the impersonal passive of the same verb, but in the case of 'read' and perhaps also 'kick' the difference looks to be insignificant.

I ran ordered logit regression models using R and *ordinal* (Christensen 2018). Random intercepts were included for Speaker and Item. It does not make sense to test the fixed effect of verb without also considering passive type, since it is quite evident that passive type interacts with verb choice, most evident in Figure 5.1 with 'hit'. Therefore, I ran the following model on the subset of judgement data for verbs tested in both personal and impersonal passives ('eat', 'hit', 'kick', 'paint', 'read'):

$$\text{Response} \sim \text{Verb} * \text{Passive type} + (1 \mid \text{Speaker}) + (1 \mid \text{Item})$$

Taking the verb 'eat' as intercept, the verb choice of 'hit' was significant by itself (β=-6.3, p<0.01). There were significant interactions with 'hit' in the personal passive (β=8.7, p<0.01) and 'read' in the personal passive (β=-1.8, p<0.03), i.e. compared to the difference in mean acceptability of 'eat' in the personal versus impersonal, 'hit' was judged very significantly better in the personal than impersonal, whilst with 'read' the difference is significantly less. The fixed effect of passive type by itself was also significant in the subset of data with both types of passive, in that personal passive was judged significantly better than impersonal across the board (β=2.2, p<0.01). Furthermore, considering only the fixed effect of verb choice with the subset that excludes personal passive (only the verbs 'dance', 'drink' and 'sing'), it emerges that verb choice significantly affects acceptability of the impersonal passive: with 'dance' as intercept, 'sing' was judged extremely significantly worse (β=-3.8, p<0.01) and 'drink' significantly worse (β=-1.7, p=0.01).

In order to test the effects of auxiliary choice and animacy of the subject, I ran the same type of model on different subsets of the data. Looking only at judgements for those verbs which were tested with both auxiliaries ('eat' and 'read'), the auxiliary *verða* emerged as significantly better than *blíva* (β=2.2, p<0.01), but there was also an interaction with verb choice: 'read' with *verða* improves the mean judgement over 'read' with *blíva* significantly less than is the case for 'eat' (β=-2.0, p=0.02). As for animacy of the subject, I ran the model only on those verbs whose subjects were present in the syntax ('eat', 'forget', 'hit', 'kick', 'love', 'paint', 'read', 'see' and 'watch'), i.e. excluding impersonal passives, since although a human agent

[2] I chose the expletive *har* 'there' instead of *það* 'it' to avoid the confound with referential-'it'.

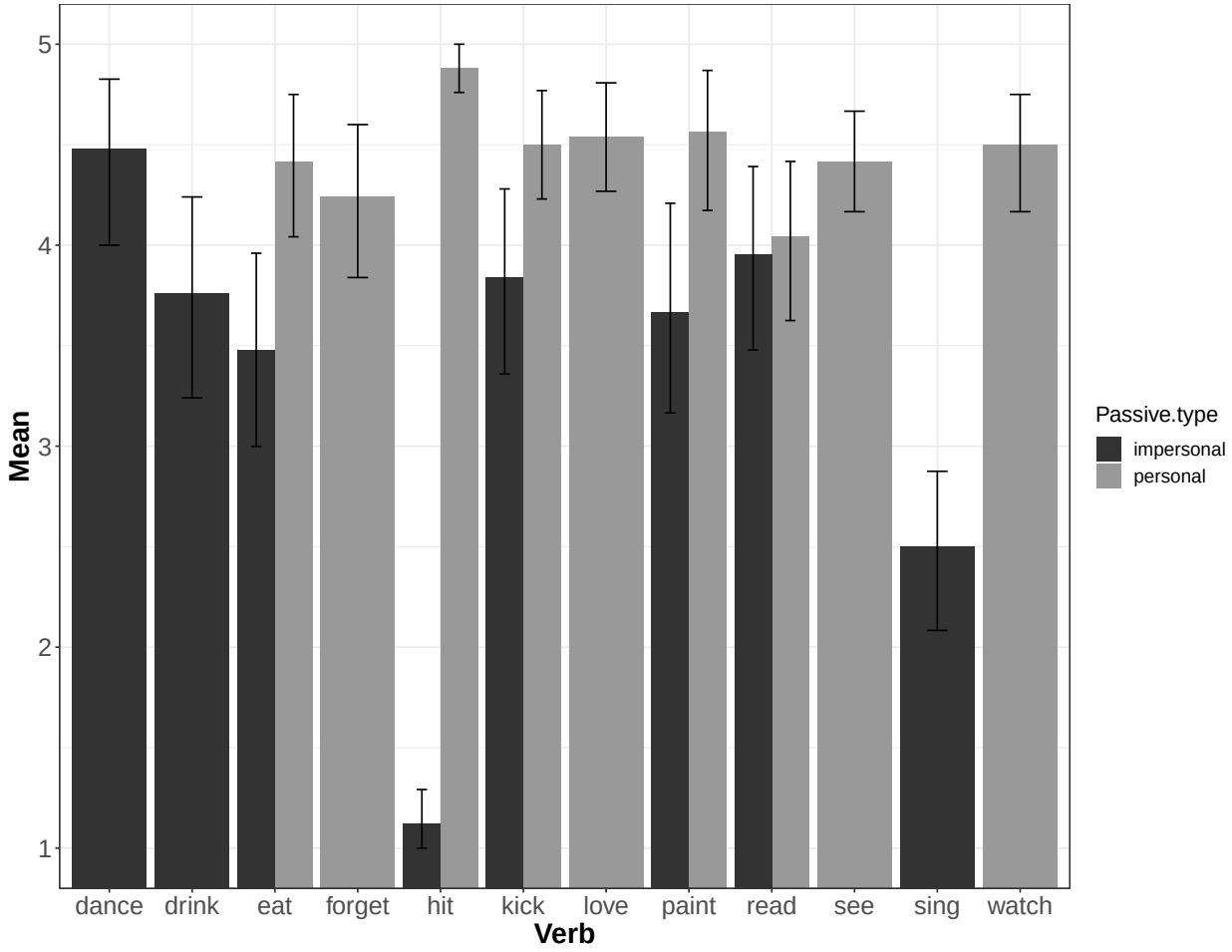


Figure 5.1: **Faroese passive survey 1: mean acceptability by verb and passive type**

is presupposed with impersonal passives, a clearer contrast is present between the passives with overt subjects ('he was kicked', etc.). Animacy of the subject of the passive by itself did emerge as significant (β=0.4, p<0.01), though I do not have data for the same verb with both animate and inanimate subjects.

5.2.1.5 Discussion

We may thus conclude from this passive survey that:

- impersonal passives were judged across the board as less acceptable in Faroese than personal passives;
- verb choice (i) interacts with passive type, such that the improvement in mean acceptability of the personal over impersonal passive differs by verb, and (ii) has a significant effect on acceptability of the impersonal when considered alone, particularly in the case of 'sing' which does not seem to permit the construction;

- the auxiliary *verða* has some effect on acceptability of the passive, though this may differ by verb;
- animacy of the subject of the passive did have a global effect on acceptability across all verbs, but interactions with verb choice or other factors were not tested.

Therefore, we ought to bear in mind the fact that although impersonal passives are acceptable in Faroese, their acceptability depends on the semantics of the verb. This suggests an analysis in which a constraint interaction allows the marked construction to occur, but its availability is determined by the lexical item — a phenomenon that I suggest is similar to case preservation, given that certain verbs seem to preserve case while others do not, within the same language. As I will argue in section 5.3 below, this may still be modelled by competing grammars, but in this scenario the probability of the grammar permitting the construction is significantly more likely when the lexical item permitting it is present in the input. In other words, the competing grammars model for impersonal passives and case preservation may have a more significant fixed effect of lexeme than the model for nominative substitution in quirky case verbs, but the underlying constraint interaction may be the same.

5.2.2 Faroese survey 2: passives with agent phrase; sentences with *tróta*

5.2.2.1 Participants

37 participants were recruited using a link to a Qualtrics survey posted in the Faroese-language Facebook group *Føroysk rættstaving*; no compensation was offered for participation. 15 of the participants fully completed the survey; the remaining 22 gave partial responses. All participants were required to declare that Faroese is their native language before taking part in the survey. The 15 participants who fully completed the survey voluntarily provided demographic information: of this subset, 6 were male, 8 female and one withheld their gender. The mean age was 43.4 years (σ=13.5 years, range 21–60). 10 participants were from Tórshavn or the area surrounding the capital, 4 were from the northern region, and one from Suðuroy.

5.2.2.2 Materials

Participants were asked to provide judgements on 45 sentences. The order of the target sentences presented for judgement was randomized, and interspersed with filler sentences whose judgements were known to me prior to the survey. The stimuli sentences are listed in Appendix B2. The verbs tested were the same as in the survey described in section 5.2.1, but adding a 'by'-phrase headed by the preposition *av* that overtly expresses an agent. Within the same survey, I also tested 16 active sentences with the verb *tróta* 'exhaust, run out of', which has been reported to occur with nominative objects (see section 7.3 for discussion).

5.2.2.3 Procedure

The procedure was identical to that of the first Faroese passive survey, described in section 5.2.1.3.

5.2.2.4 Results

Figure 5.2 shows mean acceptability plotted against verb and passive type. Again, I ran ordered logit regression models in R using *ordinal*; as in the first survey, random intercepts were included for Speaker and Item. I excluded results for the verb 'eat' from the model, since one respondent commented: "*Har bleiv etið av øllum* does not mean that everyone ate, but that people ate all kinds of things".[3]

$$\text{Response} \sim \text{Verb} * \text{Passive type} + (1 \mid \text{Speaker}) + (1 \mid \text{Item})$$

Considering the subset of verbs with data for both passive types, taking 'hit' as intercept, the fixed effect of verb by itself was found to be significant in the case of 'paint' (β=2.1, p<0.01) and 'read' (β=2.0, p<0.01), both of which were judged better than 'hit' on average. Similarly to the first survey, personal passive was judged significantly better than impersonal across the board (β=5.0, p<0.01). However, there was also an interaction with 'paint' and the personal (β=-3.4, p<0.01) as well as 'read' and the personal (β=-5.0, p<0.01): the personal passive improved the mean judgement of 'hit' significantly more than it did with 'paint' or 'read'.

It was not possible to test the effect of auxiliary choice for this survey, since the only usable data were for the verb 'read', and so interactions with main verb choice could not be tested. Interestingly, unlike the first survey, subject animacy did emerge as significant (β=2.6, p<0.01), with animate subjects judged better on average than inanimates. However, again it was not possible to test the interaction with verb choice, since there were no comparable data for the same verb tested with both animate and inanimate overt subjects.

5.2.2.5 Discussion

These results show that with the addition of the agent phrase, even straightforward passives of monotransitives were never unequivocally accepted by these speakers. However, it is evident from Figure 5.2 that acceptability again depends a lot on the individual verb: 'love' is the only verb whose mean acceptability reaches above 4, while that of 'dance' does not reach above 2. Moreover, the impersonal passive was judged worse than the personal across the board, but interacts with verb choice; the higher rating of 'eat' and 'drink' can be attributed to the confound with the 'all types' interpretation. Hence this survey confirms the dependence of acceptability of the Faroese passive on verb lexeme and whether the construction is impersonal or personal, as well as the interdependence of these two factors. This survey did not shed any light on auxiliary choice, and although subject animacy had a significant effect on acceptability, we cannot draw firm conclusions since the interaction with verb choice was not tested.

5.2.3 Summary of Faroese passive survey results

To summarise these findings, these small surveys on passives in Faroese revealed that acceptability judgements are significantly influenced by (i) verb choice; (ii) presence of an expletive, i.e. whether the passive is personal/impersonal; and (iii) presence/absence of an agent phrase. Moreover, the factors of verb choice

[3]The availability of this interpretation could also be responsible for pushing the mean acceptability of the 'drink' impersonal passive above 3.

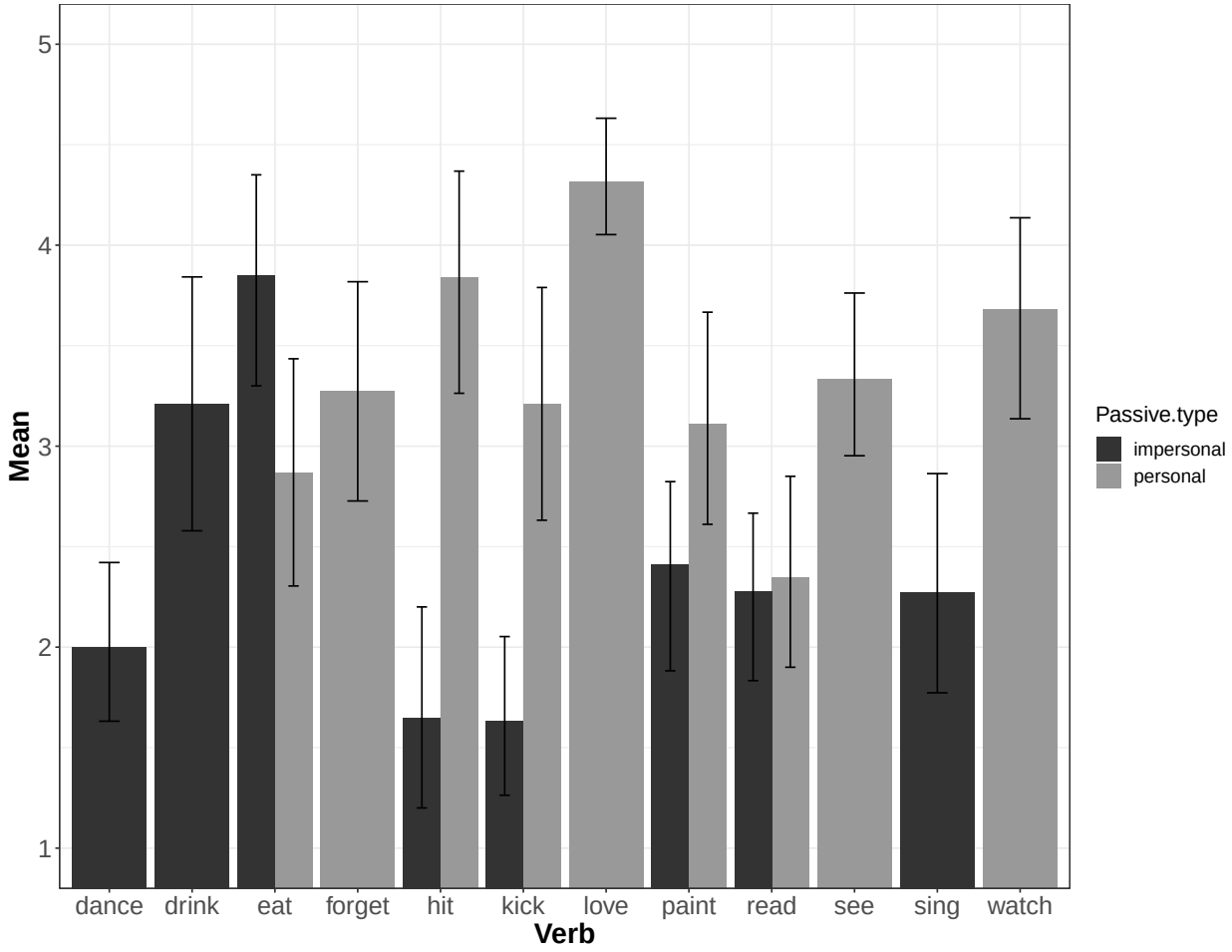


Figure 5.2: **Faroese passive survey 2: mean acceptability by verb and passive type**

and personal/impersonal passive are strongly interrelated, since only certain verbs admit impersonal passives, which is largely determined by the semantics of the verb lexeme. Our theory must therefore be able to handle the fact that the availability of passive is verb-specific, and even more so for the impersonal passive. In section 5.3 I present my analysis of the passive, also dealing with the issue of case preservation.

5.3 Analysis

I adopt here a version of the approach to passives posited by Kiparsky (2013). The basic assumptions underlying linking theory are discussed in Chapter 3. Passivisation is construed as an invariant operation triggered by a passive morpheme contained in the input, and operates on the basic argument structure at the level of Semantic Form. Passive is a valency-reducing operation that demotes, i.e. existentially binds, the highest non-demoted theta-role. The input for passivising a ditransitive would therefore be as in (128):

(128) *gav* + Passive: $\lambda z \lambda y \exists x$ [x CAUSE [BECOME [y HAVE z]]]

As discussed in section 6.3 below, promoting the theme to subject in a passive will incur a violation of Max[–hr], since the abstract case [–hr] will not be realised in morphosyntax, either by the position or item which both bear [+hr]. As passivisation is demotion of the highest theta-role on this account, impersonal passive consists of valency reduction on a predicate with only one theta-role. The demoted role from the active is present in the passive argument structure with a default interpretation of [+human], unless otherwise specified in a 'by'-phrase. We can already account for the passive facts with the constraints proposed thus far, with the addition of Parse, a constraint that rules out null output, i.e. the input must be realised. This ensures that marked diatheses like passive do not always lose to the corresponding active or null candidate, which otherwise would harmonically bound the passive candidate. I assume that null output does not violate faithfulness constraints like Max and IdentCase, since there is no output to which to map. I lay out the requisite constraints in (129-130):

(129) ArgSP: Assign a violation if no argument occupies subject position (Spec,TP).

(130) SubjNom (SNom): Assign a violation for each subject position (Spec,TP) not occupied by a nominative argument.

(131) Dep: Assign a violation for each item present in the output that is not present in the input.

(132) Parse: Assign a violation for a null parse of the input (i.e. if the output is zero).

(133) IdentCase (IdC): Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].

(134) Max[LexCase] (Max[LC]): Assign a violation for each lexical case feature on an argument at the level of abstract case that does not correspond to the same lexical feature value on an argument at the level of morphosyntactic case.

Since we already have the ranking for actives in Faroese, we need only hypothesise a ranking for Parse with respect to the other constraints. The three constraints ArgSP » {Dep, Parse} are sufficient to account for the Faroese examples without lexical case; the ranking Parse » Dep generates the impersonal passive, and Dep » Parse rules it out. Either ranking yields the correct monotransitive passive. These different rankings are, in a similar manner to the nominative substitution facts with dative-subject verbs, two grammars that compete. However, unlike nominative substitution, the choice of grammar here depends far more on the verb semantics than on contextual or sociolinguistic factors. This can still be modelled probabilistically, but the lexical factor will be of far greater significance here. This is *not* the same as positing a lexeme-specific ranking (*pace* Pater 2000), since the claim is that speakers still have access to the 'wrong' ranking: it is merely statistically highly improbable that they will select this ranking, since the choice of verb is a highly significant fixed effect.

(135) **Intransitive passive: impossible**

$\lambda e \exists x$ V_{PASS} : *verða sungið* 'be sung'	ArgSP	Dep	Parse
a. V_{PASS} : *Varð sungið*	*!		
b. Expl V_{PASS} : *Það varð sungið*		*!	
☞ c. Ø			*

(136) **Intransitive passive: possible**

$\lambda e \exists x$ V_{PASS} : *verða dansað* 'be danced'	ArgSP	Parse	Dep
a. V_{PASS} : *Varð dansað*	*!		
☞ b. Expl V_{PASS} : *Það varð dansað*			*
c. Ø		*!	

(137) **Monotransitive passive**

$\lambda e \lambda y \exists x$ V_{PASS} : *blíva sligin* 'be hit'	ArgSP	Parse	Dep
a. V_{PASS} DP_y : *Bleiv sligin hann*	*!		
☞ b. DP_y V_{PASS} : *Hann bleiv sligin*			
c. Expl V_{PASS} DP_y : *Það bleiv sligin hann*			*!
d. Ø		*!	

Therefore, the model already adopted can straightforwardly be brought to bear on the issue of the impersonal passive. The principle is the same as that proposed to account for null expletives and nominative substitution, albeit with respect to a different pair of constraints, in this case {Parse, Dep}. The only difference between how I model the nominative substitution phenomenon and the impersonal passive is the relative importance of the verb lexeme factor: I assume analogous pragmatic, stylistic and sociolinguistic information to be accessible to speakers in both instances. However, the grammatical factor is different in these two phenomena: nominative substitution relates to the expression of lexically marked case, whilst impersonal passive relates to whether or not a monadic verb can undergo argument demotion and a dummy subject be inserted. A more illustrative contrast would be that of case preservation in the passive: in both nominative substitution with dative-subject verbs and non-preservation of case with passivised dative-object verbs, realisation of lexical case conflicts with realisation of abstract case. As I argue in the next section, however, case preservation has a more significant lexical-semantic factor than does nominative substitution. Thus a similar case-substitution behaviour may be explained by the same model of grammar competition, but with different weight assigned to the relevant variables.

5.3.1 Case preservation

As noted by Þráinsson et al. (2012:267ff), some dative-object verbs in Faroese preserve lexical case on the subject of the passive, e.g. *takka* 'thank', while others do not, e.g. *hjálpa* 'help', replacing the dative with nominative and triggering full agreement with the participle (138-139).

(138) a. Far. *Teir takkaðu honum.*
they.NOM.M thanked.PL him.DAT
'They thanked him'

b. Far. ***Honum*** *varð takkað.*
him.DAT was.SG thanked.SUP
'He was thanked'

c. Far. * *Hann varð takkaður.*
he.NOM was.SG thanked.NOM.M.SG

(139) a. Far. *Tær hjálptu okkum.*
they.NOM.F helped.PL us.DAT
'They helped us'

b. Far. ***Vit*** *blivu hjálptir.*
we.NOM were.PL helped.NOM.M.PL
'We were helped'

c. Far. * *Okkum bleiv hjálpt.*
us.DAT was.SG helped.SUP

Þráinsson et al. (2012:267–268) list the following verbs as case-preserving or non-preserving:

Preserving	Non-preserving
bíða '(a)wait'	*bjarga* 'save'
dugna 'help'	*bjóða* 'invite'
takka 'thank'	*heilsa* 'greet'
trúgva 'believe'	*hindra* 'hinder'
	mjólka 'milk'
	rósa 'praise'
	steðga 'stop'

It is striking that only four verbs are listed as having dative subjects in the passive, though in the case of *takka* 'thank' and *trúgva* 'believe' they are very high-frequency verbs. By contrast, *dugna* 'help' is uncommon (not a single token of this verb occurs in the blog corpus), and *bíða* is more frequently used as a phrasal verb *bíða eftir* 'wait for'. Therefore it seems that as a system, Faroese has lost case preservation in the passive apart from with the two lexemes *takka* and *trúgva*, in some sense a remnant of the older Icelandic-type pattern. It is also important to note that some verbs in Faroese optionally take dative or accusative objects. Since accusative is an option for object case on such verbs, we cannot determine whether the dative is preserving or non-preserving with respect to passivisation, but the possibility of accusative seems to suggest this is an analogous case substitution to nominative substitution on dative subjects. Verbs of this type given by Þráinsson et al. (2012:260) are: *floyta* 'float, set afloat', *lyfta* 'lift', *lætta* 'lift, raise', *reiggja* 'wave, brandish', *tarna* 'delay', *vika* 'move, budge'. The authors note that these are all verbs of movement, and in some instances there is a subtle semantic distinction between accusative and dative objects with these verbs.

How then to disentangle these case substitution facts? It is clear that dative-object verbs are not a homogeneous set, since case may be preserved/not preserved on the passive subject, and the object case is substitutable/not substitutable by accusative in the active, which may or may not convey a semantic distinction. The lexical semantics of the individual verb appear to play a large role in the case frame that

surfaces whether in the active or passive. Further work is required to establish the semantic factors relevant to case selection, a task beyond the scope of this thesis. However, the competing grammars model proposed thus far is versatile enough to account for both types of case substitution: that which is broadly speaking semantically 'opaque' but may convey social meaning, such as nominative substitution, and that which conveys a semantic distinction, such as the verbs of motion. The case-preserving behaviour of the passives of 'thank' and 'believe' is less obviously either sociolinguistically or semantically motivated, but seems to be a fossil of an earlier stage of the language. All three of these types, nonetheless, can be accounted for by differing weight of the fixed effects in our model: while the choice of case is obviously categorial (option A or option B), and the grammar reflects this as a specified constraint ranking, several interacting factors may result in a speaker selecting a particular variant. In the case of the variation that communicates social or pragmatic meaning, factors other than lexical item such as register or age may be weighted more strongly, whereas in the case of lexical-semantic differences, the verb lexeme factor is the most significant. Finally, we currently do not know enough about case preservation in Faroese to establish which factors are most significant in choice of grammar, but the bigger point is that with a probabilistic competing grammars model — crucially, one in which the dependent variable is a discrete selection of one constraint ranking over others — the facts can be accounted for while acknowledging the sundry influences on morphosyntactic variation.

In order to capture the observed case (non-)preservation behaviour in the passive, as discussed above I conceptualise this as two competing grammars: the 'preserving' one with the ranking MAX[LC] » PARSE » SNOM and the 'non-preserving' one with the ranking SNOM » PARSE » MAX[LC]. Diachronically, the loss of lexical case can be seen as reranking, since deranking of MAX[LC] coincides with a stricter mapping from argument structure to syntactic structure, here explained by the higher ranking of SNOM. **Interestingly, this also makes the prediction that when the 'preserving' grammar is activated, the passive of a quirky-subject predicate will be unavailable, whereas when the 'non-preserving' grammar is activated, a quirky-subject verb will passivise with a nominative subject.** These predictions are borne out in Faroese in what at first glance appears to be the aforementioned lexical splits: quirky-subject verbs that either allow or disallow nominative substitution, and quirky-object verbs that either allow or disallow preservation under passive. The verb *dáma* 'like' permits nominative substitution in the active, and has a passive form with a nominative subject (140), which we know is not an adjectival use since the passive auxiliary *blíva* is used (instead of the copula *vera*). The verb *tørva* 'need' is very resistant to nominative substitution in the active (rare in the blog corpus and disliked by consultants), and does not have an attested passive (141).

(140) a. Far. *Mær dámar hasar bøkurnar.*
me.DAT likes.3SG those books-the.ACC
'I like those books.'

b. Far. *Eg dámi hasar bøkurnar.*
I.NOM like.1SG those books-the.ACC

c. Far. *Hon bleiv væl dámd.*
she.NOM was well liked.NOM.F.SG
'She was well liked.'

(141) a. Far. *Mær tørvar hasar bøkurnar.*
me.DAT needs.3SG those books-the.ACC
'I need those books.'

b. Far. * *Eg tørvi hasar bøkurnar.*
I.NOM need.1SG those books-the.ACC

c. Far. * *Hon bleiv tørvað.*
she.NOM was needed.NOM.F.SG
'She was needed.'

In the same vein, a verb like *takka* whose object bears preserving dative case, i.e. the subject of the passive is dative, is accounted for by the 'preserving' grammar, whilst a verb like *heilsa* 'greet' with non-preserving dative on the object is accounted for by the 'non-preserving' grammar. The following tableaux demonstrate the different rankings yielding the correct patterns:

Monotransitive with lexical subject case

$\lambda y \lambda x_{[LC]} \lambda e$ V : *tørva* 'need'	MAX[LC]	PARSE	SNOM
☞ a. $DP_{x[LC]}$ V DP_y : *Mær tørvar hana*			*
b. DP_x V DP_y : *Eg tørvi hana*	*!		
c. Ø		*!	

Monotransitive with 'weak' lexical subject case + nominative substitution

$\lambda y \lambda x_{[LC]} \lambda e$ V : *dáma* 'like'	SNOM	PARSE	MAX[LC]
a. $DP_{x[LC]}$ V DP_y : *Mær dámar hann*	*!		
☞ b. DP_x V DP_y : *Eg dámi hann*			*
c. Ø		*!	

Monotransitive passive with 'strong' lexical subject case

$\lambda e \lambda y \exists x_{[LC]}$ V_{PASS} : *verða tørvað* 'be needed'	MAX[LC]	PARSE	SNOM
a. DP_y V_{PASS} : *Hon verður tørvað*	*!		
b. $DP_{y[LC]}$ V_{PASS} : *Henni verður tørvað*	*!		*
☞ c. Ø		*	

Monotransitive passive with 'weak' lexical subject case

$\lambda e \lambda y \exists x_{[LC]}$ V_{PASS} : *blíva dámdur* 'be liked'	SNOM	PARSE	MAX[LC]
☞ a. DP_y V_{PASS} : *Hann bleiv dámdur*			*
b. $DP_{y[LC]}$ V_{PASS} : *Honum bleiv dámdur*	*!		*
c. Ø		*!	

Monotransitive passive with preserving lexical object case

$\lambda e \lambda y_{[LC]} \exists x$ V_{PASS} : *blíva takkað* 'be thanked'	MAX[LC]	PARSE	SNOM
☞ a. $DP_{y[LC]}$ V_{PASS} : *Henni bleiv takkað*			*
b. DP_y V_{PASS} : *Hon bleiv takkað*	*!		
c. Ø		*!	

Monotransitive passive with non-preserving lexical object case

$\lambda e \lambda y_{[LC]} \exists x$ V_{PASS} : *verða hjálpaðir* 'be helped'	SNom	Parse	Max[LC]
a. $DP_{y[LC]}$ V_{PASS} : *Teimum varð hjálpað*	*!		
☞ b. DP_{y} V_{PASS} : *Teir vórðu hjálpaðir*			*
c. Ø		*!	

Hence, if we make the crucial assumption that Parse is dominated by either Max[LC] or SNom, we can capture *both* the case preservation behaviour *and* the observed correlation between unavailability of passive and non-substitutable dative subject case. The covariance of case substitution and nominative subject passives is explained by the conflict between the pressure to express lexical case and having a nominative subject. By ranking Parse such that it either dominates Max[LC] or SNom, in those instances when the preserving grammar is likely to be activated (e.g. with a lexeme like *tørva* which is very averse to nominative substitution in the active), having nominative subject does not 'save' the passive candidate, since it violates Max[LC]; furthermore, we cannot express the lexical case on the wrong argument, since this will still violate Max[LC], which requires the same argument in the input to be lexically case-marked in the output.

5.3.2 A word on Icelandic 'dative sickness'

The nominative substitution phenomenon discussed above is reminiscent of a similar, more frequently discussed phenomenon in Icelandic known as 'dative sickness': the substitution of dative subject case on verbs whose subjects standardly bear (or historically bore) accusative or genitive case (Jónsson and Eyþórsson 2005, Þráinsson 2007:224ff). This phenomenon is somewhat different from the Faroese case substitution, since Icelandic has a far larger set of commonly used verbs with non-nominative subjects, for which some thematic generalisations have been made: non-nominative subjects are always non-agentive, and dative has been associated with the experiencer role and subjects of psychological predicates in particular. Therefore, in the Icelandic phenomenon, the loss of accusative subject case to dative may reflect an analogical process in which dative-subject verbs as a class are associated with a particular thematic structure, and so accusative is the more marked form. Nevertheless, as Þráinsson (2007:224) notes, the diachronic trajectory towards regularisation in the loss of quirky case appears to be occurring in both Faroese and Icelandic, despite it being highly unlikely that they have influenced each other in this regard (by far the stronger influence on Faroese is Danish).

I do not offer an analysis of the Icelandic dative substitution here, other than to suggest that a similar constraint interaction may be at play: Max[LC] will enforce the realisation of accusative subject case, but perhaps a constraint preferring non-agentive, non-theme arguments to be marked dative is at play; in that sense, dative may function as a kind of 'default quirky case'. If said constraint is ranked higher than Max[LC] in the Icelandic grammar that replaces accusative with dative subject case, the 'weakening' of quirky case has both a synchronic and diachronic explanation in the competing grammars model. As the case-substituting grammar is more frequently activated over time, the input for the child acquiring Icelandic will have increasing representation of the substitution behaviour, which increases the probability of the child inferring a case-substituting grammar. This rests on the assumption that the relevant factors that promote the deranking of Max[LC] are winning out, but such factors are far from fully understood.

A tentative case can be made for the role of social meaning: in a similar way to the Faroese nominative substitution, in Iceland the so-called 'dative sickness' represents anti-purism, since the phenomenon is frowned upon far more in Iceland than the nominative substitution is in the Faroes. Further study is needed to establish the sociolinguistic and pragmatic contexts in which dative substitution is more likely to occur.

5.4 Summary

To conclude this chapter, I have argued that the competing grammars model proposed for nominative substitution on dative-subject verbs is also adaptable to various phenomena relating to the Faroese passive. I presented new survey data from Faroese native speakers, confirming the availability of impersonal passive in some instances, but concluding that the lexical semantics of the individual verb is a particularly important factor. I offered an analysis of the impersonal passive as a constraint conflict between Dep and Parse, which can be paraphrased by the question "Is it worse to insert material (like an expletive) or not to have a passive form available?" Again, the ranking of {Dep, Parse} yields the (un)availability of the passive of intransitives.

I also argued that the same constraint rankings at work in the grammars that result in nominative substitution behaviour are behind the case (non-)preservation in the passive. The ranking Max[LC] » SNom results in the preservation of lexical case marking in both dative-subject verbs and passives of dative-object verbs, whereas the ranking SNom » Max[LC] generates the non-preserving, substituting forms. Moreover, an interesting correlation was observed between the preserving dative-subject verb *tørva* 'need' and the impossibility of passive, versus the non-preserving verb *dáma* 'like' and the possibility of passive: this already falls out from the model I propose, with the addition of Parse: Max[LC] » Parse » SNom predicts that it will be better to have no passive than to fail to express lexical case (even when the argument bearing said case is demoted), whilst SNom » Parse » Max[LC] predicts that it is better to have a passive that fails to express lexical case than not to have a passive. Therefore this model offers an explanation both for the by-verb variation in case realisation, and for the change that appears to be occurring towards a system-wide loss of quirky case.

Chapter 6

Faroese ditransitives

Faroese ditransitives are relevant to our discussion because (i) it has been reported that the dative argument, typically a recipient or goal, co-occurs with a nominative theme triggering object agreement in the passive (Þráinsson et al. 2012:272–273), a fact that would falsify the hypothesis that Faroese ranks MAX[–HR] over AGRNOM, due to the failure to realise accusative case on the theme; and (ii) dative case in ditransitives differs from dative subject or object case in monotransitives, in that it does not undergo nominative or accusative substitution. In the following sections I argue, based on extensive survey data, that in general Faroese speakers judge ditransitive passives unacceptable across the board, regardless of whether the theme argument is nominative or accusative; the offending nominative 'object' sentences are hence not a problem since they are not part of the Faroese speakers' grammars. Moreover, I argue that my version of linking theory generates the correct Faroese ditransitive case frames, while ruling out the unacceptable passive forms; it also captures the differences between the substitutable dative case in monotransitives and the dative on the recipient/goal argument in ditransitives.

6.1 Ditransitive verbs in Faroese

The most common case-marking pattern for Faroese three-argument verbs is nominative-dative-accusative (142), which is also the default in Icelandic.

(142) a. Far. *Pápin lænti soninum bilin.*
father-the.NOM lent son-the.DAT car-the.ACC
'The father lent his son the car.'

b. Far. *Hon gav gentuni telduna.*
she.NOM gave girl-the.DAT computer-the.ACC
'She gave the girl the computer.'

c. Far. *Hann seldi bóndanum kúnna.*
he.NOM sold farmer-the.DAT cow-the.ACC
'He sold the farmer the cow.'

(Þráinsson et al. 2012:262)

Unlike Icelandic, other case frames have generally given way in Faroese to the default pattern, or one of the arguments shows up as a prepositional phrase (Þráinsson et al. 2012:263). Some verbs also exhibit an accusative-accusative pattern, but in most of these the second object is semantically related to the verb (143).

(143) a. Far. *Kann eg biðja teg eina bøn?*
can I.NOM ask you.ACC a.ACC favour.ACC
'Can I ask you a favour?'

b. Far. *Tey spurdu meg ein spurning.*
they.NOM asked me.ACC a.ACC question.ACC
'They asked me a question.'

(Þráinsson et al. 2012:263)

In general, standard indirect object case in Faroese is dative. While an alternation exists with the prepositional phrase headed by *til* 'to', corresponding to English examples like 'I sent a letter to her', this is reportedly restricted to constructions where a clear directional interpretation is available (144).

(144) a. Far. *Hann seldi kúnna til bóndan.*
he.NOM sold cow-the.ACC to farmer-the.ACC
'He sold the cow to the farmer.'

b. Far. * *Hon beyð starvið til hana.*
she.NOM offered job-the.ACC to her.ACC
'She offered the job to her.'

(Þráinsson et al. 2012:264)

The indirect-direct object order is fixed in Faroese, since ungrammaticality results when the object arguments are switched:

(145) a. Far. *Hann seldi gentuni telduna.*
he.NOM sold girl-the.DAT computer-the.ACC
'He sold the girl the computer.'

b. Far. * *Hann seldi telduna gentuni.*
he.NOM sold computer-the.ACC girl-the.DAT

c. Far. *Teir góvu konginum hestin.*
they.NOM gave king-the.DAT horse-the.ACC
'They gave the king the horse.'

d. Far. * *Teir góvu hestin konginum.*
they.NOM gave horse-the.ACC king-the.DAT

(Þráinsson et al. 2012:265)

Little prior work exists on passives of ditransitives in Faroese. One example with the direct object promoted to subject is presented as grammatical in Þráinsson et al. (2012:266) without comment (146).

(146) Far. *Kúgvin varð seld bóndanum*
cow-the.NOM was sold farmer-the.DAT
'The cow was sold to the farmer'

It has been claimed that the dative indirect object of a ditransitive cannot be promoted to subject, whether the case is preserved or not (unlike dative object case in monotransitives):

(147) a. Far. ?? *Bóndanum varð seld kúgvin*
farmer-the.DAT was sold cow-the.NOM
'The farmer was sold the cow'

b. Far. ? *Bóndanum varð seld ein kúgv*
farmer-the.DAT was sold a.NOM cow.NOM
'The farmer was sold a cow'

c. Far. * *Bóndanum varð selt eina kúgv*
farmer-the.DAT was sold a.ACC cow.ACC

(Þráinsson et al. 2012:270)

It is noteworthy that this contrasts sharply with Icelandic, where the dative argument is typically promoted to subject (Þráinsson et al. 2012:271–272). According to Þráinsson et al., these examples are actually judged even worse in Faroese with nominative subjects:

(148) a. Far. * *Bóndin varð seldur kúgvin/kúnna*
farmer-the.NOM was sold cow-the.NOM/ACC
'The farmer was sold the cow'

b. Far. * *Gentan bleiv givin teldan/telduna*
girl-the.NOM was given computer-the.NOM/ACC
'The girl was given the computer'

In general, Faroese consultants expressed strong doubts about passives of ditransitives. Although it has been claimed that dative-subject, nominative-object passives exist in Faroese such as (146), in fact my fieldwork shows that many of the passive examples cited in Þráinsson et al. (2012:269–272) are unacceptable or highly dubious, and that speakers prefer an impersonal active construction as in (149):

(149) Far. *Mann gav konunum bøkurnar*
one gave women-the.DAT books-the.ACC
'One gave the women the books'

This paints a varied picture of the availability of the passive for three-argument verbs, which may well be extremely verb-specific, in the same way as the acceptability of monotransitive passives (see Chapter 5); additionally, it appears that the case and position of the arguments must be right for the ditransitive passive to be accepted at all.

6.2 Survey data I

In order to investigate the data further, I conducted three surveys on the Faroe Islands asking native speakers for acceptability judgements on ditransitive passives, in addition to one Icelandic survey for comparison.[1] All surveys were completed online using the Stanford version of Qualtrics. The ditransitive passive

[1] The surveys were conducted during April-June 2017. Thanks to Hjalmar P. Petersen, Jógvan í Lon Jacobsen, Bogi and Súsanna Vinther and family, Beinir Hentze Johannessen and Johann Petersen for their help. Thanks to Einar Freyr Sigurðsson and Jóhannes Gísli Jónsson for help with the Icelandic survey.

stimuli varied across several dimensions: (a) word order, (b) verbal agreement morphology, (c) case of the direct object, (d) gender of the arguments. It has long been noted that there is a certain degree of diglossia in Faroese, in that the spoken language often features more Faro-Danish vocabulary and constructions, whereas there is a subset of the lexicon that tends to be used only in written or formal, literary Faroese.[2] In colloquial Faroese the passive can be avoided by the use of the impersonal *mann*-construction, which is a loan from Danish that does not exist in Icelandic (Petersen and Jónsson p.c.). Therefore, I attempted to control for register by embedding the target sentences in a surrounding contextual sentence that used vocabulary from a colloquial or literary register, respectively.

6.2.1 Faroese 'give' passives survey 1: colloquial context

6.2.1.1 Participants

For the colloquial context survey, 23 participants were recruited from a combination of university students at Fróðskaparsetur Føroya (University of the Faroe Islands) and the Facebook group *Føroysk rættstaving*. A compensation of 10 DKK was offered for participation, though only 3 participants took up the offer. 9 of the participants fully completed the survey; the remaining 14 gave partial responses. All participants were required to declare that Faroese is their native language before taking part in the survey. 9 participants voluntarily provided demographic information (the same set who fully completed the survey): of this subset, 5 were male and 4 female, with a mean age of 40.7 years (σ=10.7 years, range 19–55); 3 were from Tórshavn, 2 from Sandoy, 2 from Suðuroy, one from Vágar and one from Fuglafjørður.

6.2.1.2 Materials

Participants were asked to provide acceptability judgements on 32 Faroese sentences with the verb *geva* 'give', shown in Appendix B3. These same sentences were tested in both the colloquial and formal context surveys. Passive sentences were tested in the following configurations: (i) Theme-Verb-Goal, (ii) Goal-Verb-Theme, (iii) Theme-Aux-Goal-Verb, (iv) Expl-Verb-Goal-Theme. Each order was also tested with each variant of (i) nominative or accusative case on the theme, and (ii) presence or absence of agreement; I defined 'agreement' by the inflection of the participle matching that of the theme argument, and 'no agreement' by the supine form in *–ið*.

6.2.1.3 Procedure

Participants were presented with Faroese sentences displayed as in (150), excluding the English translation:

(150) Eg fari at vitja Sigmund og Katrin í kvøld. **Eg hoyrdi frá Beini, at monnunum varð givið tveir nýggir bátar.** Tað hevði verið stuttligt at snakka um, tí Katrin kennir teir sera væl.
'I'm going to visit Sigmund and Katrin tonight. I heard from Beinir, that the men were given two new boats. That would be fun to chat about, since Katrin knows them very well.'

[2] See Petersen (2010) for a recent treatment of the language contact situation.

The surrounding sentences contain the lexemes *fara* + infinitive, 'going to (immediate future)' and *snakka* 'to talk, chat' which are indicative of an informal context. Participants were told to evaluate acceptability only of the embedded sentence which was displayed in bold font. Acceptability was rated on a five-point scale with the same descriptions as were given in the monotransitive passive surveys (see section 5.2.1). The target sentences for judgement were randomized, and interspersed with filler sentences whose judgements were known to me prior to the survey. Both the 'give' passives and quirky case predicates were tested within the same survey, i.e. sentence types were not separated but appeared in the same block of questions, with the aim of reducing assimilation effects (Tourangeau et al. 2000).

6.2.1.4 Results

Due to the small number of responses to survey 1, I base my analysis of the 'give' passive on the combination of surveys 1 and 2. Participants in survey 1 were not identical to those in survey 2, which tested the same sentences embedded in a formal context, and there was no overlap between the sets of participants; therefore no direct comparison could be made for the same set of respondents. In spite of this, it is clear that the passives of 'give' are by and large unacceptable regardless of context: if there were an effect for context, it is reasonable to assume that the formal context would yield higher acceptability for the passive, but in both contexts no passive of 'give' had a mean acceptability of greater than 3. The results of the combination of the two surveys are presented in section 6.2.2.4 below.

6.2.2 Faroese 'give' passives survey 2: formal context

6.2.2.1 Participants

For the formal context survey, 135 participants were recruited from a combination of university students at Fróðskaparsetur Føroya and the Facebook group *Føroysk rættstaving*. 10 DKK in compensation was offered to the university students for participation; the survey was sent out to the Facebook group without the offer of compensation. 37 of the participants fully completed the survey; the remaining 98 gave partial responses. All participants were required to declare that Faroese is their native language before taking part in the survey. 35 participants voluntarily provided demographic information: of this subset, 15 were male, 19 female and one did not disclose gender. The mean age was 42.5 years (σ=12.6 years, range 21–71). 12 participants were from Tórshavn and surrounding area, 16 from towns *norðanfjørðs* (north of Kollafjørður), 4 from Suðuroy, one from Sandoy, one from Vágar and one from Mykines.

6.2.2.2 Materials

The same sentences were tested as in the first survey (see Appendix B3); the only difference between the surveys is the contextual sentence in which the sentences for judgement were embedded.

6.2.2.3 Procedure

The target sentences for judgement were embedded in a formal or literary context, given in (151).

(151) Hóast hann var heldur móður, las hann tað líta brævið, sum konan hevði lagt á borðið. Tað segði: « **Eg hoyrdi frá Beini, at monnunum varð givið tveir nýggir bátar.** » Tað hevði verið eitt áhugavert evni í samrøðuni!
'Although he was rather weary, he read the little note that his wife had left on the table. It said, "I heard from Beinir, that the men were given two new boats." That would have been an interesting topic of conversation!'

The lexemes *hóast* 'although', *heldur* 'rather', and the phrase *eitt áhugavert evni í samrøðuni* 'an interesting conversation topic' indicate that this is a formal context (Jógvan í Lon Jacobsen, p.c.).

6.2.2.4 Results

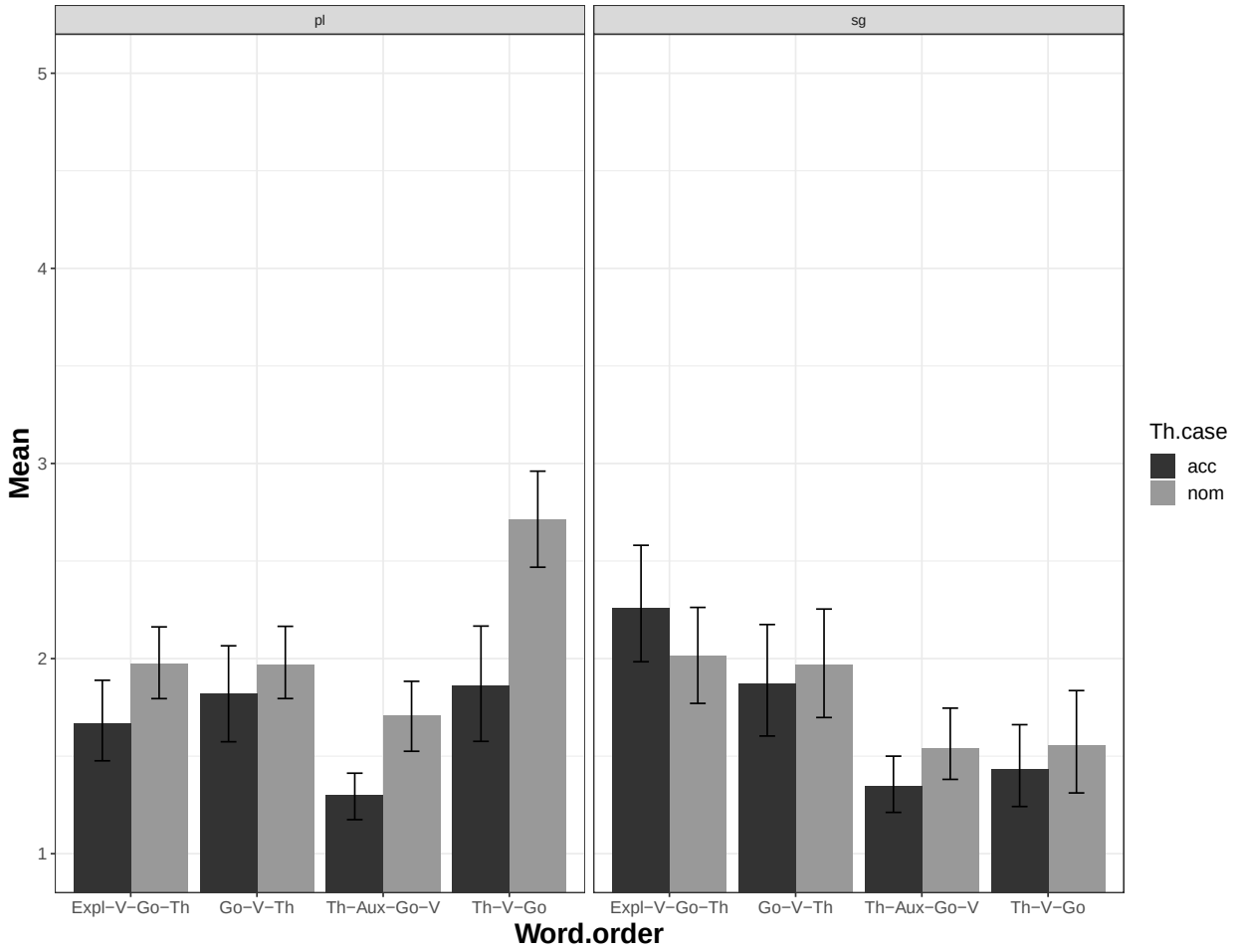


Figure 6.1: **Faroese 'give' passive surveys: mean acceptability by word order and theme case**

The results reported in this section are based on a combined dataset from both surveys. Figure 6.1 shows mean acceptability plotted with respect to the four 'give' passive word order types, case of the theme argument, and verbal agreement morphology. It should be immediately clear that regardless of word order, case

of the theme and agreement, none of these sentence types are broadly accepted, and the mean acceptability for every stimulus is below 3 ('I don't know how natural'), with most being below 2 ('not very natural').[3] One particularly striking result is that the acceptability of one sentence type appears higher than all the others, which is the type in example (146) presented by Þráinsson et al. (2012) as grammatical: if the theme occurs in nominative case in subject position, without the goal occurring structurally higher than the verb, and with plural verb agreement, the mean acceptability approaches 3.

In order to verify the significance of this result, I ran the same type of ordinal regression model as for the monotransitive passive surveys discussed in Chapter 5. The model can be summarised thus:

$$\text{Response} \sim \text{Theme case} * \text{Participle number} * \text{Word order} + (1 \mid \text{Speaker}) + (1 \mid \text{Item})$$

That is, I tested the effect on mean acceptability of the interaction between theme case (nominative or accusative), participle number (singular or plural) and word order (Theme-V-Goal, Goal-V-Theme, Expl-V-Goal-Theme, or Theme-Aux-Goal-V), with random intercepts for Speaker and Item. In this model, considering the effect of word order alone with Expl-V-Goal-Theme as intercept, the order Theme-Aux-Goal-Verb emerged as significantly worse than Expl-V-Goal-Theme (β=-1.2, p=0.05). The obvious significance of the Theme-V-Goal word order with plural agreement was corroborated: plural agreement improves the mean judgement in the order Expl-V-Goal-Theme to a significantly lesser degree than it does in the order Theme-V-Goal (β=-2.2, p<0.01), in spite of the lower mean of accusative theme case across the board.

6.3 Analysis

As mean acceptability of the 'give' passive is so low across the board, regardless of register, it is reasonable to rule the construction out as ungrammatical in Faroese. The fact that the only combination that has a mean acceptability approaching 3 on the scale is an agreed-with nominative theme argument in Spec,TP, and that the order Theme-V-Goal is judged significantly better than Goal-V-Theme, can be explained thus: ditransitive passives are ungrammatical, but if the word order and agreement morphology are the most similar to an active transitive, the sentence is judged more acceptable. Why should this be?

Passivising a verb with three arguments creates an unusual situation where abstract case, positional case and morphosyntactic case on the argument all may misalign. Since passive is construed as demotion of the highest theta-role, in a predicate with the argument structure agent-goal-theme, demoting the agent will mean that the goal argument bearing [–HR–LR] at the level of abstract case will be promoted to highest role [+HR] at morphosyntactic case, and the theme bears the lowest role [–HR] at both levels. Therefore, if a nominative theme occupies subject position in the passive, the case mapping will be [–HR]:[+HR]:[+HR], representing 'abstract : position : item' case, thus failing to express the abstract case in the morphosyntax and incurring a MAX[–HR] violation. With these considerations, I posit that the unacceptability of the 'give' passive is a corollary of the following constraint interaction: pressure to fill subject position with a nominative argument competes with a combined cost of either (i) promoting the recipient/goal, which violates a preference against promoting an argument bearing abstract dative case to subject, or (ii) promoting the

[3] Key to abbreviations: Expl = expletive, Go = goal argument, Th = theme argument, Aux = auxiliary, V = main verb.

theme, thus violating a preference that the thematically highest available argument be promoted to subject. These competing pressures can be construed as a constraint interaction between SNom and Parse, but with two additional constraints: one that enforces promotion of the highest role to subject (152), and one which ensures the realisation of structural dative case (153):

(152) SubjHi$_\theta$: Assign a violation for each argument in subject position (Spec,TP) that does not bear the highest theta-role.

(153) Max[–lr]: Assign a violation for each [–lr] abstract case feature on an input argument that is not realised by a [–lr] morphosyntactic case feature on an output argument.

If the ranking is SNom » Max[–lr] » SubjHi$_\theta$ » Parse, the null candidate will win, but the second best contender of the passives would be nominative theme in subject position, dative goal in object position. If SubjHi$_\theta$ is ranked below Parse, candidate (154a) would win as shown in (155), and thus this grammar represents the marginally attested examples of the type (146). I assume this grammar to be statistically less probable than one in which the ranking SubjHi$_\theta$ » Parse holds, hence offering a possible explanation for the doubtful acceptability judgements with respect to 'give' passives.

(154) **Faroese 'give' passive: no passive**

λzλy∃x verða givin : [*x* CAUSE [BECOME [*y* HAVE *z*]]]	SNom	Max[–lr]	SubjHi$_\theta$	Parse
a. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]			*!	
b. Goal[–hr–lr]:[+hr]:[–hr–lr] V$_{pass}$ Theme[–hr]:[–hr]:[+hr]	*!			
c. Theme[–hr]:[+hr]:[–hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]	*!		*	
d. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr]		*!	*	
e. Goal[–hr–lr]:[+hr]:[+hr] V$_{pass}$ Theme[–hr]:[–hr]:[–hr]		*!		
☞ f. Ø				*

(155) **Faroese 'give' passive: nominative theme in Spec,TP, dative goal in V,Comp**

λzλy∃x verða givin : [*x* CAUSE [BECOME [*y* HAVE *z*]]]	SNom	Max[–lr]	Parse	SubjHi$_\theta$
☞ a. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]				*
b. Goal[–hr–lr]:[+hr]:[–hr–lr] V$_{pass}$ Theme[–hr]:[–hr]:[+hr]	*!			
c. Theme[–hr]:[+hr]:[–hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]	*!			*
d. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr]		*!		*
e. Goal[–hr–lr]:[+hr]:[+hr] V$_{pass}$ Theme[–hr]:[–hr]:[–hr]		*!		
f. Ø			*!	

It falls out nicely that, if Parse is ranked above SNom, which has already been claimed for the 'preserving'-type grammar in Chapters 4-5, non-nominative arguments in subject position will be penalised less. If SubjHi$_\theta$ also dominates SNom in Icelandic, the winner will be the candidate with a dative goal argument in subject position and a nominative theme in object position, as shown in (156).

(156) **Icelandic 'give' passive: dative goal in Spec,TP, nominative theme in V,Comp**

$\lambda z \lambda y \exists x$ *vera gefinn* : [x CAUSE [BECOME [y HAVE z]]]	MAX[–LR]	PARSE	SUBJHI$_\theta$	SNOM
a. Theme[–HR]:[+HR]:[+HR] V$_{\text{PASS}}$ Goal[–HR–LR]:[–HR]:[–HR–LR]			*!	
☞ b. Goal[–HR–LR]:[+HR]:[–HR–LR] V$_{\text{PASS}}$ Theme[–HR]:[–HR]:[+HR]				*
c. Theme[–HR]:[+HR]:[–HR] V$_{\text{PASS}}$ Goal[–HR–LR]:[–HR]:[–HR–LR]			*!	*
d. Theme[–HR]:[+HR]:[+HR] V$_{\text{PASS}}$ Goal[–HR–LR]:[–HR]:[–HR]	*!		*	
e. Goal[–HR–LR]:[+HR]:[+HR] V$_{\text{PASS}}$ Theme[–HR]:[–HR]:[–HR]	*!			
f. Ø		*!		

Candidates (d-e) in the tableaux (154-156) correspond to winners in languages that have lost morphological case-marking such as English. I consider the prepositional phrase recipient in the 'to' variant, i.e. 'The book was given to John', to be a distinct construction, i.e. that the double object construction and prepositional dative are not two output candidates for the same input, a position that is typically motivated by semantic differences between the constructions (see Green 1974, Oehrle 1976 *et seq.*). Although some examples of apparent prepositional datives occur in the same configuration as double object constructions, e.g. 'give a headache to' with heavy-NP shift, as Bruening (2010, 2018) argues, it is possible to analyse the first object as rightward-projected, and therefore examples of double object constructions with respect to their semantics (*pace* Rappaport Hovav and Levin 2008, Ormazabal and Romero 2012 *i.a.*). Bruening (2010) provides evidence from locative inversion and scope interaction in support of this analysis; although I do not adopt the proposal of rightward specifiers, it is feasible that the structurally higher object can occur to the right of the lower object by rightward adjunction, as in (157):[4]

(157) It was a stench that would [$_{v\text{P}}$ give$_v$ [$_{\text{VP}}$ ___$_{\text{V}}$ a headache [$_{\text{V}'}$ [$_{\text{PP}}$ to the most athletic constitution]]]

I assume the availability of the prepositional dative to be also partly determined by information structure, but detailed analysis of this variant is beyond the scope of our discussion here.[5] In English, candidate (e) is optimal on the ranking PARSE » SNOM » SUBJHI$_\theta$ » MAX[–LR]:

(158) **English 'give' passive: goal in Spec,TP, theme in V,Comp**

$\lambda z \lambda y \exists x$ be given : [x CAUSE [BECOME [y HAVE z]]]	PARSE	SNOM	SUBJHI$_\theta$	MAX[–LR]
a. Theme[–HR]:[+HR]:[+HR] V$_{\text{PASS}}$ Goal[–HR–LR]:[–HR]:[–HR–LR]			*!	
b. Goal[–HR–LR]:[+HR]:[–HR–LR] V$_{\text{PASS}}$ Theme[–HR]:[–HR]:[+HR]		*!		
c. Theme[–HR]:[+HR]:[–HR] V$_{\text{PASS}}$ Goal[–HR–LR]:[–HR]:[–HR–LR]		*!	*	
d. Theme[–HR]:[+HR]:[+HR] V$_{\text{PASS}}$ Goal[–HR–LR]:[–HR]:[–HR]			*!	*
☞ e. Goal[–HR–LR]:[+HR]:[+HR] V$_{\text{PASS}}$ Theme[–HR]:[–HR]:[–HR]				*
f. Ø	*!			

With these four constraints, the number of logically possible grammars is 24. There are four possible output patterns for the 'give' passive input:

[4] Example adapted from **?**:165–166.

[5] McFadden (2002) argues that the prepositional phrase recipient arose in Middle English around the same time as the loss of morphological case and the rise of positional licensing; this can be seen as a way of expressing discourse features without the flexible word order afforded by overt case-marking. In contrast, languages like German can flag argument structure via case morphology, and hence word order is more available as a means of expressing information structure.

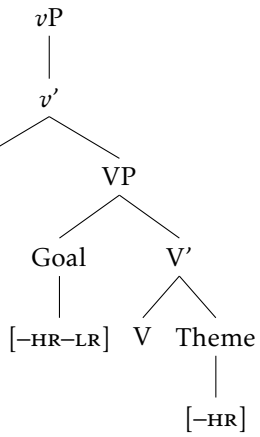
No.	Output	Language
1	no passive	Faroese
2	Theme[nom]-Goal[dat]	Icelandic, German, Faroese (marginal)
3	Goal[dat]-Theme[nom]	Icelandic
4	Goal[nom]-Theme[acc]	English

In order to derive the order Theme[nom]-Goal[acc], which is the standard in e.g. Dutch and an option in Swedish and Norwegian, additional constraints must be at work; moreover, the details of the competition between the prepositional phrase and bare argument variants would need to be fleshed out. One can imagine an account in which the PP variant wins when input contains a [+Top] feature associated with the goal, and therefore information-structural constraints such as IdentDis would play a role, but the details are beyond the scope of discussion here.

6.3.1 Position of the goal and theme arguments

As an addendum to the above analysis of 'give', I briefly turn to a discussion of which positions the goal and theme arguments occupy in Faroese, facts necessary to establish given that I assume the arguments to be positionally licensed. It has been argued since at least Barss and Lasnik (1986) that the indirect object argument is structurally higher than the direct object, which has been accounted for in binary-branching frameworks via some kind of VP-shell (Larson 1988 *et seq.*); in other words, the lower object is occupying V-Comp and the higher object some VP-internal specifier position. On my version of linking theory, the complement of V position is associated with a [–hr] positional case feature, and the higher specifier with a [–hr–lr] feature. I do not assume the VP-internal subject hypothesis, and so I have no need to posit any additional specifiers to Spec,VP. However, I do assume that the non-finite verb occurs in *v* and therefore precedes both object arguments.

(159)



The evidence for this comes from binding asymmetries: Þráinsson (2007:128) demonstrates for Icelandic that the first object can antecede a reflexive co-indexed with the second object, but not vice versa (160); this is also shown to be not merely a linear order issue, since fronting the second object does not improve the judgement (160c).

(160) a. Ice. *Þú sviptir eiginmanninn$_i$ konu **sinni**$_i$*
you deprived husband-the.ACC wife.DAT his.REFL.DAT
'You deprived the husband of his wife.'

b. Ice. * *Þú sviptir eiginmann **sinn**$_i$ konunni$_i$*
you deprived husband.ACC her.REFL.ACC wife-the.DAT

c. Ice. * *Konunni$_i$ sviptir þú eiginmann sinn$_i$*
wife-the.DAT deprived you husband.ACC her.REFL.ACC

I conducted a similar test with Faroese consultants, using the double-object verb *geva* 'give', which yielded the same results:

(161) a. Far. *Ættleiðingarskrivstovan gav mammuni$_i$ barn **sítt**$_i$*
adoption.agency-the gave mother-the.DAT child.ACC her.REFL.ACC
'The adoption agency gave the mother her child.'

b. Far. * *Ættleiðingarskrivstovan gav mammu **sínari**$_i$ barnið$_i$*
adoption.agency-the gave mother.DAT its.REFL.DAT child-the.ACC

c. Far. * *Barnið$_i$ góvu tey mammu **sínari**$_i$*
child-the.ACC gave they mother.DAT its.REFL.DAT

If we assume the structure in (159) for Faroese ditransitives, this enables us to explain, via the positional licensing constraint IDENTCASE, why we do not see nominative substitution for recipient/goal dative case, as well as why the order of the objects cannot be reversed: if the recipient/goal position is associated with [–HR–LR], an accusative argument bearing [–HR] violate IDENTCASE; likewise if a dative argument bearing [–HR–LR] is found in direct object position [–HR]. With the addition of MAX[LC], we can also account for those few ditransitive predicates with an ACC-ACC case frame, since not realising lexical accusative case on the indirect object will incur a violation thereof. The tableaux for these predicates are given in section 4.4.2.

6.4 Survey data II

6.4.1 Icelandic survey on 'give' passive

In order to investigate the differences between the Icelandic and Faroese case systems further, I also conducted a survey on the passive of the verb 'give' in Icelandic. The Icelandic survey also included quirky case predicates within the same block of questions as the passives.

6.4.1.1 Participants

The participants were identical to those for the Icelandic quirky case survey; see section 4.3.3.1.

6.4.1.2 Materials

Participants were asked to provide acceptability judgements on 35 Icelandic sentences with the verb *gefa* 'give', shown in Appendix B4. Unlike the Faroese 'give' passive surveys, these were not embedded in contextual sentences. Passive sentences were tested in the following configurations: (i) Goal-Verb-Theme,

(ii) Theme-Verb-Goal, (iii) Theme-Aux-Goal-Verb, (iv) Expl-Theme-Goal-Verb, (v) Expl-Goal-Theme-Verb, (vi) Expl-Verb-Goal-Theme, (vii) Expl-Theme-Verb-Goal. Each order was also tested with each variant of (i) nominative or accusative case on the theme, and (ii) agreement/non-agreement with the theme in both case and number (where non-agreement is the supine form). Unlike the Faroese surveys, the following additional sentence types were tested: accusative participle case and intended agreement with the theme, and dative participle case and intended agreement with the goal. The additional word orders tested in Icelandic also provided data for the variable of 'dative intervention', i.e. where a dative argument intervenes between the participle and target of agreement.

6.4.1.3 Procedure

The procedure was identical to that of the Faroese surveys. Sentences for judgement were presented in a different random order for each trial, and participants were told to evaluate acceptability of the sentence which was displayed in bold font. The instruction *Segðu hversu eðlilegar þessar setningar eru á íslensku*, 'Say how natural these sentences are in Icelandic', displayed before the block of stimuli. Acceptability was rated on a five-point scale with the following descriptions:

	Icelandic	English translation
1	***Alls ekki eðlilegt.*** *Ég gæti aldrei sagt þetta.*	**Not at all natural.** I could never say this.
2	***Ekki mjög eðlilegt.*** *Það væri skrýtið ef ég segði þetta.*	**Not very natural.** It would be strange if I said this.
3	***Ég veit ekki*** *hvort ég gæti sagt þetta.*	**I don't know** if I could say this.
4	***Frekar eðlilegt.*** *Ég gæti sagt þetta.*	**Rather natural.** I could have said this.
5	***Fullkomlega eðlilegt.*** *Ég gæti auðveldlega sagt þetta.*	**Perfectly natural.** I could easily have said this.

As in the Faroese surveys, the judgement descriptions were displayed on discrete forced-choice buttons. The buttons were displayed horizontally with *Ég veit ekki* in the centre. It was possible to leave an answer blank, and hence some participants reached the end of the survey without providing responses to every question. At the end of each trial participants were prompted to provide voluntary additional comments and demographic information.

6.4.1.4 Results

Figure 6.2 below plots mean acceptability against word order and participle case; the nominative participle in the examples is always plural, i.e. either full agreement with the nominative theme or attempted agreement with a non-nominative argument, and the notation 'nom/acc' refers to the neuter supine form of the participle which always co-occurs with non-agreement (singular auxiliary). There are two error bars for the nominative participle judgements, since this was tested both with theme and intended goal agreement; the lower error bar is for goal agreement which was judged at or close to 1 across the board, and the higher bar for theme agreement, whose judgements varied according to word order.

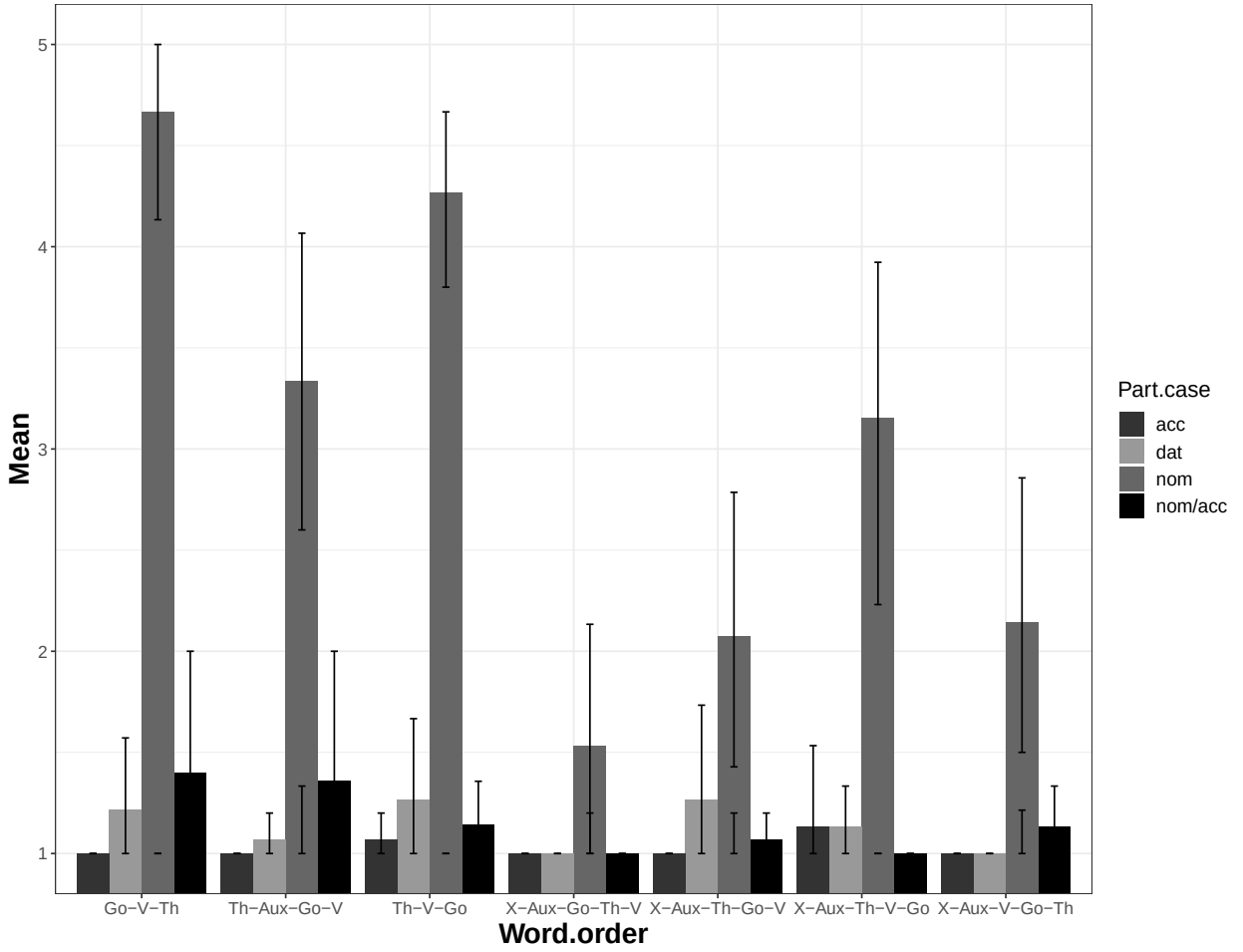


Figure 6.2: Icelandic 'give' passive survey results

As can be clearly seen in Figure 6.2, non-agreement (the supine, indicated by 'nom/acc') is completely unacceptable regardless of word order, and the same goes for sentences with the participle in the accusative or dative. Of those examples with nominative participles, the only word orders with mean acceptability greater than 4 are Goal-V-Theme and Theme-V-Goal, the former judged more acceptable than the latter. Two of the other orders, Theme-Aux-Goal-V and Expl-Aux-Theme-V-Goal, have a mean acceptability greater than 3; it is not unexpected that these orders should be judged more natural than the other expletive constructions, since these latter also deviate from the base order Goal-V-Theme.

6.4.1.5 Discussion

These results are consistent with the analysis I presented in section 6.3, with the tableau in (156), repeated here for convenience as (162); the theme-first order, which is acceptable albeit marked, is generated by

reversing the ranking of {SNom, SubjHI$_\theta$}, shown in (163). Unlike for Faroese, I stipulate that SNom is not ranked as highly in Icelandic, given the fact that Icelandic readily allows non-nominative subjects. I construe this as competing grammars, but it could well be the case that information-structural distinctions are also behind the optionality in Icelandic, in which case IdDis may be involved. Again, I leave the working out of the complex variation within Scandinavian to further research, though it seems promising to explore the role of discourse features in selection of the passive variant when more than one option exists.

(162) **Icelandic 'give' passive 1: nominative theme in Spec,TP, dative goal in V,Comp**

λzλy∃x vera gefinn : [*x* CAUSE [BECOME [*y* HAVE *z*]]]	Max[–lr]	Parse	SubjHI$_\theta$	SNom
a. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]			*!	
☞ b. Goal[–hr–lr]:[+hr]:[–hr–lr] V$_{pass}$ Theme[–hr]:[–hr]:[+hr]				*
c. Theme[–hr]:[+hr]:[–hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]			*!	*
d. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr]	*!		*	
e. Goal[–hr–lr]:[+hr]:[+hr] V$_{pass}$ Theme[–hr]:[–hr]:[–hr]	*!			
f. Ø		*!		

(163) **Icelandic 'give' passive 2: dative goal in Spec,TP, nominative theme in V,Comp**

λzλy∃x vera gefinn : [*x* CAUSE [BECOME [*y* HAVE *z*]]]	Max[–lr]	Parse	SNom	SubjHI$_\theta$
☞ a. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]				*
b. Goal[–hr–lr]:[+hr]:[–hr–lr] V$_{pass}$ Theme[–hr]:[–hr]:[+hr]			*!	
c. Theme[–hr]:[+hr]:[–hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr–lr]			*!	*
d. Theme[–hr]:[+hr]:[+hr] V$_{pass}$ Goal[–hr–lr]:[–hr]:[–hr]	*!			*
e. Goal[–hr–lr]:[+hr]:[+hr] V$_{pass}$ Theme[–hr]:[–hr]:[–hr]	*!			
f. Ø		*!		

6.4.2 Faroese survey 3: other ditransitive passives

To conclude this chapter on ditransitives, since it has been established that the lexical semantics of the particular verb plays a large role in case-selection, I also tested the passive of several other three-argument predicates with Faroese speakers.

6.4.2.1 Participants

This survey had 18 respondents, recruited via a shared link on the Facebook group *Føroysk rættstaving*; no compensation was offered to participants. 13 respondents fully completed the survey, while the other 5 gave partial responses. All participants were required to declare that Faroese is their native language before taking part in the survey. The 13 participants who fully completed the survey also voluntarily provided demographic information: of this subset, 7 were male and 6 female, with a mean age of 50.3 years (σ=14.1 years, range 25–76). 8 were from Tórshavn and 5 from towns *norðanfjørðs* (northern region).

6.4.2.2 Materials

The 31 sentences presented to participants for judgement are shown in Appendix B5. The verbs tested are shown with examples in Table 6.1 below; examples were tested with three word orders: (i) Theme-Verb-Goal, (ii) Goal-Verb-Theme, and (iii) Theme only with a temporal phrase complement. The examples for judgement were embedded under a matrix verb of speech or cognition. In all the passive sentences the participle agreed in number and gender with the subject.

Table 6.1: **Faroese ditransitive verbs**

Verb	English	Active sentence	Passive with nom subject
læna	'lend'	She.NOM lent girl-the.DAT computer-the.ACC	Computer-the.NOM was lent
selja	'sell'	He.NOM sold man-the.DAT boat-the.ACC	Boat-the.NOM was sold
handa	'hand'	John.NOM handed me.DAT butter-the.ACC	Butter-the.NOM was handed
vísa	'show'	I.NOM showed boy-the.DAT book-the.ACC	Book-the.NOM was shown
bjóða	'offer'	We.NOM offered women-the.DAT tickets.ACC	Tickets.NOM were offered
veita	'bestow'	They.NOM bestowed men-the.DAT pensions.ACC	Pensions.NOM were bestowed
flyta yvir	'transfer'	He.NOM transferred money-the.DAT over to bank-the.ACC	Money-the.NOM was transferred
lova	'promise'	She.NOM promised me.DAT money-the.ACC	Money-the.NOM was promised

6.4.2.3 Procedure

The procedure was identical to that of the previous Faroese passive surveys (see section 5.2.1).

6.4.2.4 Results and discussion

In Figure 6.3, the mean acceptability of each verb is plotted against voice. As one would predict, overall the active is more acceptable than the passive, with a mean of above 4 in most cases; it appears that the passive is generally not judged acceptable, with a mean below 4 in every case. The low means of *veita* 'bestow', *bjóða* 'offer' and *flyta yvir* 'transfer' even in the active can be explained by confounds: *veita* is uncommon in the spoken language, and unfortunately incorrect inflection of the theme argument *pensión* 'pension' was tested (*–ar* GEN.SG for intended *–ir* NOM.PL); some speakers also suggested that *eftirløn* is more natural in Faroese than *pensión*. Likewise, one speaker commented that *flyta yvir* 'transfer' is more commonly simply *flyta* without the particle *yvir*, and that *yvirføra* might be used colloquially (a Danish loan, Da. *overføre*). The verb *bjóða* 'offer' has two inflectional paradigms, a strong inflection which was used in one example (*buðu*) and a weak inflection used in the other (*bjóðaðar*). If some speakers reject one or other paradigm, which may exhibit dialectal variation, this could explain the lower mean acceptability of even the active with *bjóða*.

However, the acceptability of the passive is also affected by order of the arguments, consistent with my analysis of the 'give' passive. Figure 6.4 shows that the order Theme-Goal is more acceptable across the board than the order Goal-Theme, apart from in the highly questioned examples with 'bestow'. With the Theme-Goal order, it is notable that the verb 'sell' has a mean acceptability between 4 and 5 on the scale,

which corresponds to the example cited by Þráinsson et al. (2012:266), 'Cow-the.NOM was sold farmer-the.DAT', given as (146) above. I also tested examples with only the theme argument, all of which had a temporal phrase following the participle, e.g. 'The boat was sold yesterday'. As can be seen again in Figure 6.4, verb lexeme has a strong effect on acceptability, which may be predictable from the semantic decomposition: 'sell' and 'lend' were most acceptable on average in comparison to 'hand', which was far more readily accepted with two arguments; this could be due to the nature of a handing event versus a selling or lending event.

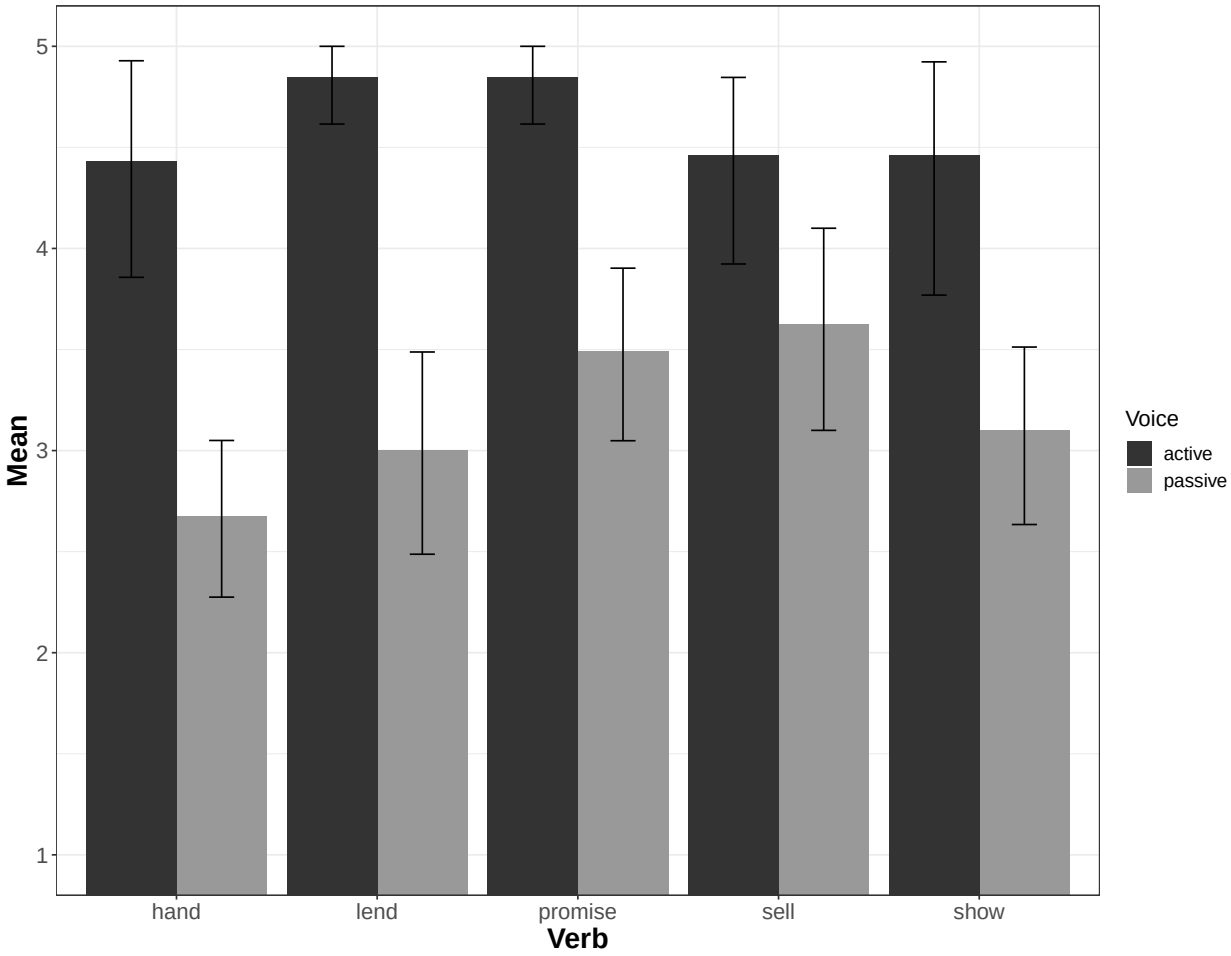


Figure 6.3: Faroese ditransitive passive survey results: active versus passive

I tested the significance of voice, verb lexeme, word order, and the interaction of verb and word order using an ordered logit regression model in R similar to those described in Chapters 4-6, with random effects for speaker and item. Considering the fixed effect of voice alone on the entire dataset, passive was judged significantly worse than active, as predicted (β=-1.07, p<0.02). In a dataset excluding the actives and results for 'bestow' and 'offer', the effect of word order by itself was significant, in that both Theme-Goal (β=3.9, p<0.01) and Theme-only (β=2.1, p<0.01) were judged significantly better on average than Goal-Theme. This is consistent with the analysis proposed for the 'give' passive, which rules out Goal-Theme

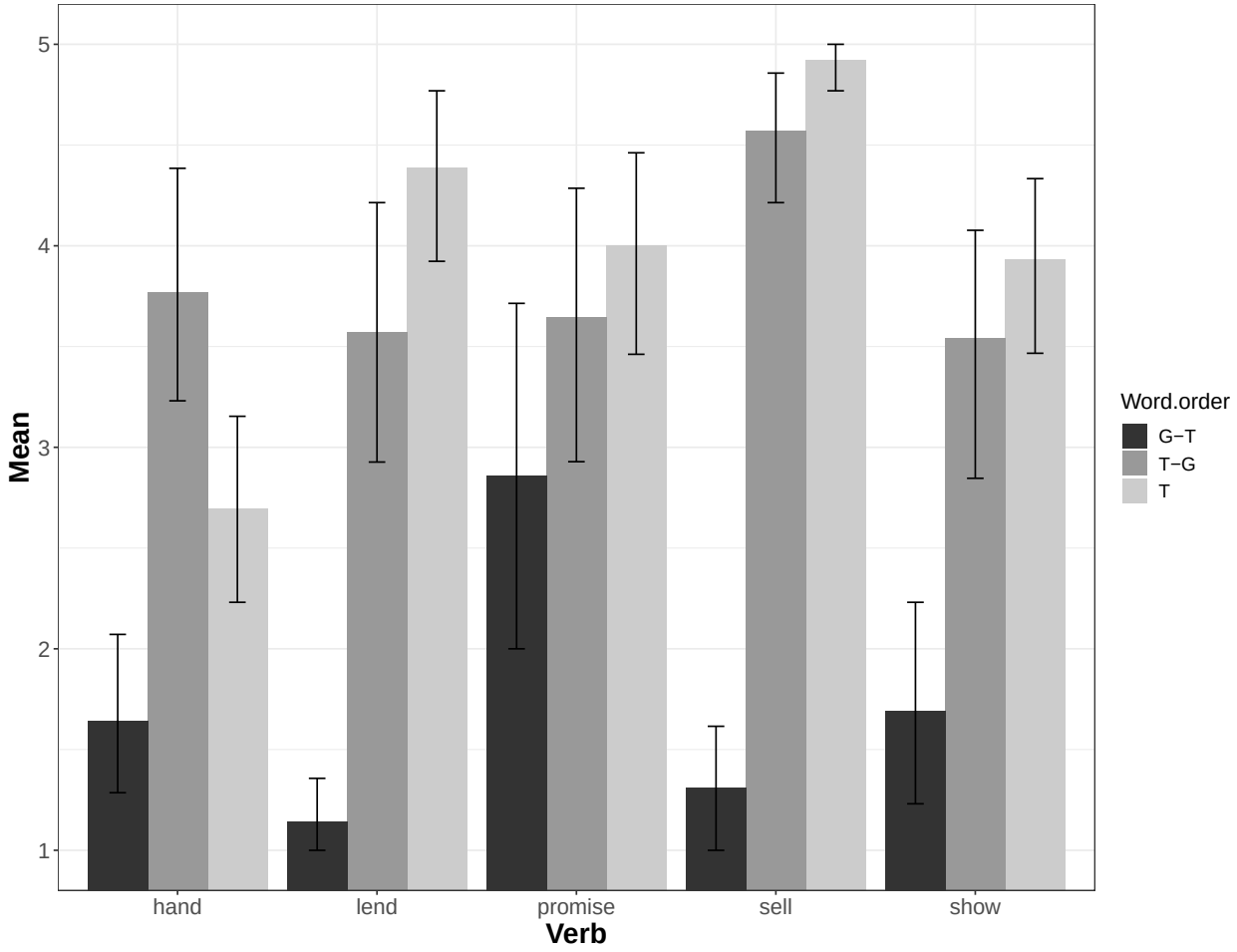


Figure 6.4: Faroese ditransitive passive survey results: word order

by the relatively high ranking of SNom. With the passive of 'hand' as intercept, the passive of 'promise' had a significantly greater mean acceptability (β=2.3, p<0.01). Several significant interactions between word order and verb lexeme emerged on this model: 'lend' with Theme-only order (β=5.2, p<0.01), 'sell' with Theme-only order (β=7.1, p<0.01), 'promise' with Theme-Goal order (β=-2.5, p<0.02) and 'sell' with Theme-Goal order (β=3.2, p<0.01). In other words, Theme-only order improved the passive of 'lend' and 'sell' significantly compared to the effect with 'hand', while Theme-Goal order improved the mean judgement of 'promise' significantly less than it did with 'hand'; finally, Theme-Goal improved the average acceptability of 'sell' significantly more so than it did with 'hand'. In all of these cases the reference level for word order was Goal-Theme. Given the small sample size, we must be cautious with our conclusions, but it seems that minimally we can ascertain that (i) ditransitive passive across the board was judged significantly worse than ditransitive active in Faroese, and (ii) Theme-Goal and Theme-only orders are judged significantly better than Goal-Theme, which was judged unacceptable overall.

6.5 Summary

In this chapter, I gave an overview of the limited prior work on three-argument verbs in Faroese. I presented new survey data from the Faroe Islands and Iceland, on passives of 'give' and other ditransitive predicates. I posited that the same constraints I adopt to account for passives of monotransitives are at work in the realisation of ditransitive passives, which in Faroese yield either null output (passive unacceptable) or the passive with Theme-Goal order: a competing grammars situation dependent on the ranking of {SubjHi$_\theta$, Parse}, but in which the ranking Parse » SubjHi$_\theta$ is more likely to be selected in Faroese, hence the reduced acceptability of ditransitive passive. I proposed the pair of constraints, SubjHi$_\theta$ and Max[–lr] that enforce the highest theta-role as subject and realisation of dative abstract case respectively, to account for the differences between Faroese, Icelandic and English 'give' passives. I demonstrate that, at least for the overtly case-marked variants, these constraints generate the correct typology.

Chapter 7

Alternative hypotheses

In this chapter, I examine some alternative accounts of the core Faroese data, specifically the existence of the dative-accusative case pattern with the subset of verbs that retain lexical subject case. I argue that (i) these accounts are not explicitly articulated enough to achieve empirical coverage of the data presented in Chapters 4-6, (ii) that based on the information given, these alternatives make wrong predictions, and (iii) that my account offers a more thoroughly worked-out system for explaining the emergence of the Faroese pattern, as well as the differences between Icelandic, Faroese and Mainland Scandinavian languages. The OLG approach, given the starting assumptions laid out in Chapters 2-3 and more fully in Chapter 8 below, is flexible enough to account for the full range of morphosyntactic variation, both intra- and cross-linguistically, which can be successfully modelled by competing rankings of universal, violable constraints.

7.1 Woolford (2007): An OT account

The first theoretical account to my knowledge that attempts to deal with the Faroese dative-accusative pattern explicitly is a brief paragraph in Woolford (2007). As Woolford (2007) notes, the standard approach to the Icelandic dative-nominative pattern is to claim that the V-head can only license accusative case if the subject is an agent, a claim that originates in Burzio (1986) known as 'Burzio's Generalisation'. The basic assumptions are as follows: (i) that a nominative case feature is associated with Infl, (ii) that case features on heads license arguments and in doing so assign their value to the argument (Chomsky 1995, 2001), and (iii) that experiencer subjects such as the Icelandic datives do not exhaust the nominative case feature, which (iv) takes priority over accusative assignment to the object. However, as Woolford (2007) points out, there are exceptions to Burzio's Generalisation, i.e. verbs without an agent licensing accusative and verbs with an agent not licensing accusative. Moreover, the Faroese pattern represents an instance where accusative is taking priority over nominative, the opposite of assumption (iv).

Woolford (2007) accounts for this by means of a hierarchy of case markedness constraints that conflicts with a hierarchy of case faithfulness constraints, given in (164). Although these constraints derive case-marking patterns through the Eval computation, Woolford (2007) still assumes that heads assign case,

presumably via head-specifier and head-complement relations. Thus her account differs from Kiparsky (1997, 2001) and mine, in that abstract and morphosyntactic case are collapsed: case is configurationally assigned, and so other means must be found to explain mismatches between thematic structure, argument positions and the case-marking on arguments.

(164) a. Markedness constraints: *Ergative » *Dative » *Accusative

b. Faithfulness constraints: Max-Ergative » Max-Dative » Max-Accusative

In Icelandic dative-nominative predicates, Woolford accounts for the selection of nominative object case by the ranking Max-Dat » *Dat » *Acc. Since the candidate with accusative object case incurs a violation of *Acc and the one with the nominative object does not, the dative-nominative pattern wins on this ranking.

(165) **Icelandic dative-nominative predicate**

$NP_{[DAT]}$ $NP_{[\ ]}$	Max-Dat	*Dat	*Acc
☞ a. [$NP_{[DAT]}$ Infl [V $NP_{[NOM]}$]]		*	
b. [$NP_{[DAT]}$ Infl [V $NP_{[ACC]}$]]		*	*!
c. [$NP_{[NOM]}$ Infl [V $NP_{[ACC]}$]]	*!		*

However, no ranking of these constraints alone will generate the Faroese dative-accusative pattern. Woolford (2007) proposes that a higher ranked locality constraint blocks the Infl head from assigning nominative. Her motivation for the locality constraint is that nominative is not blocked VP-internally in unaccusative expletive constructions such as (166):

(166) Far. *Það eru komnir nakrir gestir í gjár*
EXPL are come.NOM.PL some.NOM.PL guests.NOM.PL yesterday
'Some guests came yesterday'

Woolford then argues that this example indicates that the presence of the 'closer' dative subject in dative-accusative predicates blocks nominative licensing, since when the dative subject is not present, nominative licensing occurs within the VP. She states that Faroese prohibits an additional NP inside the nominative case-licensing domain of Infl. This obviously rests on the assumption that there is a nominative case-checking domain, which Woolford takes to be the entire clause in both (166) and the dative-accusative predicates; the accusative case-checking domain is taken to be the VP. Woolford formulates the locality constraint as follows:

(167) Pure Domain: The Case checking/licensing domain of a head must contain no NP other than the one whose Case is checked by that head.

If in Faroese the ranking Pure Domain » *Acc holds, the correct outputs are generated for dative-accusative and expletive constructions:

(168) **Faroese dative-accusative predicate**

$NP_{[DAT]}$ $NP_{[\ ]}$	Pure Domain	*Acc
a. [$NP_{[DAT]}$ Infl [V $NP_{[NOM]}$]]	*!	
☞ b. [$NP_{[DAT]}$ Infl [V $NP_{[ACC]}$]]		*

(169) **Faroese unaccusative**

$NP_{[\ ]}$	Pure Domain	*Acc
☞ a. [Ø Infl [V $NP_{[NOM]}$]]		
b. [Ø Infl [V $NP_{[ACC]}$]]		*!

According to Woolford, since the dative subject is present within the IP in (168a), the nominative case-checking domain is 'impure'. She claims that since (168b) has no nominative argument, it has no nominative checking domain at all, and so Pure Domain is not violated. It seems that the assumption is that the dative subject is not case-checked by the Infl head, and therefore would only violate Pure Domain if an NP within the clause receives nominative case-marking. If the ranking for Icelandic is *Acc » Pure Domain, the dative-nominative candidate will win over the dative-accusative.

The intuition behind this approach, similar to that espoused by dependent case approaches, is that arguments within some specified domain compete for case, and that realisation of accusative depends on some other language-specific factor, such as whether the case-checking domain tolerates more than one unchecked argument Woolford (2007), or whether the dative subject is a viable 'case-competitor' (Preminger 2011, 2014). While Woolford's approach attributes the contrast between Icelandic and Faroese to a markedness constraint *Acc conflicting with a locality constraint, I essentially adopt the inverse: a faithfulness constraint Max[–hr] (equivalent to Max-Acc) conflicts with a markedness constraint AgrNom. In the simple cases, these two hypotheses cannot be distinguished empirically, but there may be good reason to avoid a locality constraint as responsible for ruling out accusative. One such issue is that the goal-theme order of Icelandic ditransitive passives will have a dative-marked argument within the domain of Infl that is not the one whose case is checked by Infl, thus violating Pure Domain if we assume the same definition in (167); this predicts the wrong winner.

(170) **Icelandic goal-theme ditransitive passive (wrong winner)**

$Goal_{[DAT]}$ $Theme_{[\ ]}$	*Acc	Pure Domain
☞ a. [$Theme_{[NOM]}$ Infl [V $Goal_{[DAT]}$]]		
b. [$Goal_{[DAT]}$ Infl [V $Theme_{[NOM]}$]]		*!

One question is why the regular transitive nominative-accusative pattern does not violate Pure Domain. Woolford (2007) does not make this explicit, but I assume that the domain of Infl can only 'see into' VP when the internal argument bears nominative, since then it will be checked by Infl. In other words, VP is impenetrable to the domain of Infl with respect to Pure Domain if V assigns case to an argument, or rather, the object argument bearing accusative does not count as another argument within Infl's checking domain. Since the lower argument in (170a) bears lexical case, it is not checked by Infl, and so does not incur a violation of Pure Domain: only when there is a nominative object will Pure Domain come into play. This assumption is necessary to account for dative-object predicates such as the active of verbs like 'help': if Pure Domain is violated by lexical dative object case, then we would predict accusative-dative to occur in Faroese, since either order of nominative and dative will violate Pure Domain; hence, on the ranking Pure Domain » *Acc the accusative-dative pattern will win, as shown in (171). Therefore, we must change the analysis in order to account for both the Faroese nominative-dative and Icelandic dative-nominative

patterns, or indeed both case-frames occurring in the same construction in the same language, as is the case for Icelandic ditransitive passives.

(171) **Faroese nominative-dative predicate (wrong winner)**

$NP_{[\ ]}\ NP_{[DAT]}$	MAX-DAT	PURE DOMAIN viol. by DAT object	*ACC
a. $[NP_{[NOM]}$ Infl $[V\ NP_{[DAT]}]]$		*!	
b. $[NP_{[DAT]}$ Infl $[V\ NP_{[NOM]}]]$		*!	
☞ c. $[NP_{[ACC]}$ Infl $[V\ NP_{[DAT]}]]$			*
d. $[NP_{[NOM]}$ Infl $[V\ NP_{[ACC]}]]$	*!		*

One option is to adopt the definition of PURE DOMAIN in (167), but posit competing grammars in Icelandic, one with the ranking *ACC » PURE DOMAIN and the other with PURE DOMAIN » *ACC. The conditions under which one grammar is selected over another would depend on what selecting the Goal-Theme versus the Theme-Goal order in Icelandic communicates. If it turns out that information-structural conditions determine one output choice over another, it would perhaps call for positing two inputs, and one discourse-structural faithfulness constraint ensuring that the order of arguments reflects the information structure specified in the input.

A more fundamental question is whether PURE DOMAIN is the kind of constraint we wish to posit in the first place: what it encodes is the idea that there is a case-marking domain embedded within another (VP within IP), that the presence of a second argument must be determined by the higher head, and that the higher head can penetrate the embedded domain only if it does not case-mark the external argument. These are not necessarily problematic assumptions, but encoding them into a single constraint masks the components of the analysis: it must be assumed that (i) positional licensing and case-marking are one and the same, (ii) that case-marking is partly determined by the presence or absence of an argument within the same clause as a particular head, and (iii) that the mechanism for determining whether an argument is present is sensitive to the case-marking of that argument. A better way of encoding these claims would be to separate out licensing from identifying the presence/absence of arguments and ensuring that lexical and structural cases are expressed in the output. One could imagine the constraints as follows; I will test both claims regarding sensitivity to the presence of an argument, i.e. whether the argument simply has to be present, or whether structural case is also relevant:

(172) *2VISARG (*2VA): Assign a violation for each tensed clause (IP) with more than one argument visible to Infl, where a visible argument does not bear structural case (i.e. case assigned by the local head).

(173) *2ARG: Assign a violation for each tensed clause (IP) containing more than one argument.

(174) MAXLEXCASE: Assign a violation for each lexical case feature in the input not realised in the output.

(175) POSCASE: Assign a violation for each A-position whose argument does not bear the case value specified by the local head.

With the addition of *ACC, this system is able to generate the correct facts in Faroese and Icelandic. However, tableaux (176-178) show that neither *2VA nor *2ARG are necessary: MAXLEXCASE, *ACC and POSCASE are doing all the work.

(176) **Icelandic dative-nominative predicate**

$NP_{[DAT]}$ $NP_{[\ ]}$	MaxLexCase	*Acc	PosCase	*2VA	*2Arg
☞ a. [$NP_{[DAT]}$ Infl [V $NP_{[NOM]}$]]			**	*	*
b. [$NP_{[DAT]}$ Infl [V $NP_{[ACC]}$]]		*!	*		*
c. [$NP_{[NOM]}$ Infl [V $NP_{[ACC]}$]]	*!	*			*

(177) **Faroese dative-accusative predicate**

$NP_{[DAT]}$ $NP_{[\ ]}$	MaxLexCase	PosCase	*Acc	*2VA	*2Arg
a. [$NP_{[DAT]}$ Infl [V $NP_{[NOM]}$]]		**!		*	*
☞ b. [$NP_{[DAT]}$ Infl [V $NP_{[ACC]}$]]		*	*		*
c. [$NP_{[NOM]}$ Infl [V $NP_{[ACC]}$]]	*!		*		*

(178) **Faroese nominative-dative predicate**

$NP_{[\ ]}$ $NP_{[DAT]}$	MaxLexCase	PosCase	*Acc	*2VA	*2Arg
☞ a. [$NP_{[NOM]}$ Infl [V $NP_{[DAT]}$]]		*			*
b. [$NP_{[DAT]}$ Infl [V $NP_{[NOM]}$]]		**!		*	*
c. [$NP_{[NOM]}$ Infl [V $NP_{[ACC]}$]]	*!		*		*

Therefore, it seems that an OT analysis that adopts some concept of positional licensing and a constraint that penalises arguments occupying the wrong position is sufficient: the complex mechanism for determining whether another argument is present, and/or whether it is case-checked by a head, *does not seem to add anything with respect to these data*. Essentially, the easiest way to alter Woolford's analysis to account for the range of data explored in this thesis, is to turn it into a version of my analysis: I deliberately notated MaxLexCase and PosCase differently from Max[LC] and IdentCase to keep the hypotheses distinct, but they are the same concepts, and *Acc is merely the inverse of Max[–hr].

7.2 Jónsson (2009): 'Covert nominative'

Jóhannes Gísli Jónsson (2009) proposes a somewhat different account of the Faroese dative-accusative pattern. His argument is as follows: dative subjects in finite clauses have 'nominative case which is not morphologically realized' (Jónsson 2009:157). He assumes that there is a requirement for a nominative subject to appear in subject position, which he distinguishes from positional licensing, rather like my SNom versus IdentCase. The basic idea is that both nominative and dative case are assigned, but since dative is more highly specified, if present it blocks the morphological spell-out of nominative (Jónsson 2009:157). He proposes this on the basis of agreement facts: he found that many Faroese native speakers accept agreement with dative plural subjects, as shown in his examples (179-180).

(179) Far. *Nógvum kvinnum dáma mannfólk við eitt sindur av búki*
many.DAT.PL women.DAT.PL like.3PL men.ACC with a bit of belly
'Many women like men with a bit of belly'

(180) Far. *Teimum dáma at vera saman í bólki*
they.DAT.PL like.3PL to be together in band

'They like to be together in a group'

(Jónsson 2009:157–158)

Such examples are claimed to be 'widely accepted' by Faroese native speakers (Jónsson 2009:158): my fieldwork shows this to be somewhat overstated, since distributions of responses to these types were bimodal (see section 4.3.1); however, it is the case that some speakers judge sentences like (179-180) acceptable some of the time, and they are occasionally produced.[1] Jónsson suggests that number agreement here is not obligatory since this 'covert' nominative only optionally gets assigned to the subject, which already bears dative case. In other words, it is assumed that agreement must indicate the presence of nominative case, even if it does not surface as such. A supplementary argument Jónsson provides is that *sjálvur* 'self', when used with a dative subject, is more acceptable when marked nominative than when marked dative; in a 2006 survey, 58.2% of participants preferred (181a), 30.6% preferred (181b) and 11.2% said both were equally acceptable.[2]

(181) a. Far. *Sjálvur dámar honum ikki at lurta eftir tónleiki*
self.NOM likes.3SG him.DAT not to listen after music
'He himself doesn't like to listen to music'

b. Far. *Sjálvum dámar honum ikki at lurta eftir tónleiki*
self.DAT likes.3SG him.DAT not to listen after music

(Jónsson 2009:159)

Jónsson (2009) argues that the covert nominative in Faroese is responsible for occurrence of accusative case on the object, and conversely that its absence in Icelandic results in the dative-nominative pattern. He does not make all his assumptions about case assignment explicit, but his account necessitates some sort of valuation operation where the subject receives the nominative value from T. This is standardly assumed to be the outcome of an Agree operation (Chomsky 1995), but as others have argued, this mechanism cannot be solely responsible for case-assignment (Bobaljik 2008, Preminger 2011, 2014).[3] Indeed, it is not made clear how Icelandic fails to assign accusative case to the theme in dative-nominative predicates on this theory. Jónsson appeals to what he calls the 'Nominative First Requirement', related to the Case in Tiers idea (Yip et al. 1987 *i.a.*) that nominative is the first case available on the structural tier. However, Case in Tiers runs into a problem with double case: an argument is supposedly not permitted to receive case from both the lexical and structural tiers, but this is exactly what is required to make structural accusative case available for the object (see Yip et al. 1987). This is a tweak that to my knowledge was never explicitly proposed for Case in Tiers theory, but it is not far from the three-level approach proposed by Kiparsky (1997, 2001) which I adopt. One key difference, then, between Jónsson (2009) and the OLG approach is that both lexical and structural case are assigned by heads in the syntax for Jónsson, whilst on my approach the

[1] For example, there were 8 tokens of *teimum dáma(r)*, 'them.DAT like(s).3SG/PL in the blog corpus, one of which had the plural verb 'like.PL', the other 7 of which had the singular.

[2] One possibility is that the nominative in (181a) is an instance of default case, which in Faroese is nominative: the question *Hvør er tað?* 'Who is it?' is answered by *Eg!* 'I.NOM', not *Meg!* 'Me.ACC' (Hjalmar Petersen, Bogi and Súsanna Vinther p.c.).

[3] In my MPhil thesis (Galbraith 2013), I argue that the case-by-Agree theory of Chomsky (1995, 2001) runs into both empirical and conceptual problems, to the extent that it is essentially untenable for Faroese.

winning candidate will have the optimal configuration, with the optimal morphosyntactic case-matching, and the optimal mapping from abstract to morphosyntactic case *for that input*. Essentially, positions bear the features they do because of constraint interactions that rule out other candidates: constraints on the mapping from semantic roles to syntactic structure force [–HR] to be linked to V,Comp, [+HR] to Spec,TP, and so on, rather than e.g. Spec,VP bearing [–HR]. The reason that objects in monotransitives by default bear accusative case is not because the V-head assigns it into its complement within syntax, but because the winning candidate for a monotransitive input (in the absence of lexical case or some other marked elements) will match positional case [–HR] to case on the argument [–HR].

While Jónsson (2009) proposes the idea of a non-realised nominative case feature within syntax, I rather take it to be a positional case which mismatches with the dative lexical case on the subject. Unlike Jónsson, I disconnect the assignment of accusative from the presence or absence of a covert nominative feature, instead positing that a constraint enforcing the realisation of abstract accusative case (MAX[–HR]) conflicts with a preference that the verb agree with a nominative argument (AGRNOM). In other words, it is not that Icelandic lacks some feature that Faroese has, it is simply that Icelandic tolerates a case mismatch in object position provided there is a nominative argument to trigger agreement, i.e. the ranking AGRNOM » MAX[–HR]. Proposals like Jónsson (2009) arise from the starting assumption that case-assignment happens configurationally within syntax, and is driven by features on heads. Since Jónsson's account is not explicit about when a covert nominative is or is not available, it is difficult to test empirically. Because there is always the possibility of attributing variation to the presence or absence of heads or features, it could be argued that this type of approach overgenerates: one might ask whether a covert nominative ever occurs on another functional head such as *v*, or whether there are covert versions of other case features. Even if we stipulate certain case features with certain heads, e.g. nominative with T, accusative with *v* and genitive with D, covert versions would be expected to show substitution behaviour. A covert accusative on *v*, for instance, must somehow be ruled out in Icelandic when the object bears quirky case: otherwise, we would expect the object case to be replaceable by accusative in the same manner as Faroese dative subject case, which does not in fact occur. In (182) the stage of derivation prior to subject movement to Spec,TP is shown (under standard Minimalist assumptions); in (182a), covert accusative is absent and only lexical genitive case is assigned to the object by V, while in (182b), covert accusative is assigned to the argument already marked with genitive case in the same way as the proposed covert nominative in Faroese.

(182) a. [$T_{[NOM]}$ [*hann* *v* [$saknar_{V,[GEN]}$ *hennar*]]]
he.[ ] misses her.GEN

b. * [$T_{[NOM]}$ [*hann* $v_{[ACC]}$ [$saknar_{V,[GEN]}$ *hana*]]]
he.[ ] misses her.ACC

Therefore, an account like Jónsson (2009) will need to explain why (182b) is ruled out: is it the case that covert accusative is just not available in Icelandic? By contrast, data like (182) 'come with' the linking theory approach: MAX[LC] is ranked above MAX[–HR], and failing to express lexically marked genitive case will incur an additional violation of MAX[LC] in (182b). Although the theory presented in Jónsson (2009) can be altered and expanded to achieve empirical coverage, the ranking MAX[LC] » MAX[–HR] is proposed to be

responsible for a much wider range of data than a covert feature on a functional head; likewise, the Faroese ranking MAX[–HR] » AGRNOM correctly predicts the absence of nominative objects and object agreement across the language, not merely in quirky case predicates. Of course, Jónsson's covert nominative does not fail to rule out nominative objects, but it does posit a redundant element that only assigns accusative when *v* fails to do so, which is a highly restricted range of constructions. I argue that if we assume a set of universal constraints with grammar-specific rankings, and that such constraints govern mapping relations between levels of case, we are able to capture the variation within and across languages without positing language- or construction-specific flavours of functional heads. Indeed, the OT model of grammar is in some ways more universal than the model standardly assumed in broadly Minimalist approaches, since all languages 'have' all constraints, rather than each grammar selecting from the set of all possible functional material.

7.3 Asarina (2011)

Asarina (2011) mentions the Faroese dative-accusative pattern, adopting a version of Sigurðsson and Holmberg (2008) proposal that Person and Number are separate probes.[4] Asarina proposes that the number probe in Faroese assigns quirky dative case to the subject, whereas in Icelandic dative subject case is assigned by a lower head; she also adopts the 'covert nominative' hypothesis put forth by Jónsson (2009). However, unfortunately some of the empirical claims made in Asarina (2011) are not supported by my fieldwork data. It is claimed that nominative objects exist with dative-subject verbs in Faroese (Asarina 2011:136); examples are presented from Þráinsson et al. (2004):

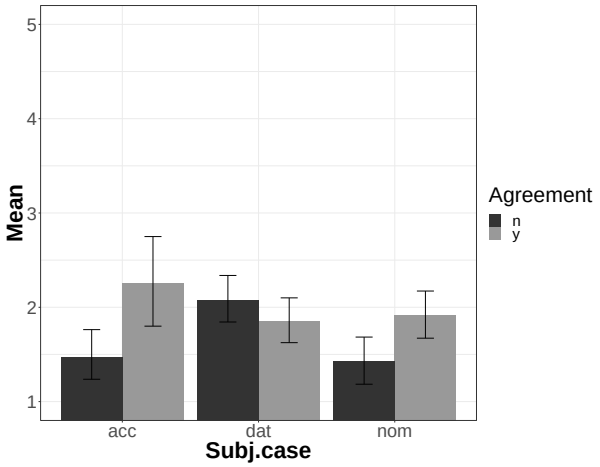
(183) a. Far. *Henni treyt pening/?-ur*
her.DAT exhausted.3SG money.ACC/?NOM.SG
'She ran out of money'

b. Far. *Mær eydnaðist *túrin/túrurin væl*
me.DAT succeeded.3SG tour-the.*ACC/NOM.SG well
'The trip turned out nicely for me'

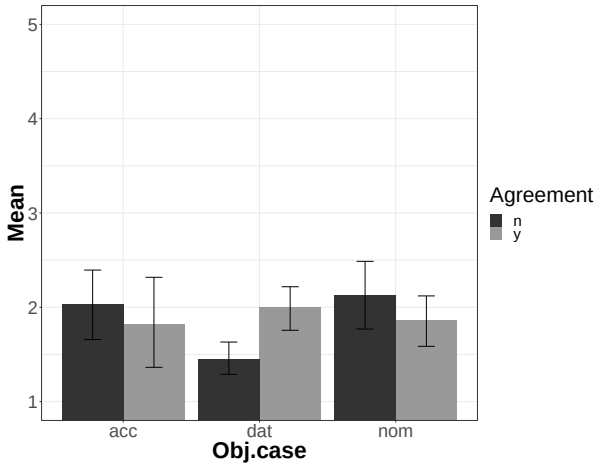
Although this claim, viz. that Faroese has some predicates with nominative 'objects', has been repeated in the literature (Þráinsson et al. 2004, 2012), I found no evidence for this at all in the contemporary language. Of the 24 tokens of *eydnaðist* in the blog corpus, not a single one occurred with a nominative object: one token occurred with a nominative subject and dative object with a clausal complement,[5] 7 tokens occurred with a nominative argument only, and the remaining 17 occurred in an expletive construction with *tað*, *hetta* or some non-subject XP with a dative argument in V,Comp. All of my consultants expressed strong doubts about the construction in (183b), preferring either *Tað eydnaðist (mær) væl* 'EXPL succeeded (me.DAT) well' or *Túrurin eydnaðist (mær) væl* 'trip-the.NOM succeeded (me.DAT) well'. Furthermore, as part of the survey described in section 5.2.2, I tested the verb *tróta* (183a) in various constructions, and found that the verb was unacceptable regardless of case, word order or agreement. Figure 7.1a shows mean acceptability

[4] That is, features on functional heads that receive a value by the syntactic Agree mechanism (Chomsky 1995, 2001).

[5] *Umframt katalogarbeiðið eydnaðist honum væl at gera seks frálík prent*, 'Besides, catalogue.work-the.NOM succeeded him.DAT well to make six excellent prints', *listinblog* line 15636.



(a) **Faroese survey on *tróta*: mean acceptability by subject case and number agreement**



(b) **Faroese survey on *tróta*: mean acceptability by object case and number agreement**

plotted against subject case and agreement, while Figure 7.1b plots mean acceptability against object case and agreement. As is evident, none of the mean judgements approach 2.5 on the 5-point scale, regardless of the case frame or agreement, and so it is safe to conclude that the verb has fallen out of use in the contemporary language. As one participant commented, 'The word *tróta* is no longer usual in Faroese'.[6] The loss of the dative-nominative case frame can be explained as a reranking of {AGRNOM, MAX[–HR]} from the older, Icelandic type AGRNOM » MAX[–HR] to the Faroese MAX[–HR] » AGRNOM. It could be that the examples cited by Þráinsson et al. (2004, 2012) represent an earlier stage of the language in which the ranking AGRNOM » MAX[–HR] was statistically more likely to be activated than in contemporary Faroese.

Asarina's account of the Faroese dative-accusative pattern is based on the timing of case assignment. If we suppose that dative subject case is assigned to the higher argument later in the derivation than in Icelandic, it could be that accusative case is assigned to the lower argument, and number agreement triggered with the higher argument, prior to the assignment of dative case (Asarina 2011:138). In other words, the dative subject in Faroese behaves like a nominative at some point before the sentence is fully derived. Asarina posits that a higher functional head than V is responsible for assigning dative case to the subject in Faroese, which she identifies as the Number head. The assumption is that this is always projected in some form, one which assigns dative case to the subject and one which does not; which form is merged depends on the verb lexeme (Asarina 2011:140). Asarina argues that if the number agreement projection can either agree with the subject and then assign case, or assign case before attempting to agree with the subject: this is supposed to explain the optionality of number agreement with the dative subject in Faroese. The reason person agreement is not available with the dative is explicable if the person probe is higher in the structure than the number probe, which would mean that number agreement has already occurred before the subject ends up in Spec,TP. However, the only empirical evidence presented for splitting the person

[6] *Orðið tróta er ikki longur vanligt á føroyskum.*

and number heads in Faroese is the fact that person agreement is not possible with a dative subject, while number agreement is attested; it is simply stipulated that the number head assigns dative. Therefore, it would need to be established (i) that the person and number heads must be separated to account for the unavailability of person agreement with the dative subject, and (ii) that the number head is able to assign dative case. It seems to me that by far the simpler solution is to assume positional licensing, but also permit mismatches between subject position case and the occupying dative, and this is easiest to implement in a system of ranked, violable constraints such as OT. Moreover, we do not need to attribute the accusative object case to timing of movement operations, since accusative is the standard object case associated with V,Comp: constraint conflict, as demonstrated in Chapter 4, derives the correct case-marking patterns in Faroese and Icelandic, without referencing movement at all.

7.4 Summary

To summarise this section, I have laid out various alternative possibilities to the OLG model I adopt. I concluded that there are both conceptual and empirical reasons to favour an account which acknowledges semantic, syntactic and morphological case, that does not attribute cross-linguistic variation solely to features on functional heads but also to different rankings of markedness and faithfulness constraints, and which captures the attested intra-linguistic variation via competing grammars.[7] New survey data showed that claims repeated in the literature that nominative objects occur in Faroese are unsubstantiated with respect to the verb *tróta*, and hence that those examples do not falsify the MAX[–HR] » AGRNOM ranking for Faroese.

[7] An earlier version of the thesis mentioned in this paragraph a constraint-based analysis of secondary predicates; this came from an earlier draft and was included in error.

Chapter 8

Syntax in OLG

8.1 Introduction

Chapter 3 provided a brief overview of Linking Theory and the basic starting assumptions behind the OT model of grammar. However, many questions remain as to the specifics of how the correct outputs are generated in OLG. This chapter broaches the major issues common to all theories of syntax. Here I propose that the OLG framework not only accounts for the data examined in Chapters 4-6, offering a deeper explanation thereof than the alternatives in Chapter 7, but also provides a model of syntax that is explicit, empirically sound and cross-linguistically tractable. In section 8.1.1, I discuss how Gen produces output candidates, and how the word-order harmonisation derives the correct typology of headedness, including the Final Over Final Constraint. In section 8.1.2, syntactic phenomena classically attributed to movement such as filler-gap dependencies are discussed, in addition to constraints on locality. Section 8.1.3 gives explicit formalisms for the syntactic features proposed in this thesis, and section 8.1.4 provides a step-by-step derivation of an English sentence. Section 8.2 revisits the Faroese sentence types discussed in section 2.2, providing ranking arguments for the proposed constraints; in section 8.2.2, I develop a theory of information-structural constraints, and in section 8.2.3 derive Holmberg's Generalisation from adverb adjunction and the relevant discourse constraints. Factorial typologies are provided for the proposed constraints throughout this chapter.

8.1.1 Phrase structure

Following Prince and Smolensky (1993:209), Smolensky and Legendre (2006:529) *i.a.*, I assume the 'richness of the base', i.e. the set of inputs must be universal. In syntax, as in phonology, I construe this to mean that the set of inputs is a result of freely combining all primitives in all possible ways (McCarthy 2011); the set of output candidates will be the result of this combinatoric mechanism. The lexicon of a given language is hence a finite subset of primitives inferred by learners from the stimulus; lexical entries are formulated according to the distribution of elements in observed grammatical structures (Smolensky 1996). The 'grammar' of Gen is minimally defined as a mechanism that generates trees with items and

features occupying positions: the primitives of syntax being lexical/functional items and a hierarchical structure, analogous to phonological features occupying the positions of a hierarchical prosodic or syllable structure. We can formally define the tree-constructing mechanism as a context-free grammar, following Sipser (1997):[1]

(184) GEN: CONTEXT-FREE GRAMMAR
A grammar G is defined by:
$G = (V, \Sigma, R, S)$ where:
V is a finite set of non-terminal symbols;
Σ is a finite set of terminals, disjoint from V;
R is a finite relation from V to $(V \cup \Sigma)*$, where $*$ is the Kleene star operation;
S is the start symbol or entire sentence, which must be an element of V.

(185) RULES OF GEN
The rules of R are defined by:
$\alpha \rightarrow \beta \in R$, where:
α and β are an ordered pair (α, β) where α represents the left side and β the right side of the rule;
$\alpha \in V$, i.e. α is a non-terminal;
$\beta \in (V \cup \Sigma)*$, i.e. β is a string of terminals and/or non-terminals;
β is permitted to be an empty string (ϵ).

(186) RULE APPLICATION
Given two strings $u, v \in (V \cup \Sigma)*$:
$u \Rightarrow v$, i.e. u is the input and v the output of the rule, where:
$\exists(\alpha, \beta) \in R$, i.e. a rule $\alpha \rightarrow \beta$ exists in the set of rules;
$\alpha \in V$, i.e. α is a non-terminal;
$u_1, u_2 \in (V \cup \Sigma)*$ such that $u = u_1 \alpha u_2$ and $v = u_1 \beta u_2$;
$\therefore v$ is a result of applying rule $\alpha \rightarrow \beta$ to u.

To illustrate, let us assume the following definition of GEN:[2]

(187) $G = (V, \Sigma, R, S)$ where:
V = {CP, TP, VP, DP, NP, AP, PP, AdvP};
Σ = {C, T, V, D, N, A, P, Adv};
R = {XP $\rightarrow$ (XP $\cup$ X)*}, where XP $\in V$ and X $\in \Sigma$;
$S \in V$.

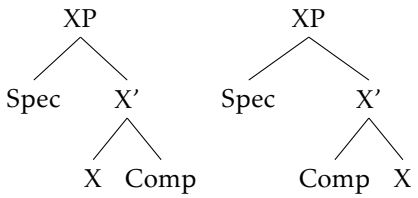
The set of non-terminals V and the set of terminals Σ will be straightforwardly enumerable, since the terminals are derived from universal lexical categories, and the labels in the set of non-terminals are defined

[1] In (184) the term finite relation refers to the number of places in the relation, in this case the two-place rule formulation with a left-hand and right-hand side, or the tuple (LHS, RHS). The Kleene star operator represents the set of all strings generated by concatenating elements of the set preceding the operator an arbitrary number of times, including the empty set; this can be paraphrased to 'zero or more of'.

[2] I do not include vP in the set of non-terminals even though I use this notation later, because I do not assume it to be categorially distinct from VP; rather, the v-head position is an additional position occupied by items of category V.

by the set of terminals. However, the set of rules will be countably infinite, since the right hand side of the rule can contain an arbitrary number of symbols. Therefore, although such unlikely rules as /NP → VP A/ and /CP → P Adv P P/ are members of the set *R*, this is not a problem, since faithfulness constraints such as Max, Dep and Subcat will ensure that candidates produced by such rules are harmonically bounded, and markedness constraints enfore X-bar theoretic structures. In this way, Gen is essentially blind to any distinction other than that of terminal versus non-terminal; the lexical or functional content of the symbol is relevant only to Eval. Gen also does not formally distinguish between bar-levels and phrase-levels: X' is merely a level of structure that is the mother of a head and sister of a specifier, concepts which I build into markedness constraints (ObHead and ObSpec) rather than Gen. The reasoning for this is that in order to permit projections without heads or specifiers, which I argue to be a more parsimonious analysis of some sentence types (see section 2.2), the constraints enforcing them must be violable, and therefore part of Eval rather than Gen. I assume the X-bar theoretic definitions of specifier, head and complement as descriptive priors, in the same way that phonological constraints make reference to notions of 'onset' and 'coda' (Kayne 1994):

(188)



The two possible orders of heads (X) and complements (Comp) are always both generated by Gen, since there is cross-linguistic variation, and the richness of the base is assumed; alignment constraints at Eval rule out incorrect word orders. Therefore, output candidates sent to syntactic Eval include all logically possible orders of heads and complements present in the input. Candidates are hence *not* unordered, but both structures in (188) are always output candidates for every phrasal projection, and the candidate with the order that best satisfies the alignment constraints (for that ranking) is the winner. Adjuncts are generated by the same set of rules *R*, since non-terminals of the same label as that of the left-hand side of the rule may be present on the right-hand side, e.g. /VP → AdvP VP/. [3]

Endocentricity, i.e. the category of a non-terminal being defined by a terminal, is not built into Gen but governed by undominated constraints such as Subcat which enforce compositional interpretability; this captures the fact that phrase- and bar-level labels are in a sense underdetermined, since specifier and complement positions take their properties from the local head.[4] **Only two undominated constraints are necessary** to account for the data under discussion here: (i) Subcat, which does the work equivalent to c-selection in Minimalist approaches, and (ii) *EmptyStruc, which rules out unnecessary empty structure (cf. proposals in Legendre et al. 2001). They are defined as follows:

(189) Subcat: Assign a violation for each subcategorisation feature not satisfied in the output.

[3]The data examined in this thesis are consistent with adjuncts being evaluated at the same semantic-syntactic interface as arguments, but further work should be done to establish whether a distinct, later evaluation cycle for adjuncts is necessary. For an OT treatment of adjuncts, see Zepter (2000) and the references therein.

[4]See Narita (2014:68–76) for one recent proposal for capturing endocentricity without phrase structure rules.

(190) *EmptyStruc (*EmpStr): Assign a violation for each empty position in the output that does not satisfy requirements of an input feature.

For further discussion of the features proposed here, see section 8.1.3. The definition of *EmptyStruc is such that subcategorised gaps and ellipsis will not be targeted by the constraint, since on this approach these phenomena are triggered by features present in the input; rather, *EmptyStruc will ensure that empty specifier or complement positions beyond that required to satisfy input features will not proliferate.

As for the violable constraints responsible for phrase structure, I follow Grimshaw (2001) in positing two kinds of markedness constraints that enforce economy of projections: alignment constraints, and obligatory element constraints. Alignment constraints concern the hierarchical ordering of elements in the structure. I formulate the alignment constraints as proposed by Kiparsky (2017):

(191) F<XP: Assign a violation for each operator, i.e. functional head, that does not precede its operand, i.e. complement phrase (Kiparsky 2017).

(192) HeadFinal (HdFin): Assign a violation for each head that does not occur in the final position of its phrase (Kiparsky 2017).

(193) Harmony (Hrm): Assign a violation for each phrase XP embedded in a phrase YP where XP and YP do not have the same headedness (Kiparsky 2017).

Although {F<XP, HdFin} are sufficient to derive X-bar principles, the addition of Harmony captures the range of attested disharmonic structures, as discussed below. The obligatory element constraints are violated when a projection does not have a head or a specifier respectively (Grimshaw 2001:2–3):[5]

(194) ObHead (ObHd): Assign a violation for each phrase not containing an overt head.

(195) ObSpec (ObSp): Assign a violation for each phrase not containing a specifier.

These constraints are sufficient to generate well-formed structures that obey X-bar theoretic principles. Hierarchical relations between positions such as the notions of specifier and complement must be referred to within syntax, and hence are encoded in the constraints. It should be noted that these constraints are somewhat analogous to those responsible for syllable structure: for instance, ObSpec is similar to Onset which requires every syllable to have an onset. Indeed, it should therefore be unsurprising if phrases without specifiers exist given that faithfulness to the input can be satisfied without them, in the same way that onsetless syllables exist without violating highly ranked faithfulness constraints. I assume there is no constraint ObComp, since many projections consist solely of a head; similarly, it would be implausible to posit a constraint ObCoda since there is no language in which codas are always obligatory.

Head-initiality and head-finality are derived by the pair of constraints {F<XP, HdFin}: head-initial order by the ranking F<XP » HdFin, and head-final order by the ranking HdFin » F<XP, as shown in the tableaux (adapted from Grimshaw 2001:5–6). The orders Head-Spec-Comp and Comp-Spec-Head are excluded, since the definition of head and complement is that they be sisters, and a specifier is by definition a left-edge position within the phrasal projection. Therefore such candidates would always incur at least one

[5]The reason for formulating ObHead such that it is satisfied only by an overt head is explained in section 8.1.2 below.

additional ObHead and ObSpec violation compared to the equivalent candidates with left-edge specifiers and head-complement sisterhood, in the same way that a syllable structure such as Nucleus-Onset-Coda would violate Onset where Onset-Nucleus-Coda would not.[6] Throughout the tableaux in this chapter, I use the notation $\{\alpha,\beta\}$ to denote an unordered set, and $[\alpha\ \beta]$ to denote a linearly ordered syntactic constituent.

(196) **Head-initial**

{Spec, H, Comp}	F≺XP	HdFin
☞ a. [Spec H Comp]		*
b. [Spec Comp H]	*!	

(197) **Head-final**

{Spec, H, Comp}	HdFin	F≺XP
a. [Spec H Comp]	*!	
☞ b. [Spec Comp H]		*

As mentioned earlier, in order to derive disharmonic word orders while ruling out the order *[[H Comp] Op], where Op is an operator taking a complement, an additional constraint must be in operation. This restriction is known as the Final Over Final Constraint (FOFC), proposed by Biberauer et al. (2007, 2008) *et seq.*; see Sheehan et al. (2017) for a recent overview. Kiparsky (2017) proposes the three constraints (191-193) adopted here to derive the FOFC and concomitant typological generalisations: Harmony, ensuring that if A dominates B, A and B have the same headedness; HeadFin, enforcing that arguments precede their predicates; and F≺XP, enforcing that functional heads (operators) precede their operands. An example ranking deriving each of the possible orders is shown in (198-200):

(198)

{Op, {H, Comp}}	F≺XP	HdFin	Hrm
☞ a. [Op [Comp H]]		*	*
b. [Op [H Comp]]		**!	
c. [[Comp H] Op]	*!		
d. *[[H Comp] Op]	*!	*	*

(199)

{Op, {H, Comp}}	Hrm	F≺XP	HdFin
a. [Op [Comp H]]	*!		*
☞ b. [Op [H Comp]]			**
c. [[Comp H] Op]		*!	
d. *[[H Comp] Op]	*!	*	*

[6] It is questionable whether languages with right-edge specifiers exist: languages with ostensibly subject-final declarative word orders such as Malagasy (VOS) do not necessarily call for a rightward-specifier analysis (Pearson 1998, 2005), nor do languages with OVS surface order such as Hixkaryana (Mahajan 2007, Kalin 2011).

(200)

{Op, {H, Comp}}	HdFin	F<XP	Hrm
a. [Op [Comp H]]	*!		*
b. [Op [H Comp]]	**!		
☞ c. [[Comp H] Op]		*	
d. *[[H Comp] Op]	*!	*	*

Candidates (a), (b) and (c) are each winners on two rankings, but there is no ranking in which *[[H Comp] Op] can win, since it is always harmonically bounded. The alignment constraints are universal, as are the candidates and violations incurred by each candidate: the only difference, then, between uniformly head-initial and head-final languages is the ranking of these two constraints.[7] Therefore, in every grammar, under any ranking, a projection with a functional head and complement will incur a violation of {F<XP, HdFin}, and a projection with a single element satisfies all the alignment constraints. Hence, in order to generate projections with more than a single element, the alignment constraints conflict with those requiring certain syntactic elements to be present in the structure.

The work done by the obligatory element constraints is, unsurprisingly, to ensure that projections have a head and a specifier. This also rules out completely empty structures, which despite not violating alignment constraints (since there is nothing to misalign), violate both ObHead and ObSpec. Moreover, projections with a single element necessarily violate ObHead, ObSpec or both. Thus, every type of projection in every grammar necessarily incurs violations of the constraints governing X-bar structure. This corollary is desirable, since it is only by constraint conflict that we derive structural economy: the combination of alignment and obligatory element constraints prohibits proliferation of empty projections (Grimshaw 2001:12–15).

Output candidates with increasing amounts of empty structure are harmonically bounded by simpler, smaller structures with fewer elements, and can never win.[8] It is the job of the *faithfulness* constraints to make sure that the optimal candidate has sufficient structure for the elements in the input to be inserted, and that said items are inserted in the correct positions. **In other words, the rationale behind the constraints is to achieve a more parsimonious analysis, since no empty position or structure will be present in a winning candidate unless empirically supported**. Rather than formulating Gen such that every head projects a specifier, and hence typical outputs beyond individual sentences will contain hundreds of empty specifiers or head positions that are never occupied by overt material, this approach allows us to posit only the structure that is absolutely necessary for insertion of syntactic items and the satisfying of their featural requirements. This system is thus close to that of Bare Phrase Structure (Chomsky 1994 *et seq.*), in which the labels of non-terminals are determined by one element of the tuple created by the Merge operation, i.e. the head projects its label to the phrasal constituent. In the same way, in OLG the undominated constraints Subcat and *EmptyStruc derive endocentricity and the minimal necessary structure for features to be discharged. However, by positing undominated constraints as part of Eval, not imposed on Gen as is effectively the case in Minimalism, we allow the structure-building mechanism to be as general as possible, while achieving the same restrictions on tree well-formedness. As has been demonstrated in Chapters 4-6, this approach to grammar makes verifiable predictions that turn out to be consistent with

[7] One might posit a more general version of F<XP that is violated also by any head failing to precede its complement, but such a constraint derives the wrong typology of headedness (Kiparsky 2017).

[8] Excluding the case where presence of a head is preferred over its absence; see Grimshaw (2001:11).

the data examined, thus lending empirical support to the OLG model.

8.1.2 Movement, or fillers and gaps

The linear ordering that results from the language-specific ranking of the constraints governing phrase structure is assumed to be the 'base' order, but in a different sense to that of transformational approaches. Indeed, since OLG does not posit a derivational model, base position is merely a traditional descriptor for structures in an output candidate that satisfy the word-order constraints without failing to realise input features. Therefore, *not every input will represent the base order, nor can be said to 'have' a base structure*: only that given input-output pair which fits a certain structural description.[9] In OLG it is assumed that the base position of a syntactic element is defined in (201):

(201) The base position β of a syntactic element α is that winning output candidate which:

(i) incurs no violation of SUBCAT;

(ii) satisfies all IDENT-type constraints targeting the syntactic features of α and β; and

(iii) incurs no violations of higher-ranked constraints if α occurs in β.

Hence, an example of a structure that does *not* have or represent a base order would be presentational expletive constructions, in which the associate occurs in V,Comp: the winning candidate will incur a violation of IDENTCASE, since the V,Comp position bears [–HR] and the associate [+HR]. The constraints enforcing the base position will differ according to the syntactic properties of the element in question; for instance, MAX[–HR] is irrelevant to adverbs, while IDENTADV will not evaluate nominal case. The difference between MAX and IDENT must be emphasised: **where** MAX **constraints penalise material from the input being unexpressed in the output,** IDENT **constraints penalise output candidates in which the syntactic feature values are not identical on the position and occupying item**. The constraints relevant to phenomena attributed to syntactic movement are enumerated in Table 8.1; I follow the standard OT terminology in grouping faithfulness constraints as those which compare the input and output representations, and markedness constraints as those which solely evaluate the form of the output candidate (see de Lacy 2011). Both MAX and IDENTF represent classes of constraint which also have more specific subtypes; I propose only those subtypes that are empirically necessary. A full table with definitions for every constraint proposed in this thesis can be found in Appendix A2.

In section 8.1.4, the roles played by these constraints are illustrated by an example English sentence with a wh-dependency. Regarding the constraints in Table 8.1, the base positions of several elements are enforced as follows: for overt arguments, the base position is that which satisfies IDENTCASE without incurring a violation of IDENTDIS or other information-structural markedness constraints, e.g. an object bearing [–HR] in base position incurs no IDENTCASE violation; a topicalised object DP in Spec,CP does incur a IDENTCASE

[9] In that sense, base position is less useful terminology in a representational theory, but can approximate a notion of markedness, in that the base order is typically less marked, e.g. polar questions versus simple declaratives in languages with subject-auxiliary inversion.

Table 8.1: **Constraints governing positions of syntactic elements**

Constraint	Description	Targets
	Faithfulness constraints	
Max	Assign a violation for each feature or item present in the input that is not present in the output.	All
Dep	Assign a violation for each feature or item not present in the input that is present in the output.	All
	Markedness constraints	
ArgSP	Assign a violation for each finite TP in which no argument occupies subject position (Spec,TP).	Spec,$TP_{[+fin]}$
IdentF	Assign a violation for each positional feature matrix F[$vals_{pos}$] that is not identical to its corresponding item feature matrix F[$vals_{item}$].	All
IdentCase	Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].	Argument DPs
IdentDis	Assign a violation for each positional discourse-feature matrix F[$vals_{pos}$] that is not identical to its corresponding item discourse-feature matrix F[$vals_{item}$].	All
IdentAdv	Assign a violation for each positional adverbial-adjunction feature matrix F[$vals_{pos}$] that is not identical to its corresponding item adverbial-adjunction feature matrix F[$vals_{item}$].	Adverbs
CheckTns	Assign a violation for each Tense (T) head position not occupied by an item bearing a [±fin] feature (i.e. of category V).	V-heads
VfinHi	Assign a violation for each finite verb not occurring in the highest available functional head position in the clause (CP).	V-heads

violation, but satisfies the higher-ranked IdentDis by the matching of [+Top] features. As laid out in section 8.1.3, both arguments and syntactic positions may also bear discourse-features such as [±Foc] and [±Top]. For tensed verbs, the relevant constraint enforcing base order is CheckTns, which conflicts with the markedness constraint VfinHi that penalises finite verbs occurring in head positions lower than the highest available in the clause (CP). For adverbs, I assume the X'-adjunction analysis, but since the position of the adverb depends both on the given adverb and on its scope, I assume the order to be determined by an adjectival-adjunction feature present on the input item. The constraint IdentAdv ensures that this adjunction feature matches that of the site, e.g. that a T'-adverb does not occur adjoined to V'. This analysis turns out to derive the correct object shift typology in Scandinavian, as discussed in section 8.2.3 below. Thus, on this theory it is *not* the case that movement operations derive surface orders: instead, in cases typically assumed to be syntactic movement, the input contains features (e.g., [+Foc],[+Q]) that trigger violations of input-output faithfulness constraints if unrealised. Since Subcat ensures that subcategorisation violations are never present in a winning candidate, it follows that grammatical sentences with elements not present in their default position also do not violate Subcat.

The analysis of adverb placement proposed here is also relevant to so-called cases of 'optional movement', e.g. optional scrambling of definites in Dutch. Diesing and Jelinek (1995) propose that referential definite objects scramble obligatorily, i.e. must occur to the left of a sentence-medial adverb, unlike non-referential definite objects. In contrast, van der Does and de Hoop (1998) and de Hoop (2000, 2003) propose that true optionality does exist with respect to word order under certain conditions; for example, when a preceding context is provided in which there is no antecedent for 'the cat' in (202), scrambling does not force an anaphoric interpretation (de Hoop 2000:157):[10]

(202) Context: 'Recently, Paul seems to be under stress.'

a. Dut. *Misschien komt dat omdat hij* ***zelden*** *de kat aait*
maybe comes that because he seldom the cat pets
'That's maybe because he hardly ever pets the cat'

b. Dut. *Misschien komt dat omdat hij de kat* ***zelden*** *aait*
maybe comes that because he the cat seldom pets

Both word orders in (202a-b) are claimed to be grammatical, with the non-anaphoric reading preferred for 'the cat' in both. Likewise, when a context is provided in which 'the cat' has an antecedent, e.g. 'Paul has a cat that seems to be under stress recently', it is claimed that the anaphoric interpretation is forced for both orders in (202a-b). This suggests that word order only determines the preferred interpretation in the absence of context, an effect that can be overridden by an explicit antecedent. However, van Bergen and de Swart (2009, 2010) call de Hoop's analysis into question with data from two corpus studies. They found that scrambling decreases in occurrence along the definiteness hierarchy, i.e. pronouns > proper nouns > definites > indefinites; moreover, it was found that pronouns scramble almost categorically, but indefinite and definite objects in fact rarely scramble. Interestingly, the scrambling behaviour of definite objects was not reported to be categorical, which led the authors to propose a functional account of the data, attributing the preference to sentence planning considerations (Wasow 2002). Elements which require little planning, such as pronouns, prefer the scrambled order, whereas more complex elements such as definite and heavy objects require more planning and hence prefer the non-scrambled option.

How then does the framework adopted in this thesis address the empirically supported preference for the (202a) order in Dutch? In OLG, 'scrambling' is not object movement across an adverb, but a different adverbial adjunction site combined with availability of the Spec,VP object position. In section 8.2.3, I propose an analysis of Scandinavian object shift in which *v*'-adjoined adverbs block shift by scoping over the Spec,VP position, whereas V'-adjoined adverbs do not scope over this position and therefore permit shift as a means of satisfying a [–Foc] feature on the object. Accordingly, if we extend the hypothesis to Dutch, the difference between (202a-b) is expected to be a different adjunction site for *zelden* 'seldom': if *v*'-adjoined as in (202a), the object occurs in (head-final) V,Comp, while if V'-adjoined as in (202b), the object sits in Spec,VP. Since van Bergen and de Swart (2010) show that the order in (202a) is far more frequent in actual usage, the question is then why the *v*'-adjoined *zelden* is preferred. I propose that the OT-based approach advocated for here is in fact consistent with the sentence processing literature. While OT syntax is not typically presented as a theory of linguistic 'performance' but rather one of 'competence'

[10] See Jäger (1995) and Meinunger (2000) for similar claims with respect to German scrambling of definite objects.

— in other words, of delimiting the inventory of all possible sentences in all languages — this does *not* entail that functional factors do not strongly influence the universal set of constraints at Eval. Indeed, it is quite possible that late commitment on the part of the speaker, e.g. preferring non-scrambling for definites due to their lower accessibility relative to pronouns, is a functional pressure that holds of the distribution of syntactic features across the structure. In the same way that assigning [–Foc] to the Spec,VP position in Scandinavian could be a result of a pressure that discourse-heavy material should occur later, the preference for *v*'-adjoined adverbials in Dutch with definite objects in V,Comp could be the result of a lexical constraint ensuring that the adverb adjoins at a site prohibiting discourse-heavy material from occurring earlier. Hence, the empirical observations may be captured within a theory such as OLG that acknowledges functional factors as influences on the set of constraints.

Another central issue regarding phenomena standardly attributed to movement is that of traces, i.e. the gap position to which the filler element is in a dependency relation. *Pace* Grimshaw (2001:21–24), I do not assume that 'traces' or 'lower copies' of items that show up in higher structural positions than the base actually exist in a sense other than 'gap': the gap exists as a position in the structure, but is not manipulated as a true syntactic object.[11] I assume instead, following Hawkins (1999), the gap mechanism for both subcategorised and non-subcategorised gaps: a direct association or co-indexation between the wh-element and its subcategorising head (Pollard and Sag 1994, Pickering et al. 1994), here instantiated by matching features on each item, or simply an association of the filler to its gap in the latter case. Therefore, a head position that is vacant does incur a violation of ObHead, even though it is the base position for an item that is pronounced elsewhere. Grimshaw (2001:21) rejects the hypothesis that ObHead is violated by a trace of head movement, on the basis of her analysis of subject-auxiliary inversion in English. She argues that, if only the pronounced head satisfies ObHead, the candidate without movement and the candidate with a trace each will violate ObHead once, resulting in a tie as shown in (205). In this tableau, the constraints are formulated as follows:

(203) ObHead1: Assign a violation for each phrase not containing a head or subcategorised head position.

(204) ObHead2: Assign a violation for each phrase not containing an overt head.

(205)

{[the students]$_{[+\text{HR}]}$, have$_{[+\text{fin}][+\text{Q}]}$, read$_{[-\text{fin}]}$ [which books]$_{[-\text{HR}][+\text{Q}]}$}	ObHd1	ObHd2
a. [$_{\text{CP}}$ [$_{\text{DP}}$ Which books] have$_{\text{C}}$ [$_{\text{TP}}$ [$_{\text{DP}}$ the students] ___$_{\text{T}}$ [$_{\text{VP}}$ read ___]]]		*
b. [$_{\text{CP}}$ [$_{\text{DP}}$ Which books] [$_{\text{TP}}$ [$_{\text{DP}}$ the students] have$_{\text{T}}$ [$_{\text{VP}}$ read ___]]]	*	*

(205a) represents the standard analysis of subject-auxiliary inversion in English, in which the finite auxiliary is assumed to be in C. In output candidate (205a), which is supposed to win, the overt auxiliary head occurs in the higher position, with a subcategorised gap in its base position of T. In candidate (205b), which should not win, there is no C-head position at all, and therefore either formulation of ObHead is violated. Grimshaw states that if we adopt the ObHead2 formulation in which only an overt head satisfies the constraint, we are left without an explanation for inversion, and therefore we must adopt ObHead1.

[11] I do not treat ellipsis as merely a 'gap' but actual deletion: constituents or sub-constituents that are unpronounced in the winning candidate, I assume, bear some input feature encoding ellipsis of the appropriate material, and a feature-realisation constraint rules out candidates in which that material is sent to PF.

The logic is, if we only had ObHead2, there would be no way to rule out the loser (205b), since the empty head position would also incur a violation thereof. However, I respond that we are only left without the explanation based on ObHead. If in fact there is a faithfulness constraint IdentF enforcing the correct mapping of syntactic features between positions and their occupying items in the output, formulated as in Table 8.1 above, we have a feasible alternative hypothesis. Even though candidate (a) incurs identical violations of ObHead to (b), (a) does not violate IdentF where (b) does. In languages with wh-'movement', **in wh-questions the positions C and Spec,CP, and the finite verb and wh-phrase, are each associated with a [+Q] feature**, satisfied only by matching of the positional features to those of the items occupying them; wh-in-situ languages, conversely, would locate those features in V,Comp and the finite verb 'base' (T or V). IdentF is repeated here as (206):

(206) IdentF: Assign a violation for each positional feature matrix F[$vals_{pos}$] that is not identical to its corresponding item feature matrix F[$vals_{item}$].

This analysis would account for English subject-auxiliary inversion as shown in (207).

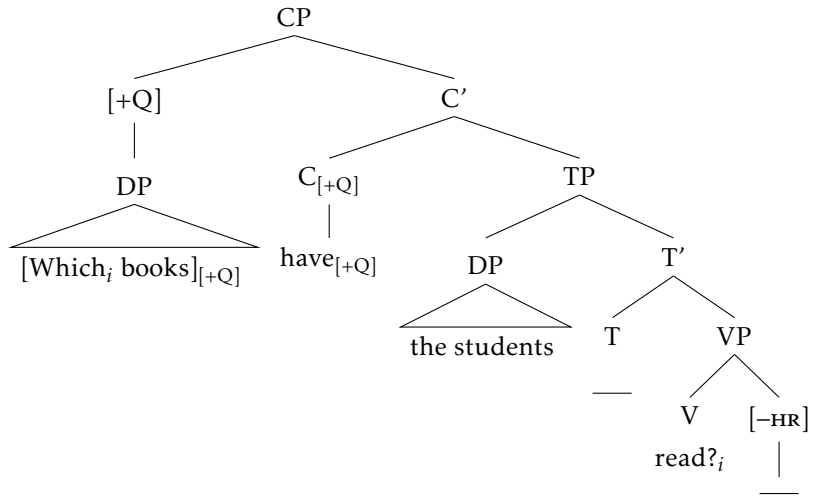
(207)

{[the students]$_{[+hr]}$, have$_{[+fin][+Q]}$, read$_{[-fin]}$ [which books]$_{[-hr][+Q]}$}	IdentF	ObHd(2)
☞ a. [$_{CP}$ [$_{DP}$ Which books]$_{[+Q]:[+Q]}$ have$_{C,[+Q]:[+Q]}$ [$_{TP}$ [$_{DP}$ the students] ___$_{T}$ [$_{VP}$ read ___]]]		*
b. [$_{CP}$ [$_{DP}$ Which books]$_{[+Q]:[+Q]}$ [$_{TP}$ [$_{DP}$ the students] have$_{T,[-Q]:[+Q]}$ [$_{VP}$ read ___]]]	*	*

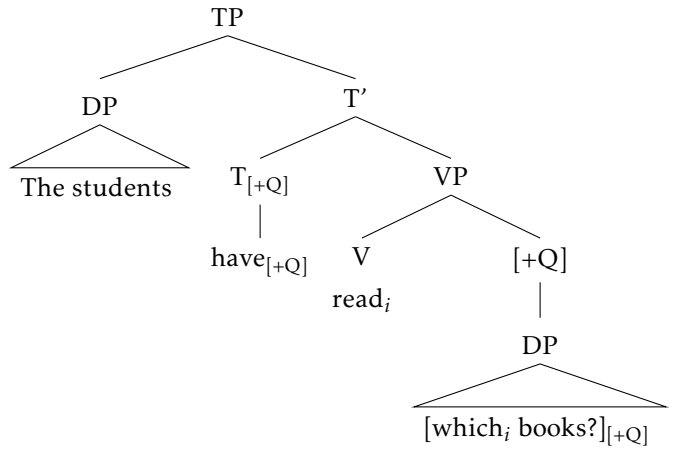
In the winner (207a), IdentF is not violated since the [±Q] features on Spec,CP and C have identical values to those on the occupying phrase 'which books' and 'have' respectively. In (207b), since the [–Q] feature on the T position does not match the [+Q] on 'have', a violation of IdentF is incurred, and therefore (207b) fares worse than (207a) with respect to IdentF.[12] Unlike some broadly Minimalist approaches, we do not posit an unpronounced $C_{[+Q]}$ head that is always present even without an overt head in C. Rather, C denotes a position that may be present/absent, occupied/not occupied or associated/not associated with [+Q], depending on the candidate. Moreover, the position is only associated with [+Q] *in the winning candidate* if [+Q] is present in the input, in the same way that V,Comp is only associated with [–hr] if the input verb takes a direct object complement. (There may of course be losing candidates with the features associated with the right positions, but which lose due to violations of some other constraints.) Candidates with positions not associated with the input features will be harmonically bounded by violations of faithfulness constraints of the type Max. As noted above, I assume that in English, [+Q] is associated with the positions C and Spec,CP, not with the finite verb base position (V or T) and V,Comp; the inverse is hypothesised for wh-in-situ languages, where the [+Q] is satisfied without the relevant items occurring elsewhere. A tree for a wh-'movement' language is shown in (208) and for a wh-in-situ language in (209).

[12] I discuss in more detail how feature matching is evaluated in section 8.1.3; further discussion of English word-order constraints can be found in section 8.1.4.

(208)



(209)



As can be seen in (208), in languages like English a subcategorised gap occurs in both T and V,Comp in the winner, incurring violations of CheckTns and IdentCase. However, IdentF is satisfied by the matching value of the [+Q] features between Spec,CP and the wh-DP, and C and the auxiliary. In (209), IdentF is already satisfied by the matching value of the V,Comp [+Q] and that of wh-DP in situ, as well as the [+Q] on T and the auxiliary. The [+Q] hypothesis can be extended to languages with overt morphology for polar questions, for example the Japanese sentence-final particle *ka*: unlike English do-support or Scandinavian V1, in such languages the [+Q] present in the input is morphologically instantiated, rather than subject to position-item matching, and therefore candidates without the particle would incur a Max violation.[13] Tableaux yielding the trees in (208-209) are given in (210-211), with a Mandarin example representing wh-in-situ:

(210) **English content question:**

{[the students]$_{[+HR]}$, have$_{[+fin][+Q]}$, read$_{[-fin]}$ [which books]$_{[-HR][+Q]}$}	IdF	ObHd
☞ a. [$_{CP}$ [$_{DP}$ Which books]$_{[+Q]:[+Q]}$ have$_{C,[+Q]:[+Q]}$ [$_{TP}$ [$_{DP}$ the students] ___$_T$ [$_{VP}$ read? ___]]]		*
b. [$_{TP}$ [$_{DP}$ The students] have$_{T,[-Q]:[+Q]}$ [$_{VP}$ read [which books?]$_{T,[-Q]:[+Q]}$]]]	**	

[13] For the data examined in this thesis, it is sufficient to limit the scope of Max to features that are morphologically instantiated, i.e. which have a 'host' word or morpheme, but future work may refine the formulation.

(211) **Mandarin content question:**

{[*xuéshēng*]$_{[+\text{HR}]}$, *dú*$_{[+\text{fin}][+\text{Q}]}$, [*nǎxiē shū*]$_{[-\text{HR}][+\text{Q}]}$}	IDF	OBHD
a. [$_{\text{CP}}$ [$_{\text{DP}}$ *Nǎxiē shū*]$_{[-\text{Q}]:[+\text{Q}]}$ *dú*$_{\text{C},[-\text{Q}]:[+\text{Q}]}$ [$_{\text{TP}}$ [$_{\text{DP}}$ *xuéshēng?*] ___$_{\text{T}}$ [$_{\text{VP}}$ ___$_{\text{V}}$ ___]]]	**	**
☞ b. [$_{\text{TP}}$ [$_{\text{DP}}$ *Xuéshēng*] *dú*$_{\text{T},[+\text{Q}]:[+\text{Q}]}$ [$_{\text{VP}}$ ___$_{\text{V}}$ [*nǎxiē shū?*]$_{\text{T},[+\text{Q}]:[+\text{Q}]}$]]]		

In the case of these content questions, it turns out that the same ranking IDENTF » OBHEAD generates both languages: in English (210), wh-in-situ violates IDENTF due to the [–Q]:[+Q] mismatches in T and V,Comp, while in Mandarin (211), the candidate with the sentence-initial wh-phrase incurs a violation of IDENTF for the same mismatches in C and Spec,CP. The difference is between the positions to which the [+Q] features are associated. It may be objected that features rather than constraints seem to be necessary to account for movement phenomena, since when a constraint is satisfied depends on the position of the feature. However, as I argue in section 8.1.3, the distribution of features across structure is itself subject to harmonisation, and therefore also under the purview of ranked universal constraints. Furthermore, other constraints are at play in both sentences (210-211), e.g. IDENTCASE is violated by a [–HR]-bearing object occurring in Spec,CP, and an interaction between CHECKTNS and VFINHI derives the "T-to-C" behaviour; these tableaux merely illustrate the role played by feature-matching in generating these two varieties of content question. Regarding such issues of word-order variation, the typology derived by the word-order constraints proposed in this thesis is presented in section 8.2.1.

Therefore, we have seen that is quite possible to account for syntactic movement phenomena without explicit reference to an independent movement operation, but rather explain the observed patterns as the outcome of constraint interaction. An advantage of this approach is its flexibility to account for morphosyntactic variation with a universal set of competing pressures on well-formedness, rather than a universal operation that applies 'when necessary'. The 'when' on such theories may also depend on features, but in Minimalist approaches the distribution of movement-triggering features tends to be determined by heads present at the input to syntax, rather than being subject to a universal set of constraints. Conversely, by attributing universals to the set of constraints and variation to the ranking, we can be more explicit (and hence make more straightforwardly testable predictions) about the typology of possible languages with a given set of primitives.

The constraint-based approach to 'movement' raises questions common to representational theories, namely how to account for locality effects. In particular, the question of harmonic *parallelism* (a single optimisation algorithm generates the fully-formed winner) versus *serialism* (multiple cyclic optimisations of smaller domains) will determine how the model captures island phenomena, for example. While the data examined in this thesis do not principally shed light on this issue, the way in which Linking Theory proposals would contribute to OT accounts of locality represents a fascinating avenue for future research. Here I follow Legendre et al. (1998), who posit that a general 'shortest link' constraint subhierarchy MIN-LINK ensures that longer dependency chains are penalised (cf. Rizzi 1990): recursive application of local conjunction to the constraint BAR(RIER), violated by a chain link which crosses a barrier (defined as per Chomsky 1986),[14] results in a system where chains are 'as weak as their longest link', where length of link

[14] Formulating a precise definition of barrier within OLG is a task beyond our scope here, but since the notions of 'L-marking' and 'theta-governing' adopted in Chomsky (1986) require a quite distinct set of starting assumptions, this would involve reviewing in detail the empirical case for the barriers framework.

is measured in barriers. In other words, (i) if chain C_1 is longer than chain C_2, C_1 is less harmonic than C_2; (ii) if the longest links of C_1 and C_2 are the same length but C_1 has more longest links than C_2, C_1 is less harmonic than C_2; and (iii) if C_1 and C_2 have longest links of equal length and the same number of them, harmonisation is recursively determined by examining the remaining links excluding the longest links (Legendre et al. 1998:13). This provides a principled account of a wide variety of extraction phenomena, including super-raising, wh-islands, superiority and strong island effects; it also correctly captures wh-in-situ and topicalisation in Chinese, as well as English and Bulgarian data. I refer the reader to Legendre et al. (1998) for more detailed discussion; the central point is that filler-gap dependencies are subject to optimisation that disfavours longest links, but with the advantage of the cross-linguistic flexibility provided by a violable constraint model. In this way, phenomena attributed to movement in transformational theories can be derived from the interaction of universal locality and faithfulness constraints.

A major advantage of the OLG approach is that, by formulating economy constraints as part of Eval rather than economy of derivation, we capture the fact that gaps and insertion of expletives are tolerated only in order to satisfy some other competing pressure. Furthermore, we make more restrictive empirical predictions than accounts which posit empty specifiers and structure-altering operations: for example, presumably if a *v*-head were always present in the extended VP in all languages, it would also always project a specifier in the standard Minimalist model; this predicts that every language will have Spec,*v*P as an available syntactic position, and therefore we expect to see elements occupy this position in some sentence types. However, Spec,*v*P is not *necessary* to account for the Faroese sentence types in Table 2.1, even if it does not undergenerate. Thus by dividing the labour such that Gen concerns only the combinatorics of lexical insertion into structures that fit a very general description, we allow for a closer matching between the data and the assigned syntactic structure. It seems to me that such an approach reduces the cost of universal mechanisms like Merge by only positing structures minimally necessary for satisfying insertion and selectional restrictions.

As demonstrated in this section, on a theory without movement operations, the content of the input becomes particularly important, since it is the satisfaction of input features that determines the violation profile of an output candidate, and therefore also the winning candidate. Following standard assumptions in OT syntax, I hypothesise that the input contains argument structure of the predicate, lexical items, information and discourse features, a hierarchy of theta-roles,[15] and functional features such as tense (Legendre et al. 2001:20). In the next section 8.1.3, input features are discussed in greater detail, and in section 8.1.4 the process of generating an English sentence is laid out.

8.1.3 Syntactic features

Almost all theories of syntax have posited some form of feature-based formalism, since it is clear that a certain subset of linguistic information is syntactically 'intelligible', i.e. necessary to account for the range of observed surface word orders. Feature matrices are a clear and explicit notation for such information. Indeed, some frameworks have a highly developed theory of feature inheritance and transference or percolation; prominent examples being LFG (Bresnan 1982), GPSG (Gazdar et al. 1985) and the typed feature

[15] More precisely, the hierarchical relations that derive the [±hr±lr] features rather than named roles such as Agent, Goal, Theme etc.

structures of HPSG (Pollard and Sag 1994). In OLG, feature matrices, notated [ ], contain a possible value or values taken from the set of all possible values for that feature; feature matrices may also contain other feature matrices, e.g. [–HR–LR] which represents [[–HR][–LR]]. Feature-matching is notated throughout by matrices linked by a colon, in the format 'position : item'. The list of basic types below is not intended to be exhaustive, but covers all necessary features to cover the data examined in this thesis:

(212) i. LEXICAL/FUNCTIONAL CATEGORIES:

{N, V, A, P, Adv, D}, borne by heads and head positions

ii. CASE FEATURES:

morphosyntactic {[+HR],[–HR],[–HR–LR],[–LR]}, borne by arguments

positional {[+HR],[–HR],[–HR–LR],[–LR]}, borne by argument positions

iii. PHI-FEATURES (a subset of semantic features):

{Pers[*val*], Num[*val*], Gend[*val*]}, borne by arguments and verbs

iv. DISCOURSE/INFORMATION-STRUCTURE FEATURES:

{[±Q], [±Foc], [±Top]}, borne by positions, arguments and verbs

v. SEMANTIC FEATURES:

{[±fin],[±aux],[adjunct:T']}, borne by positions and items of the relevant category

In the sections which follow these features will be justified as the data present their need. I assume that only syntactically-relevant semantic features enter the EVAL computation for syntax; hence, lexical-semantic features one might imagine, such as [+colour] or [+cognition], will only be referred to if there is empirical evidence that an attested language makes grammatical distinctions by such a feature. It is clear that the feature list in (212) contains features of several kinds: binary features such as [±fin], features with more than two possible values such as Gend[m,f,n], and categorial features that must be present on the relevant items such as V. Therefore, formulations of feature-matching constraints must handle these distinctions. Both faithfulness and markedness constraints are necessary in the evaluation of input features, not only to enforce word orders other than the base, but more generally to ensure that the broad variety of information types in (212) is correctly instantiated in the winning output. Matching or IDENT-type constraints look only at the output candidate, and are therefore markedness constraints; MAX-type constraints compare input and output representations, and thus fall into the category of faithfulness constraints. In order to formulate these constraints precisely, we must define notions of feature *identity* and *realisation*.

The identity relation when evaluating values of two feature matrices is defined as in (213):

(213) **Identity**: Two feature matrices $F_1[vals]$ and $F_2[vals]$ are said to be identical iff, for every possible feature f, one of the following conditions holds:

i. the value of f in F_1 is equal to the value of f in F_2;

ii. f is not applicable in both F_1 and F_2.

In this definition 'not applicable' simply means that neither F_1 nor F_2 have the feature f. 'Every possible feature' includes all features types listed in (212), i.e. lexical category, Pers[ ], [±LR], [±Q] etc; this is not a constraint, but a defined function from pairs of feature matrices to a truth value, which is a necessary prior for identity-type constraints; hence, the ability to take in any type of feature matrix is desirable. The function can be notated as in (214):

(214) $\mathbb{I}_P : P \rightarrow \{0, 1\}$, where:
P is the set of all possible ($F_i[\alpha]$, $F_j[\beta]$) tuples;
F_i and F_j are feature matrices;
A is the set of all possible values of F_i and $\varnothing \in A$;
B is the set of all possible values of F_j and $\varnothing \in B$;
$\alpha \in A$ and $\beta \in B$;
$x \in P$.
The function $\mathbb{I}_P$ is defined as:
$\mathbb{I}_P(x) := \{0 \text{ if } \alpha \neq \beta, 1 \text{ if } \alpha = \beta\}$.

Hence, the identity function only evaluates to true (i.e. two matrices are only considered identical) in the cases where *each pair of values of the same feature* is equal in both matrices, e.g. [MASC]:[MASC], [3SG]:[3SG]; or, when f is not applicable in either, e.g. [±fin] feature matrices are considered 'identical' with respect to a DP in an argument position, since both the position and the DP lack [±fin] (in other words, ∅:∅ is identical). On the other hand, a value of a feature f present in one matrix and absent from the other is *not* identical by (213), e.g. an adverb in a [+HR] position, though such candidates will typically be harmonically bounded by SUBCAT. Moreover, a feature-bearing position without an occupying item does not satisfy either condition in (213), e.g. a V,Comp position bearing [–HR] whose corresponding argument occurs in Spec,CP, as in wh-questions, does not have a pair of identical matrices. This definition of identity allows us to formulate markedness constraints which evaluate specific subsets of features. With respect to the data in this thesis, I propose that we only need the following type of feature-matching constraint, different species of which enforce verbal agreement, argument licensing and discourse-feature mapping:

(215) IDENTF: Assign a violation for each positional feature matrix F[$vals_{pos}$] that is not identical to its corresponding item feature matrix F[$vals_{item}$].

IDENTF will be violated once per position-item feature mismatch; e.g. an item bearing the case feature [+HR] occupying a position which bears [–HR] will incur one violation, as would an item bearing the case feature [–HR–LR] occupying a position bearing [–HR]. A violation is also incurred when either the position or item feature is null (i.e. absence of a feature), for instance an empty V,Comp position bearing [–HR] whose corresponding argument occurs elsewhere in the structure, as in wh-questions. Thus, IDENTF is not a unification-type constraint, but requires identical values in order to be satisfied. However, condition (ii) in the definition of identity ensures that the constraint only evaluates position-item pairs with at least one valued feature matrix: position-item pairs lacking the targeted type of feature matrices do not incur a violation, e.g. nouns do not incur an IDENTF violation by not having tense features.

Another important concept for defining the feature apparatus is that of 'realisation', which underlies the MAX-type faithfulness constraints. Realisation of a feature value is defined as in (216):

(216) **Realisation**: The value of feature f is said to be realised iff the output conditions of that value of f are satisfied.

The reason for the generality of the definition in (216) is that the satisfaction of the content of a feature value is highly dependent on the feature in question. The most common output condition will be presence of the morpheme or word corresponding to that feature value, but a value may also encode a specific syntactic configuration (e.g. polar question by subject-verb inversion), deletion of an element (e.g. ellipsis), or an intonational property realised at phonology (e.g. contrastive focus). The heterogeneity of output conditions is related to the broad range of morphosyntactic strategies for linking form to meaning, which cannot be flattened out into a single type. Therefore, the definition in (216) is not a necessary prior for defining MAX constraints, but a description of the underlying principle. Instead, MAX constraint formulations will typically check for the presence of a particular morpheme, word, constituent, configuration, morpho-phonological feature (to be fed through to the next harmonisation), or the absence of any of these. Whenever the term 'realise' is used of features in this thesis, I assume the definition in (216), but the specific constraint formulation depends on the target of evaluation. To draw the analogy with phonology once again, it should not be problematic that the possible targets of MAX at syntactic EVAL differ in form and function, since the targets of phonological MAX constraints differ in several dimensions. Input-output correspondence as defined by McCarthy and Prince (1995) holds between segments, but may also target terminal and non-terminal nodes in the phonological feature hierarchy, tonal nodes or prosodic nodes (see de Lacy 2011 and the references therein).

The question of why one particular position is associated with one feature as opposed to another is much larger than space permits here. The answers depend on one's theory of subcategorisation, the syntax-semantics interface, and semantic compositionality. With respect to English wh-movement discussed in section 8.1.2, one could imagine an account in which some set of markedness constraints prefers topics or discourse-prominent information to occur sentence-initially (see Dalrymple and Nikolaeva 2011 *i.a.*), which conflict with constraints that require [–HR] features (i.e. direct objects) to be complements of the verb. Output candidates with features in positions unattested in real languages are likely to be harmonically bounded by the relevant constraints. Without exploring the particularities of a full-fledged theory of feature distribution across syntactic positions, I will briefly present how 'c-selection' is accounted for in OLG. The undominated SUBCAT constraint is key for ruling out candidates which violate selectional requirements, i.e. restrictions of the form 'combines with a syntactic element of type x'. The formulation of SUBCAT is repeated in (217):

(217) SUBCAT: Assign a violation for each subcategorisation feature not satisfied in the output.

Subcategorisation features are notated by Subcat:[(*vals*),(*vals*)], where up to two places are defined, requiring an item or feature of a certain category or value in the specifier and/or complement. Subcat features may also be underspecified for place, i.e. require an item to be present in the input but do not enforce a specific syntactic position. The definition of 'satisfied' in (217) is dependent on the feature, but the output

condition is assumed to be explicitly annotated and visible to Eval. Further work may reveal the necessity for more granularity, i.e. a family of selection-related constraints, but for now I adopt the general formulation in (217), and define the output conditions in the feature matrix itself. For examples of this, see the following section 8.1.4.

One objection to the feature-based hypothesis presented in this section is that it adds complexity, as well as features that may not be empirically necessary. On the contrary, I have argued that it is a reasonable hypothesis that a similar feature-matching evaluation lies behind several linguistic phenomena, which achieves greater cross-linguistic generality, while also being more restrictive than the movement operations typically proposed in contemporary syntactic literature. Syntactic elements occur in positions that best satisfy the constraints on a given ranking, and while these constraints can and do target feature matrices, the distribution of features is itself subject to constraints. As discussed in Chapters 4-6, the Faroese data I examine can be accounted for without positing a separate movement mechanism, and the feature-based account covers the data while generating realistic typologies of possible languages.

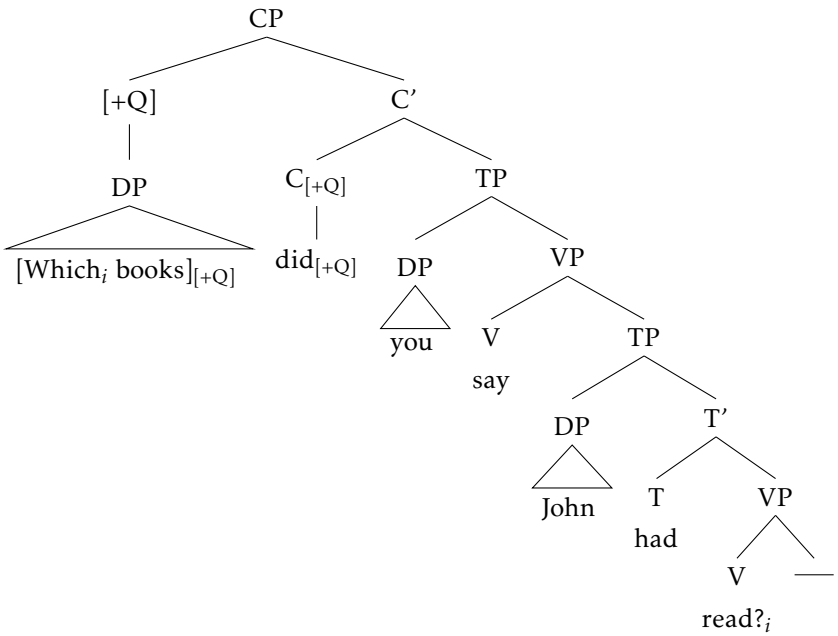
8.1.4 OT syntax in practice

To illustrate the grammatical system I have proposed, in this section I lay out an analysis of one example sentence in English.

(218) Which books did you say John had read?

First, (219) is the hypothesised structure of the winning candidate:

(219)



I do not assume a null C head that is realised as overt 'that' when present, but only posit C in the structure when empirically necessary; instead, the verb 'say' may subcategorise for either a TP or CP complement.[16]

[16]Incidentally, there is syntactic evidence for this in German: the verb *glauben* 'believe' can take a CP complement such as *dass er*

I hypothesise the following input to syntactic Eval, with the relevant feature values provided in curly brackets following the item.[17] This is not an exhaustive list of all features, but a summary of those relevant to the syntactic evaluation. The input is an unordered set of non-linearised items; following standard assumptions, linearisation proper happens at PF.

(220) you : {Cat:[N], Pers:[2], Num:[sg], Case:[+hr]}
said : {Cat:[V], Fin:[+fin], Tns:[pst], Dis:[–Q], Subcat:[($DP_{[+hr]}$), (TP,Comp)]}
John : {Cat:[N], Pers:[3], Num:[sg], Case:[+hr]}
had : {Cat:[V_{aux}], Fin:[+fin], Tns:[pst], Dis:[+Q], Subcat:[(VP,Comp)]}
read : {Cat:[V], Fin:[–fin], Tns:[pst], Dis:[–Q], Subcat:[($DP_{[+hr]}$), ($DP_{[–hr]}$)]}
which : {Cat:[D], Num:[pl], Dis:[+Q], Subcat:[(NP,Comp)]}
books : {Cat:[N], Pers:[3], Num:[pl], Case:[–hr]}

It must be stipulated that there are two [+Q] features for content questions (one on the wh-phrase and one on the finite verb), but this is not an unreasonable hypothesis, given that such questions involve both an interrogative phrase or word ('which') and the interrogative mood, which in English is realised by a sentence-initial wh-phrase and subject-auxiliary inversion.[18] Gen generates output candidates which combine the input items in all possible combinations as defined in section 8.1.1. The Subcat features are made up of tuples where the first element indicates the category of constituent required, and the second element the syntactic position in which to insert that constituent; however, arguments of verbs are underspecified for position, instead being selected according to abstract case features. This avoids the reduplication of information, since argument realisation varies cross-linguistically, and therefore we avoid redundancy by allowing constraints such as IdentCase to ensure that arguments show up in the correct position. The subcategorisation feature values are specific to *this* input, e.g. another input may have the verb 'said' selecting a DP-complement such as 'nothing'. Hence, like most Minimalist approaches, heads do have featural requirements that will violate selection constraints if unrealised. However, Eval may select a winner in which some syntactic element occurs elsewhere in the structure, with a subcategorised gap in the base position of that element, if an Ident or Max constraint enforces it. One example would be a wh-phrase occurring in Spec,CP rather than object position: IdentDis is satisfied by virtue of the identity of [+Q]:[+Q], even though an additional IdentCase violation is incurred by the [–hr]:∅ mismatch in V,Comp; in a violable constraints model, this is possible under some rankings. It is assumed that subcategorised gaps do not violate Subcat, since the gap is co-indexed with the filler, which satisfies the featural requirement.

gekommen ist 'that he has come', or a TP complement such as *er ist gekommen* 'he has come'. The clause-initial *dass* and head-final position of the auxiliary show that this is a CP complement, while the auxiliary precedes the participle in the TP complement.

[17] Key to abbreviations: Cat(egory), Pers(on), Num(ber), T(e)ns(e), Fin(iteness), Dis(course), Subcat(egorisation).

[18] Further support for a general interrogative [+Q] feature comes from languages with interrogative mood morphology; one example of such a language is Central Siberian Yup'ik, which uses the interrogative conjugation even with content questions (Jacobson 1979:60):

(1) Yup. *Sameng negh-yug-sin?*
what eat-want-intrans.interrog.2sg.s
'What do you want to eat?'

Interrogative verbal morphology is not rare cross-linguistically: in the WALS sample of 955 (Dryer 2013), 179 have interrogative verb morphology, whereas only 13 make use of word order to express polar questions. By far the most frequent strategy is a question particle, present in 585 of the languages in the sample.

In order to capture the subject-verb inversion and do-support facts, we introduce two constraints, VfinHi and CheckTns:

(221) VfinHi: Assign a violation for each finite verb not occurring in the highest available functional head position in the clause (CP).

(222) CheckTns (ChkT): Assign a violation for each Tense (T) head position not occupied by an item bearing a [±fin] feature (i.e. of category V).

In (221), 'available' is defined as follows:

(223) **Availability**: A syntactic position *p* is said to be available iff *p* is not occupied by an overt item.

This means that a violation of VfinHi is *not* incurred when there is a finite verb, complementiser or other overt element in C, but *is* incurred in all other circumstances where the finite verb is in a position lower than C. As discussed in section 2.2 below, these constraints are also empirically necessary to account for various word order facts in other Germanic languages, e.g. subordinate clauses in German. In languages where CheckTns is ranked below Dep, do-support does not arise, and the candidate with the finite verb in C will win. Constraint (222) may appear to be an overly general formulation if we permit any verb occupying T to satisfy it, including non-finite verbs; however, by making the combination of CheckTns and IdentF conspire to create the preference for finite verbs in T, we permit cross-linguistically rare phenomena like do-support. IdentF is the general constraint enforcing input-output faithfulness with respect to features borne by positions and items; CheckTns is effectively a more specific case of ObHead, i.e. 'make sure T is occupied by a head with a [±fin] feature, i.e. a verbal head'.

The tableau below represents the syntactic Eval harmonisation; the input items are assumed to bear the features given in (220). For illustrative purposes, I separate word-order harmonisation into another tableau; all candidates represented in (224) conform to head-initial word orders, though it is presupposed that head-final orders are also candidates. For constraint definitions, see Table 8.1 in the preceding section. For space considerations, features are not notated in the tableau; the input features are assumed to be as in (220), while the table in (225) shows the specific causes of the violation marks for each constraint and candidate.

(224) **Which books did you say John had read?**

{you, said, John, had, read, which, books}	Max	ChkT	VfHi	Dep	IdF
☞ a. [$_{CP}$ [Which books] did$_{C}$ [$_{TP}$ you say$_{T}$ [$_{TP}$ John had$_{T}$ [$_{VP}$ read$_{V}$ ___?]]]]			*	**	****
b. [$_{CP}$ [Which books] said$_{C}$ [$_{TP}$ you ___$_{T}$ [$_{TP}$ John had$_{T}$ [$_{VP}$ read$_{V}$ ___?]]]]		*!	*		*****
c. [$_{CP}$ [Which books] ___$_{C}$ [$_{TP}$ you said$_{T}$ [$_{TP}$ John had$_{T}$ [$_{VP}$ read$_{V}$ ___?]]]]			**!		****
d. [$_{TP}$ You said$_{T}$ [$_{TP}$ John had$_{T}$ [$_{VP}$ read$_{V}$ [which books?]]]]	**!		**		**

(225)

	Max	CheckTns	VfinHi	Dep	IdentF
a.			'had' not in C	'did' bearing [+Q] inserted	V,Comp [–hr]:∅, Spec,CP ∅:[–hr], 'say' [+fin]:[–fin], 'had' [–Q]:[+Q]
b.		no item bearing [±fin] in matrix T	'had' not in C		V,Comp [–hr]:∅, Spec,CP ∅:[–hr], matrix T [+fin]:∅, 'said' [+Q]:[–Q], 'had' [–Q]:[+Q]
c.			'said' not in C, 'had' not in C		V,Comp [–hr]:∅, Spec,CP ∅:[–hr], Spec,CP ∅:[–hr], $C_{[+Q]}$ [+Q]:∅, 'had' [–Q]:[+Q]
d.	[+Q] on 'which' and 'had' not satisfied: no [+Q] positions		'said' not in C, 'had' not in C		V,Comp [–Q]:[+Q], 'had' [–Q]:[+Q]

As noted in section 8.1.2, if English were a wh-in-situ language, the [+Q] feature would already be satisfied by the DP occupying V,Comp, and so the winner would be the equivalent of (224d). Unlike the structure in (208), in (219) 'had' in the TP-complement of 'say' cannot have its [+Q] feature realised within the embedded clause, since candidates with a CP-complement only win on a different input: for this input, such candidates violate Subcat by failing to satisfy the (TP,Comp) value of the Subcat features of 'said'.[19] Additionally, 'had' in the TP-complement in (224) does violate VfinHi, since there is no higher occupied C position within the clause. In this sentence, although Dep is violated by the winner by do-support, more costly violations are incurred in candidates (224b-d). Here we see the difference between Max and IdentF: Max compares the input and output representations, finds two instances of [+Q] and sees that its output conditions are not satisfied in either case: those conditions being that a C and Spec,CP position bearing [+Q] occur in the structure. In contrast, IdentF solely looks at the output, and sees [–Q]:[+Q] mismatches with the elements *in situ*. Hence, Max enforces the *presence* of the conditions specified by input features (here, [+Q]-bearing positions), while IdentF enforces the *mapping between* positions and items. All serious contenders incur two IdentF violations due to the [–hr] feature on the wh-phrase not matching the lack of a case feature in Spec,CP, as well as the empty V,Comp not having an argument bearing [–hr]. Nevertheless, this does not incur a Max violation since the content of the feature (namely, that the DP 'which books' is the lowest thematic role) is still present in the output by virtue of the subcategorised gap. Finally, it should be clear that it is also possible to maintain lexicalist morphology on this approach, since no lowering of tense affixes is required: CheckTns penalises non-realisation of tense features by ensuring that finite verbs occur in the T position.

[19] The reason subject-auxiliary inversion is not possible in such sentences with a CP-complement either, is that such candidates with the order '...that had John read' incur an additional CheckTns violation.

The tableau in (226) demonstrates how word-order harmonisation occurs. I assume that these constraints are also part of the same syntactic evaluation as those in tableau (224).

(226) **Word-order harmonisation**

{you, said, John, had, read, which, books}	F≺XP	Hrm	C≺XP	HdFin
☞ a. [[Which$_D$ books] did$_C$ [you [say$_T$ [John [had$_T$ [read$_V$ ___]]]]]]]				*****
b. [[Books which$_D$] [you [[John [[___ read$_V$] had$_T$] say$_T$]]]] did$_C$]	*****!		*	
c. [[Which$_D$ books] did$_C$ [you [[John [[___ read$_V$] had$_T$]] say$_T$]]]]	***!	*		**
d. [[Which$_D$ books] did$_C$ [you [say$_T$ [John [[read$_V$ ___] had$_T$]]]]]]	*!	**		****

The ranking F≺XP » Hrm » C≺XP » HdFin ensures that the winner in English is consistently head-initial, with operators preceding operands. As discussed in section 8.1.1, these constraints derive the FOFC, whilst also allowing for benign disharmony, i.e. the [[H Comp] Op] order in (198). Thus, the proposed constraints derive both the correct word order for English and offer an empirically sound analysis of the phenomena of wh-movement and do-support.

Having laid out the basic starting assumptions behind the version of Optimality Theory I adopt, in the next section I review the Faroese sentence types discussed in section 2.2, and establish that they are generated by the OT grammar.

8.2 Faroese clause structure revisited: OT account

For Faroese, I propose the constraints and rankings in (227), the evidence for which will be explored in this section. I posit a competing grammars situation between {ArgSP, Dep} to account for null expletives, discussed further below.

(227) **Faroese:**

Max » {ArgSP, Dep} » {IdentF, {VfinHi » ChkT}} » {ObHd, ObSp}

{F≺XP, Hrm} » {HdFin, ObSp}

C≺XP unranked

In Table 8.2 (not a tableau), I show the hypothesised winning candidates for the Faroese sentences discussed in section 2.2 with the violations they incur on the basic alignment and obligatory element constraints. In the table I do not notate the absence of a head or specifier position, which of course are responsible for some of the violations of ObHead and ObSpec. Underline indicates an empty position of the category indicated by the subscript. I exclude the violations induced DP-internally, since they will not affect the analysis here. I refer the reader to Appendix A3 for trees of all the sentences in Table 8.2.

In this section I establish that these constraints in the rankings proposed in (227) rule out serious contender (i.e. not harmonically bounded) output candidates. A valid ranking argument demonstrates conflict between constraints, a comparison between a winner and loser, and that no other constraint can do the same job (McCarthy 2011). Such an argument should hold of any of the data examined, unless additional constraints are necessary. For ranking arguments, I select sentence types where the hypothesised lower-ranked constraint is violated as many times as possible, so that loser candidates can be found by adding violations to the hypothesised higher-ranked constraint (Prince and Smolensky 1993:139).

Table 8.2: **Faroese sentence types**

	VfHi	ChkT	HdFin	ObHd	ObSp
a. [$_{TP}$ *Tey hava*$_T$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *lisið*$_V$ *bókina*]]]]	*		**	*	**
b. [$_{CP}$ *Tá hava*$_C$ [$_{TP}$ *tey* ___$_T$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *lisið*$_V$ *bókina*]]]]]		*	***	**	**
c. [$_{CP}$ *at*$_C$ [$_{TP}$ *Jógvan hevur*$_T$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *lisið*$_V$ *bókina*]]]]]			***	*	***
d. [$_{CP}$ *at*$_C$ [$_{TP}$ *Jógvan* [$_{T'}$ *aldri hevur*$_T$ [$_{VP}$ *lisið*$_V$ *bókina*]]]]			***		**
e. [$_{TP}$ *hvør* [$_{T'}$ *aldri hevði*$_T$ [$_{VP}$ *lisið*$_V$ *bókina*]]]	*		**		*
f. [$_{CP}$ *um*$_C$ [$_{TP}$ *hon* [$_{T'}$ *altíð sigur*$_T$ [$_{VP}$ ___$_V$ *satt*]]]]			***	*	**
g. [$_{TP}$ *Tey lósu*$_T$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ ___$_V$ *bókina*]]]]	*		**	**	**
h. [$_{CP}$ *Ivaleyst skulu*$_C$ [$_{TP}$ *tey* ___$_T$ [$_{vP}$[$_{v'}$ *ongantíð selja*$_v$ [$_{VP}$ *dreingjunum* ___$_V$ *teldurnar*]]]]]		*	****	**	*
i. [$_{CP}$ *Ivaleyst góvu*$_C$ [$_{TP}$ *tey* ___$_T$ [$_{vP}$[$_{v'}$ *ongantíð* [$_{VP}$ *dreingjunum* ___$_V$ *teldurnar*]]]]]		*	***	***	*
j. [$_{TP}$ *Tað hevur*$_T$ [$_{vP}$[$_{v'}$ *altíð* [$_{VP}$ *verið*$_V$ *tónleikur*]]]]	*		**	*	**
k. [$_{CP}$ *Tað hevur*$_C$ [$_{TP}$ *tónleikur* ___$_T$ [$_{vP}$[$_{v'}$ *altíð* [$_{VP}$ *verið*$_V$]]]]]		*		**	**
l. [$_{TP}$ *Tað má*$_T$ [$_{vP}$ *hava*$_v$ [$_{VP}$[$_{V'}$ *altíð verið*$_V$ [*nógv fólk*]]]]]	*		***		**
m. [$_{TP}$ *Tað má*$_T$ [$_{vP}$[$_{v'}$ *ongantíð hava*$_v$ [$_{VP}$ *verið*$_V$ [*innlendsk trø*]]]]]	*		***		**
n. [$_{CP}$ [*Tann gamla bilin*] *vil*$_C$ [$_{TP}$ *eg* ___$_T$ [$_{vP}$[$_{v'}$ *ikki* [$_{VP}$ *hava*$_V$ ___$_{V,Comp}$]]]]]		*	***	**	**
o. [$_{TP}$ *Eg las*$_T$ [$_{vP}$[$_{v'}$ *ikki* [$_{VP}$ ___$_V$ *bókina*]]]]	*		**	**	**
p. [$_{TP}$ *Eg las*$_T$ [$_{VP}$ *hana* [$_{V'}$ *ikki* ___$_V$ ___$_{V,Comp}$]]]	*		**	*	
q. [$_{TP}$ *Eg havi*$_T$ [$_{VP}$ *ongan sæð*$_V$ ___$_{V,Comp}$]]	*		**		
r. [$_{TP}$ *Eg havi*$_T$ [$_{VP}$ [*ongan næming*] *tosað*$_V$ [$_{PP}$ *við*$_P$ ___$_{P,Comp}$]]]	*		***		*

8.2.0.1 Ranking arguments

Given the general head-initial clause order in Scandinavian languages, I hypothesise the ranking {F≺XP, Hrm} » HdFin for Faroese. A combination tableau[20] for Table 8.2(a) is given in (228):

(228) **Ranking argument for** {F≺XP, Hrm} » HdFin

{*tey*$_{[+HR]}$, *hava*$_{[+fin]}$, *aldri*, *lisið*$_{[-fin]}$, *bókina*$_{[-HR]}$}	F≺XP	Hrm	HdFin
☞ a. [$_{TP}$ *Tey hava*$_T$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *lisið*$_V$ *bókina*]]]]			**
b. [$_{TP}$ *Tey hava*$_T$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *bókina lisið*$_V$]]]]		*W	*L
c. [$_{TP}$ *Tey* [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *bókina lisið*$_V$]]] *hava*$_T$]	*W		L

From (228) we may conclude that both F≺XP and Harmony must be ranked higher than HdFin, since the loser candidates would only win if HdFin were higher ranked than F≺XP and Harmony respectively. We cannot construct a ranking argument for the pair {F≺XP, Hrm} from the data in Table 8.2, since no winning candidate ever violates Hrm at the clause-level; they must be left unranked. One potential example of a disharmonic word order in Faroese is the definite suffix, which could be analysed as a functional head D attached to the right of its N, with an additional D-head dominating the phrase containing the N if a definite adjective intervenes, as in (229).

(229) Far. [$_{DP}$ *tann*$_D$ [$_{DP}$ [$_{AP}$ *stóri*$_A$] [$_{NP}$ *maður*$_N$] *–in*$_D$]]
the big man the
'the tall man'

However, the analysis in (229) goes against the lexicalist assumption that the syntactic atomic item is the fully inflected word-form. Börjars and Donohue (2000:331) propose that the definite suffix in Faroese (as in

[20] A tableau showing both constraint violations, and whether for a given loser, its violations of a given constraint favour the winner (W) or this loser (L).

Norwegian and Swedish, unlike Danish) only satisfies input-output faithfulness constraints if realised as a suffix to N, whilst the preceding definite word is a phrasal feature only satisfied by the larger DP projection. Hence, the structure for double definites would be as in (230):

(230) Far. $[_{DP}$ *tann*$_D$ $[_{NP}$ $[_{AP}$ *stóri*$_A$$]$ *maður-in*$_N$ $]]$
the big man-the
'the tall man'

As for single definites such as *maður-in* 'man-the' without a modifier, I follow Hankamer and Mikkelsen (2002) and assume that nouns with the suffixed article enter the syntactic input as items of category D. As Hankamer and Mikkelsen (2002, 2005) show, the lexicalist approach is consistent with both the double and single definites, and so we need not stipulate a D-head position for the suffixed article. On this analysis, no violation of HARMONY is incurred within the embedded DP, and hence definite DPs do not speak to the ranking of {F≺XP, HRM} one way or the other.[21]

It is difficult to construct a ranking argument for {OBHEAD, OBSPEC}, since the only way to reduce violations would be either inserting an additional head into the output to better satisfy OBHEAD, thus violating DEP, or inserting an empty specifier to do better on OBSPEC, which would be ruled out by *EMPTYSTRUC. Therefore I leave these unranked.

The ranking HRM » OBSPEC can be demonstrated by adding a specifier and removing a complement, which incurs an additional HRM violation:[22]

(231) **Ranking argument for** HRM » OBSP

{... *at*, *Jógvan*$_{[+HR]}$, *hevur*$_{[+fin]}$, *aldri*, *lisið*$_{[-fin]}$, *bókina*$_{[-HR]}$}	HRM	OBSP
☞ a. ... $[_{CP}$ *at*$_C$ $[_{TP}$ *Jógvan hevur*$_T$ $[_{vP}[_{v'}$ *aldri* $[_{VP}$ *lisið*$_V$ *bókina*$]]]]]$		***
b. ... $[_{CP}$ *at*$_C$ $[_{TP}$ *Jógvan hevur*$_T$ $[_{vP}[_{v'}$ *aldri* $[_{VP}$ *bókina*$_{Spec}$ *lisið*$_V$$]]]]]$	*W	**L

(231b) also violates positional licensing, since Spec,VP is associated with the morphosyntactic case features [–HR–LR]. The informal generalisation could be: 'make sure an item with the correct grammatical role is occupying the correct position'. This is one of the feature-mapping phenomena that is handled by IDENTF (232), repeated again in (232):

(232) IDENTF (IDF): Assign a violation for each positional feature matrix F[$vals_{pos}$] that is not identical to its corresponding item feature matrix F[$vals_{item}$].

If a positional feature matrix like [+HR] does not match the item's feature matrix [–HR], a violation will be incurred. IDENTF will therefore rule out the mismatch of having the direct object in Spec,VP instead of V,Comp, since [–HR] does not match [–HR–LR]. Since inserting an argument into a specifier with a non-matching feature matrix incurs a violation of IDENTF, the ranking IDENTF » OBSPEC must hold:

[21] I assume that candidates omitting either definite element will incur a MAX violation, and that the suffix cannot occur as a prefix which would violate SUBCAT. As for the indefinite article *ein*, I assume that it is of category D and takes an NP complement, i.e. the analysis of *ein stórur maður* 'a big man' would be $[_{DP}$ D $[_{NP}$ AP N$]]$.

[22] For ease of reading I do not include the matrix clause, but I assume that word-order constraints like HRM operate on full sentences, as stated in section 8.1.4.

(233) **Ranking argument for** IdentF » ObSp

{*tey*$_{[+HR]}$, *hava*$_{[+fin]}$, *aldri*, *lisið*$_{[–fin]}$, *bókina*$_{[–HR]}$}	IdentF	ObSp
☞ a. [$_{TP}$ *Tey*$_{[+HR]:[+HR]}$ *hava*$_{T}$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *lisið*$_{V}$ *bókina*$_{[–HR]:[–HR]}$]]]]		**
b. [$_{TP}$ *Tey*$_{[+HR]:[+HR]}$ *hava*$_{T}$ [$_{vP}$[$_{v'}$ *aldri* [$_{VP}$ *bókina*$_{[–HR–LR]:[–HR]}$ *lisið*$_{V}$ ___]]]]	*W	*L
c. [$_{TP}$ *Tey*$_{[+HR]:[+HR]}$ *hava*$_{T}$ [$_{vP}$ *bókina*$_{∅:[–HR]}$ [$_{v'}$ *aldri* [$_{VP}$ *lisið*$_{V}$ ___]]]]	*W	*L

If the ranking ObSpec » IdentF held, one of the losers (233b-c) would win: thus we have the partial ranking {IdentF, Hrm} » ObSp.

To test a hypothesised ranking of IdentF » ObHead, we need to look at losing candidates with fewer ObHead violations than the winner and more IdentF violations than the winner. This requires there to be either more heads (which would violate Dep), or fewer projections. The only possibility here is a candidate with *ongantíð* adjoined at V', thus eliminating the *v*P projection,[23] combined with violations of IdentF by arguments occupying the wrong positions (234b-d).

(234) **Ranking argument for** IdentF » ObHd

{*ivaleyst*, *góvu*$_{[+fin]}$, *tey*$_{[+HR]}$, *ongantíð*, *dreingjunum*$_{[–HR–LR]}$, *teldurnar*$_{[–HR]}$}	IdentF	ObHd
☞ a. [$_{CP}$ *Ivaleyst góvu*$_{C}$ [$_{TP}$ *tey*$_{[+HR]:[+HR]}$ [$_{vP}$[$_{v'}$ *ongantíð* [$_{VP}$ *dreingjunum*$_{[–HR–LR]:[–HR–LR]}$ *teldurnar*$_{[–HR]:[–HR]}$]]]]]		***
b. [$_{CP}$ *Ivaleyst góvu*$_{C}$ [$_{TP}$ *tey*$_{[+HR]:[+HR]}$ [$_{VP}$[$_{V'}$ *ongantíð teldurnar*$_{[–HR–LR]:[–HR]}$ *dreingjunum*$_{[–HR]:[–HR–LR]}$]]]]]	**W	**L
c. [$_{CP}$ *Ivaleyst góvu*$_{C}$ [$_{TP}$ *dreingjunum*$_{[+HR]:[–HR–LR]}$ [$_{VP}$[$_{V'}$ *ongantíð tey*$_{[–HR–LR]:[+HR]}$ *teldurnar*$_{[–HR]:[–HR]}$]]]]]	**W	**L
d. [$_{CP}$ *Ivaleyst góvu*$_{C}$ [$_{TP}$ *teldurnar*$_{[+HR]:[–HR]}$ [$_{VP}$[$_{V'}$ *ongantíð tey*$_{[–HR–LR]:[+HR]}$ *dreingjunum*$_{[–HR]:[–HR–LR]}$]]]]]	***W	**L

If ObHead were ranked above IdentF, loser candidates like (234b-d) would win. Thus we have the rankings IdentF » {ObHd, ObSp} and {F<XP, Hrm} » {HdFin, ObSp}. It is also impossible to test the ranking of HdFin and {ObHd, ObSp}, since there is no way of adding violations to HdFin in a consistently head-initial language like Faroese.

It is important to note that the obligatory element *markedness* constraints are doing some of the work to prohibit structures which omit heads or specifiers, which arguably could also be achieved by *faithfulness* constraints ensuring that all items in the input are present in the output, i.e. something like Max. Such a constraint is indeed necessary in order to rule out empty structures. It is also reasonable to hypothesise it being ranked higher than the obligatory element constraints, since it is more stringent: ObHead and ObSpec only ensure that already-present projections have heads and specifiers, and are not violated when the projection itself is absent; Max, by contrast, is violated when any input item is not present in the output candidate.

(235) **Ranking argument for** {Max, Dep} » ObHead

{*syngið*}	Max	Dep	ObHd
☞ a. [$_{VP}$ *Syngið!*$_{V}$]			
b. [$_{VP}$ *Lesið!*$_{V}$]	*W	*W	L
c. Ø	*W		L
d. [$_{VP}$ *Syngið*$_{V}$ *væl!*]		*W	L

[23] Incidentally, this may suggest that in this example, the adverb ought to be adjoined at V' to avoid positing unnecessary structure, but since adjunction at *v*' seems to be the default in other cases, I assume that some faithfulness constraint may be enforcing *v*'-adjunction as the elsewhere case.

Here, we have evidence for the rankings Dep » ObHead and Max » ObHead.

To find a ranking of Max and Dep, we must find a winner that incurs violations of at least one of these; the most straightforward example would be expletive constructions, where *tað* or *har* is inserted despite not being present in the input (I assume, therefore, that a discourse feature in the input forces the subject to occur in V,Comp, and as a consequence, this dummy phonological material to occupy Spec,TP).

(236) **Ranking argument for** Max » Dep

{*hevur*$_{[+\text{fin}]}$, *altíð*, *verið*$_{[+\text{fin}]}$, *tónleikur*$_{[+\text{Foc}]}$}	Max	Dep
☞ a. [$_{\text{TP}}$ *Tað hevur*$_{\text{T}}$ [$_{v\text{P}}$[$_{v'}$ *altíð* [$_{\text{VP}}$ *verið*$_{\text{V}}$ *tónleikur*$_{[+\text{Foc}]:[+\text{Foc}]}$]]]]		*
b. [$_{\text{TP}}$ *Tónleikur*$_{[-\text{Foc}]:[-\text{Foc}]}$ *hevur*$_{\text{T}}$ [$_{v\text{P}}$[$_{v'}$ *altíð* [$_{\text{VP}}$ *verið*$_{\text{V}}$]]]]	*W	L

Since (236b) fails to instantiate a [+Foc] feature present in the input, rather than having one in the wrong position (e.g. a non-focused subject in V,Comp), it does not violate IdentF, only Max. If we test IdentF with respect to Max » Dep, we must find a winner that does incur an IdentF violation. An instance of this would be object topicalisation, as shown in (237):

(237) **Ranking argument for** Max » IdentF

{[*tann gamla bilin*]$_{[-\text{HR}],[+\text{Top}]}$, *vil*$_{[+\text{fin}]}$, *eg*$_{[+\text{HR}]}$, *ikki*, *hava*$_{[-\text{fin}]}$}	Max	IdentF
☞ a. [$_{\text{CP}}$ [*Tann gamla bilin*]$_{\varnothing:[-\text{HR}],[+\text{Top}]:[+\text{Top}]}$ *vil*$_{\text{C}}$ [$_{\text{TP}}$ *eg* [$_{v\text{P}}$[$_{v'}$ *ikki* [$_{\text{VP}}$ *hava*$_{\text{V}}$ ___$_{[-\text{HR}]}$]]]]]		**
b. [$_{\text{TP}}$ *Eg vil*$_{\text{T}}$ [$_{v\text{P}}$[$_{v'}$ *ikki* [$_{\text{VP}}$ *hava*$_{\text{V}}$ [*tann gamla bilin*]$_{[-\text{HR}]:[-\text{HR}],[-\text{Top}]:[-\text{Top}]}$]]]]	*W	L

By analogy with our treatment of focus in (236), the 'elsewhere' discourse position for objects is going to be V,Comp, which therefore is [–Top]. If IdentF were ranked above Max, loser (237b) would win. Therefore, we have now established the rankings Max » {Dep, IdentF} » {ObHd, ObSp} and {F≺XP, Hrm} » {HdFin, ObSp}. The missing pieces are the rankings of {Dep, IdentF, F≺XP}, and {VfinHi, ChkT, C≺XP} with respect to the other constraints. These latter three constraints are motivated by the factorial typology, which must be able to generate [[H Comp] Op] word orders such as in German, as discussed later in this section. As for {Dep, IdentF, F≺XP}, it is not possible to construct ranking arguments, so I leave these unranked.

It turns out, however, that Max » {Dep » IdentF} is insufficient to capture some types of expletive constructions, i.e. when an expletive is present (violating Dep) and all input items are expressed without violating IdentF. One such sentence type is when adverbs occur in Spec,CP, and the expletive in Spec,TP as shown in (238).

(238)

{*tí*, *sjálvandi*, *vóru*$_{[+\text{fin}]}$, [*nøkur fólk*]$_{[+\text{HR}],[+\text{Foc}]}$}	Max	Dep	IdentF
☞ a. [$_{\text{CP}}$ [*Tí sjálvandi*] *vóru*$_{\text{C}}$ [$_{\text{TP}}$ *tað* [$_{\text{VP}}$ [*nøkur fólk*]$_{[-\text{HR}]:[+\text{HR}],[+\text{Foc}]:[+\text{Foc}]}$]]]		*	*
b. [$_{\text{CP}}$ *Sjálvandi vóru*$_{\text{C}}$ [$_{\text{TP}}$[$_{\text{T}'}$ *tí* [$_{\text{VP}}$ [*nøkur fólk*]$_{[-\text{HR}]:[+\text{HR}],[+\text{Foc}]:[+\text{Foc}]}$]]]]		L	*
c. [$_{\text{CP}}$ *Sjálvandi vóru*$_{\text{C}}$ [$_{\text{TP}}$ *tí* [$_{\text{VP}}$ [*nøkur fólk*]$_{[-\text{HR}]:[+\text{HR}],[+\text{Foc}]:[+\text{Foc}]}$]]]		L	*

Candidates like (238b-c) which violate neither Max nor Dep suggest that some additional constraint may be in play. Either having no Spec,TP position (238b) or putting the adverb in that position (238c) will yield a losing candidate. Let us assume that the requirement which generates expletives is that an *argument* must occupy Spec,TP, even if that argument does not bear the highest theta-role: if so, an adverb like *tí* could not satisfy that requirement. We can call this constraint ArgSP, similar to the Extended Projection

Principle (Chomsky 1981), though the standard formulation of the EPP is stronger, since it requires a *subject* argument to occupy subject position, not just any argument.

(239) ArgSP: Assign a violation if no argument occupies subject position (Spec,TP).

(240) **Ranking argument for** ArgSP » Dep

{*tí, sjálvandi, vóru*$_{[+fin]}$, [*nøkur fólk*]$_{[+HR],[+Foc]}$}	ArgSP	Dep	IdentF
☞ a. [$_{CP}$ [*Tí sjálvandi*] *vóru*$_C$ [$_{TP}$ *tað* [$_{VP}$ [*nøkur fólk*]$_{[-HR]:[+HR],[+Foc]:[+Foc]}$]]]		*	*
b. [$_{CP}$ *Sjálvandi vóru*$_C$ [$_{TP}$[$_{T'}$ *tí* [$_{VP}$ [*nøkur fólk*]$_{[-HR]:[+HR],[+Foc]:[+Foc]}$]]]]	*W	L	*
c. [$_{CP}$ *Sjálvandi vóru*$_C$ [$_{TP}$ *tí* [$_{VP}$ [*nøkur fólk*]$_{[-HR]:[+HR],[+Foc]:[+Foc]}$]]]	*W	L	*
d. [$_{CP}$ *Sjálvandi vóru*$_C$ [$_{TP}$ *tað* [$_{T'}$ *tí* [$_{VP}$ [*nøkur fólk*]$_{[-HR]:[+HR],[+Foc]:[+Foc]}$]]]]		*	*
e. [$_{CP}$ *Sjálvandi vóru*$_C$ [$_{TP}$ *tað* [$_{VP}$[$_{V'}$ *tí* [*nøkur fólk*]$_{[-HR]:[+HR],[+Foc]:[+Foc]}$]]]]		*	*

The tableau in (240) raises the question of why the adverb *tí* cannot be adjoined at T' or V', since either of these apparent losing candidates satisfy the constraints we have so far an equal number of times as the winner. The answer is in fact that candidates (240d-e) are also possible Faroese sentences: adverbs like *tí* 'therefore', *jú* 'indeed', *bara* 'only, just' among others, have various possible attachment sites. A search of texts online in Faroese and my blog corpus yields some examples of this optionality:

(241) a. Far. [$_{CP}$ ***Tí*** *er*$_C$ [$_{TP}$ *tað* [$_{T'}$ *millum annað* [$_{AP}$ *sera relevant at spyrja seg sjálvan*]]]]
therefore is it among other.things very relevant to ask one- self
'Therefore it is, among other things, very relevant to ask oneself...'
Blog corpus, *samalsdiary* line 7578

b. Far. [$_{CP}$ *Ikki var*$_C$ [$_{TP}$ *tað* [$_{T'}$ ***tí:*** [$_{TP}$ *hugurin at renna saman við bygdarfólkið*
not was it therefore desire-the to run together with townsfolk-the
bilaði honum ikki]]]]
lacked him not
'That was not it: he was not lacking the desire to make up with the townsfolk'
Føroyskar bókmentir 4 vol. 3, p.116, Google Books, accessed 1/17/18

c. Far. [$_{TP}$ *Verið*$_T$ [$_{VP}$[$_{V'}$ ***tí*** [$_{AP}$[$_{A'}$ *altíð* [*tvey vaksin saman við barninum*]]]]]]
be.IMP.PL therefore always two adults together with child-the
'Always have two adults accompanying the child'
<www.sjovarkommuna.fo>, accessed 1/17/18.

(242) a. Far. [$_{CP}$ [*Fyrsta kvøldi*] *var*$_C$ [$_{TP}$ *tað* [$_{T'}$ ***bara*** [*nátturði og so í song*]]]]
first night was it only supper and so to bed
'The first night, it was just supper and then to bed'
Blog corpus, *holmjohannessen* line 2320.

b. Far. *...men so oftast ikki*, [$_{TP}$[$_{T'}$ *tí eg gloymi*$_T$ [$_{VP}$ *tað* [$_{V'}$ ***bara!***]]]]
...but so most.often not, because I forget it just
'...but most of the time not, because I just forget it!'
Blog corpus, *roskur* line 617.

The proposal that adverbs may adjoin to several different projections depending on the semantics is one standard way of capturing their scopal properties (Pollock 1989, Iatridou 1990, Potsdam 1998 *i.a.*), over against an alternative analysis in which adverbs occupy specifiers (Jackendoff 1981, Alexiadou 1994, Cinque 1998); see Potsdam (1998) for a review of the evidence. Here I do not attempt to solve this large problem, but stipulate that in a similar vein to presentational focus, topicalisation, and other phenomena involving syntactic expression of information structure, discourse features may be associated with the adverb which enforce adjunction to the appropriate syntactic category. For example, a manner adverb in English such as 'carefully' is preferably VP-adjoined, and therefore bears a V'-adjunction feature:

(243) a. They have [$_{VP}$[$_{V'}$ carefully$_{[V']:[V']}$ gathered the evidence]]
b. They have [$_{VP}$ gathered the evidence [$_{V'}$ carefully$_{[V']:[V']}$]]
c. ? They [$_{TP}$[$_{T'}$ carefully$_{[T']:[V']}$ have [$_{VP}$ gathered the evidence]]]

Notably, (243c) improves with contrastive stress on 'have', i.e. 'They carefully HAVE gathered the evidence'; in that case, we hypothesise that 'carefully' bears a [T'] feature, and therefore that the lower acceptability of (243c) results from the [T']:[V'] mismatch. Hence, if the adverb *tí* in (240) bore a feature in the input such as [Spec,CP] specifying the position needed to express the appropriate semantic information, candidates (240b-e) would incur additional Max violations, assuming that the winner has the correct site for the adverb. This is merely a way of capturing the fact that there may be options for where to adjoin the adverb, and the input reflects this featurally in the same way as other discourse phenomena.

Since I have proposed the additional constraint ArgSP, its ranking must be established. Let us test the ranking Max » ArgSP: the relevant losing candidates will be those that do better than the winner on ArgSP, but worse than the winner on Max. This requires a winner that incurs a violation of ArgSP, i.e. with an empty Spec,TP or a non-argument item in Spec,TP. Perhaps presentational constructions with an expletive could be brought to bear, since one possible hypothesis is that the expletive is in Spec,CP, with an empty Spec,TP, and hence that the expletive always occurs in Spec,CP. However, there is a theory-internal reason to avoid this: if the descriptive generalisation is that the expletive *tað* is inserted into Spec,TP *unless* the associate subject occurs there, it makes most sense to analyse Spec,TP as the 'elsewhere' location for expletive *tað*. This analysis, however, leaves us with no way of testing the ranking of ArgSP, since there is no winner that violates it. We need to find a winning candidate with an empty Spec,TP that does not insert an expletive.

Thankfully, such constructions do exist: in Faroese, the expletive may be omitted when it follows the finite verb (Þráinsson 2007:335).

(244) a. Far. *Eru* ___ *komnir nakrir gestir úr Íslandi?*
are ___ come some guests from Iceland
'Have any guests arrived from Iceland?'
b. Far. *Í Havn regnar* ___ *ofta*
in Havn rains ___ often
'It often rains in Tórshavn'

Example (244a) is analogous to Table 8.2(j) but without anything in Spec,TP. This example will incur a violation of ArgSP since there is no argument in Spec,TP.[24] I assume the standard analysis of inversion in questions, i.e. that the finite verb occurs in C. It is necessary to account for the apparent optionality, i.e. that *tað* may either be present or omitted, and hence there are two winning candidates for the same input: I propose that this is a competing grammars situation, both of which are accessible to native speakers of Faroese given the correct conditions (in Chapter 4 I laid out a competing grammars proposal of syntactic variation). There is much to be said on this, but for the moment let us assume two different rankings of ArgSP and Dep, with Max dominating both. Thus the version of (244a) with the overt expletive is a losing candidate in the tableau (245), and the winner in tableau (246).

(245) **Ranking argument for** Max » ArgSP » Dep

{*eru*$_{[+\text{fin}],[+\text{Q}]}$, *komnir*$_{[-\text{fin}]}$, [*nakrir gestir*]$_{[+\text{HR}],[+\text{Foc}]}$, *úr*, *Íslandi*}	Max	ArgSP	Dep
a. [$_{\text{CP}}$ *Eru*$_{\text{C},[+\text{Q}]:[+\text{Q}]}$ [$_{\text{TP}}$ ___$_{\text{T}}$ [$_{\text{VP}}$ *komnir*$_{\text{V}}$ [*nakrir gestir* [*úr Íslandi?*]]]]]		*W	L
☞ b. [$_{\text{CP}}$ *Eru*$_{\text{C},[+\text{Q}]:[+\text{Q}]}$ [$_{\text{TP}}$ *tað* ___$_{\text{T}}$ [$_{\text{VP}}$ *komnir*$_{\text{V}}$ [*nakrir gestir* [*úr Íslandi?*]]]]]			*
c. [$_{\text{TP}}$ *Tað eru*$_{\text{T},[-\text{Q}]:[-\text{Q}]}$ [$_{\text{VP}}$ *komnir*$_{\text{V}}$ [*nakrir gestir* [*úr Íslandi*]]]]	*W		*

(246) **Ranking argument for** Max » Dep » ArgSP

{*eru*$_{[+\text{fin}],[+\text{Q}]}$, *komnir*$_{[-\text{fin}]}$, [*nakrir gestir*]$_{[+\text{HR}],[+\text{Foc}]}$, *úr*, *Íslandi*}	Max	Dep	ArgSP
☞ a. [$_{\text{CP}}$ *Eru*$_{\text{C},[+\text{Q}]:[+\text{Q}]}$ [$_{\text{TP}}$ ___$_{\text{T}}$ [$_{\text{VP}}$ *komnir*$_{\text{V}}$ [*nakrir gestir* [*úr Íslandi?*]]]]]			*
b. [$_{\text{CP}}$ *Eru*$_{\text{C},[+\text{Q}]:[+\text{Q}]}$ [$_{\text{TP}}$ *tað* ___$_{\text{T}}$ [$_{\text{VP}}$ *komnir*$_{\text{V}}$ [*nakrir gestir* [*úr Íslandi?*]]]]]		*W	L
c. [$_{\text{TP}}$ *Tað eru*$_{\text{T},[-\text{Q}]:[-\text{Q}]}$ [$_{\text{VP}}$ *komnir*$_{\text{V}}$ [*nakrir gestir* [*úr Íslandi*]]]]	*W	*W	

I assume that a [+Q] feature violates Max when the verb is not initial; i.e. [+Q] in Faroese is expressed by the subject-verb inversion. Moreover, this difference in ranking predicts other behaviours relating to expletives elsewhere in the language: whenever it is possible to omit an expletive, the grammar in (246) will do so. It will not, however, over-zealously remove all expletives, since removing a sentence-initial expletive will incur an additional Dep violation: as we have seen, V1 expresses [+Q], i.e. is the default word order in questions, and so candidates with no expletive and no [+Q] in the input will violate Dep if [+Q] is in the output. In essence, [+Q] is simply a way of notating that inversion is how Faroese and other Germanic languages instantiate polar questions (rather than a verbal morpheme, for example).

Finally, although candidates (245a-b) and (246a-b) violate CheckTns due to no verb occupying T, and conversely (245c) and (246c) violate VfinHi, these violations would not threaten the winner in either competing grammar if {VfinHi, ChkT} were ranked below {ArgSP, Dep}: thus the null expletive constructions also constitute evidence for the ranking {ArgSP, Dep} » {VfinHi, ChkT}. Furthermore, the ranking VfinHi » ChkT must hold for Faroese, since the reverse would yield winners in which the finite verb always shows up in T, i.e. there would be no V2 in main clauses, as in English. The pair VfinHi » ChkT must also be ranked above {ObHd, ObSp}, since otherwise if the winner has the finite verb in C, losing candidates with the verb in T would defeat the winner, since they would remove the ObHead violation. Similarly to F≺XP, We cannot test the ranking of C≺XP in Faroese, since no winner will have a C follow its XP complement.

In brief, the following partial rankings have been demonstrated by ranking arguments:

[24] I assume that 'from Iceland' in this example modifies the argument 'some guests', not the entire VP.

(247) Max » {ArgSP, Dep} » {IdentF, {VfinHi » ChkT}} » {ObHd, ObSp}
{F<XP, Hrm} » {HdFin, ObSp}

All constraints proposed here are tested in section 8.2.1 with respect to the languages they generate.

8.2.1 Factorial typology I

What remains is to demonstrate that the proposed set of constraints generates a typology of attested and possible languages, while ruling out impossible ones. I ran a stipulated constraint ranking in (248) in OT Soft 2.5 (Hayes et al. 2013), first testing the inputs given in (249).

(248) **Faroese:**
Max » ArgSP » Dep » IdentF » F<XP » Hrm » C<XP » VfinHi » ChkT » HdFin » ObHd » ObSp

(249) a. /{they,have,never$_{[v']}$,read,book}/
b. /{then$_{[+Top]}$,have,they,never$_{[v']}$,read,book}/
c. /{that,John,has,never$_{[v']}$,read,book}/
d. /{that,John,never$_{[T']}$,has,read,book}/
e. /{who,never,had,read,book}/
f. /{if,she,always,says,true}/
g. /{they,read,never,book}/
h. /{doubtless$_{[+Top]}$,shall,they,never,sell,boys,books}/
i. /{doubtless$_{[+Top]}$,gave,they,never,boys,books}/

With 12 constraints, there are 479,001,600 logically possible grammars, but for the sentences in (249) without expletives, topicalisation or object shift, only 14 output language types are generated. Pernicious disharmony, i.e. the order *[[Head Comp] Op], is never generated under any ranking. I did not consider output candidates with violations of Merge or C-Selection, or failure to express input features such as [v'], since such candidates will be harmonically bounded.[25] No winner for these inputs incurs any violations of Max, ArgSP, Dep or IdentF; these higher-ranked constraints are necessary for expletive constructions, object shift and other diatheses.

I lay out a summary of each output pattern below. The constraints generate three types of "T-to-C": (i) the finite verb never appears in C, (ii) the finite verb only appears in C if there is a topicalised XP immediately preceding it, and (iii) the finite verb always appears in C. I list these types as "no T-to-C", "Top(icalised XP) + T-to-C" and "A(cross) T(he) B(oard) T-to-C" respectively. Since the difference between presence or absence of T-to-C is only detectable with a fronted XP or in embedded clauses, types (ii) and (iii) will yield the same surface orders in these sentence types: therefore, there are actually only 11 distinct output word orders for these inputs. However, the constraints do predict that in languages of type (iii) the finite verb will always appear in C, regardless of construction.

[25] Given the analysis of adverb adjunction I adopt, I stipulate adverb placement in the losing candidates, but do not claim that the output languages in which that candidate wins necessarily always adjoin the adverb in that position; scope and discourse factors may enforce different adjunction sites.

(250) **Output factorial typology**

No.	Main clause	M.c. with Aux	Embedded clause	"T-to-C"	Example language
1	VO	Aux[VO]	C[Aux[VO]]	Top + T-to-C	Faroese, Danish, Old French
2	VO	Aux[VO]	C[Aux[VO]]	no T-to-C	English
3	VO	Aux[OV]	C[Aux[OV]]	Top + T-to-C	*output 4 with T-to-C*
4	VO	Aux[OV]	C[Aux[OV]]	no T-to-C	Kisi, Dinka, Dongo, Nuer
5	OV	[OV]Aux	C[Aux[VO]]	Top + T-to-C	
6	OV	[OV]Aux	C[[OV]Aux]	Top + T-to-C	
7	OV	[OV]Aux	[[OV]Aux]C	Top + T-to-C	*output 10 with T-to-C*
8	OV	[OV]Aux / Top+Aux[VO]	C[Aux[VO]]	no T-to-C	
9	OV	[OV]Aux / Top+Aux[OV]	C[[OV]Aux]	no T-to-C	Hindi
10	OV	[OV]Aux	[[OV]Aux]C	no T-to-C	Korean, Tamil, Telugu
11	VO	Aux[VO]	C[Aux[VO]]	ATB T-to-C	Icelandic, French
12	VO	Aux[OV]	C[Aux[OV]]	ATB T-to-C	*output 4 with T-to-C*
13	VO	Aux[OV]	C[[OV]Aux]	ATB T-to-C	German
14	OV	[OV]Aux	[[OV]Aux]C	ATB T-to-C	*output 10 with T-to-C*

As the phenomena standardly analysed as "T-to-C" and V2 are cross-linguistically rare, it should not be problematic that unattested combinations that are nevertheless logically possible (e.g. output 14) are generated. In many constructions it may not even be possible to tell whether the finite auxiliary is occupying T or C, which often yield the same surface order, particularly if fronting of a topicalised non-subject phrase is not a strategy used by the language for expressing [+Top]. Moreover, many languages whose word order profile is ostensibly the same as outputs 4 or 10 are as yet incompletely described, especially with respect to the conditions under which V2 occurs and/or whether a topicalised XP can precede the finite auxiliary, and so it is likely that more of the cells in table (250) are attested.

8.2.2 Information-structural constraints

With the same set of basic clause structure constraints, I also considered the sentence types involving expletives, topicalisation or object shift (267). In dealing with these phenomena, two broad kinds of feature-matching are at play: discourse-featural positions and argument licensing positions. Such constructions often involve a conflict between mapping of argument structure and information structure to syntax, e.g. when a positional discourse feature can only be satisfied by a mismatch in case features. In order to capture the range of data even within the Faroese sentences already seen, a more fine-grained hierarchy of constraints underneath IdentF is required:

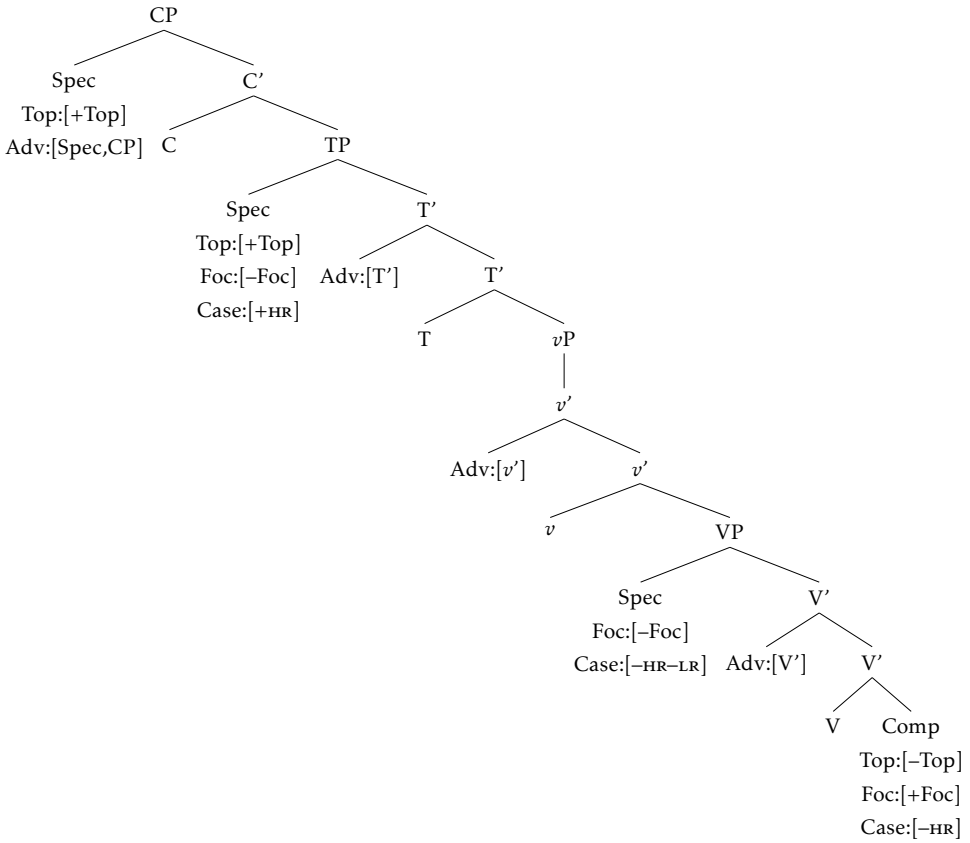
(251) IdentCase (IdC): Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].

(252) IdentDis (IdDis): Assign a violation for each positional discourse-feature matrix F[$vals_{pos}$] that is not identical to its corresponding item discourse-feature matrix F[$vals_{item}$].

(253) IdentAdv (IdAdv): Assign a violation for each positional adverbial-adjunction feature matrix F[$vals_{pos}$] that is not identical to its corresponding item adverbial-adjunction feature matrix F[$vals_{item}$].

As for the range of possible discourse-features and their positions, I follow Choi (2001:148) in assuming that [+Foc(us)] expresses a combination of [+New] and [±Prom(inent)], the latter determined by whether focus is contrastive [+Prom] or presentational [–Prom]. [–Foc] expresses [–New] only, and is underspecified for [±Prom]. [+Top(ic)] expresses [–New,+Prom], while [–Top] expresses any other combination of the features [±New,±Prom]. This captures the generalisations that focus involves drawing attention to new information regardless of discourse-prominence, while topicalisation involves making prominent some element that is not new information. A non-focused element is therefore by definition not new, while a non-topic is any element that is not *both* old *and* discourse-prominent information. In (254) I lay out the proposed positional features for Faroese.

(254)



For illustrative purposes, I discuss one much-debated example below, that of object shift in Scandinavian. I show that variation in Scandinavian object positions can be derived straightforwardly from information-structural constraints, but without any reference to movement operations, provided the adverbial adjunction sites I propose are assumed.

8.2.3 Object shift

Object shift occurs in the Scandinavian languages when certain adverbials, notably the negative particle *ikki/ikke/ekki/inte* and negative adverbs like 'never', occur clause-medially: in such sentences, the object

occurs to the left of the adverb. In languages like Danish, the verb occurs below sentence-medial adverbs in embedded clauses, whilst in Icelandic the verb also may occur above such adverbs in embedded clauses (255-256).[26] Additionally, there is cross-linguistic variation within the Nordic languages, since only in Icelandic can full DPs also undergo object shift, whereas in Mainland Scandinavian and Faroese, only weak pronouns undergo shift (hence the Danish examples in (255) all have pronominal objects). The literature on this subject is vast and only a short treatment can be given here; nevertheless, I argue that the OLG framework provides a novel solution to the question of how object shift is variously restricted across the Scandinavian languages.[27]

(255) **Danish:**

a. Dan. *Hvorfor **læste** Peter **den** aldrig?*
why read Peter it never
'Why did Peter never read it?'

b. Dan. * *Hvorfor **læste** Peter aldrig **den**?*
why read Peter never it

c. Dan. *Jeg spurgte hvorfor Peter aldrig **læste den***
I asked why Peter never read it
'I asked why Peter never read it'

d. Dan. * *Jeg spurgte hvorfor Peter **den** aldrig **læste***
I asked why Peter it never read

(256) **Icelandic:**

a. Ice. *Af hverju **las** Pétur aldrei **þessa bók**?*
why read Peter never this book
'Why did Peter never read this book?'

b. Ice. *Af hverju **las** Pétur **þessa bók** aldrei?*
why read Peter this book never

c. Ice. *Ég spurði af hverju Pétur **læsi** aldrei **þessa bók***
I asked why Peter read never this book
'I asked why Peter never read this book'

d. Ice. *Ég spurði af hverju Pétur **læsi** **þessa bók** aldrei*
I asked why Peter read this book never

An important insight in the literature from Holmberg (1986, 1997) is that, if one assumes that V-to-T movement is blocked by certain clause-medial elements, one prerequisite for object shift to occur is that the verb must have moved out of its base position, a claim known as 'Holmberg's Generalisation'. I return to how to deal with this below.

Sells (2001) provides a very thorough LFG-based OT analysis of Scandinavian object shift, which more recent work by Engels and Vikner (2014) builds upon. In order to account for the range of attested object

[26] Examples from Engels and Vikner (2014:58).

[27] See Þráinsson (2013) for a recent study of object shift in Faroese and Old Norse, which suggests that some contexts do permit full NP object shift in modern Faroese, though it is far more restricted than in Icelandic, and the data in Chapter 4 are consistent with the analysis proposed in this section.

shift behaviours, I follow Engels and Vikner (2014) and propose that the relevant constraint conflict involves (i) preference for a non-focused element to occur left of the extended-VP adverbial, i.e. avoid focus position (V,Comp); (ii) preference for full DP objects to remain in V,Comp; and (iii) preference for any object to remain in V,Comp. The conflict is between objects occupying their 'canonical' position (Stay in Engels and Vikner 2014) and the syntactic mapping of information structure, such that [–Foc] elements do not occupy a [+Foc] position (their Shift), which is also sensitive to adverbial scope. I propose the additional constraint (257) to account for the difference between full-DP objects and other kinds of objects (analogous to Engels and Vikner's StayBranch):

(257) ObjectDP (ObjDP): Assign a violation for each V,Comp position not occupied by a full DP.

I take a rather different approach to Holmberg's Generalisation than do Engels and Vikner (2014). Their starting assumption is that a prerequisite for object shift is movement of the finite verb to T. On my account, however, the position of the adverb does not in fact tell us definitively where the finite verb occurs, since such adverbs may be adjoined to *v*', V' or T'. Instead, I assume that the finite verb *always* occurs at least as high as T once the T-head is merged, and depending on the language may also occur in C (always in Icelandic, only under particular conditions in Danish and Faroese). Holmberg (1986, 1997:208) formulated the generalisation in terms of blocked movement: if any phonologically 'visible' category precedes the object landing site within VP, shift may not occur. This will not work under my assumptions, since the finite verb does not occur in V when there is no auxiliary, and so is not 'visible' within VP. In a similar vein, Engels and Vikner (2014:61) adopt a constraint on order preservation: object shift is only permitted if the order of certain elements is maintained, more specifically 'an independently moved constituent A must not precede a non-adverbial constituent B if the canonical position of A (or parts of A) follows the canonical position of B'. This formulation requires more precise definitions of 'independently moved' and 'canonical', but the assumption is similar to Holmberg's, in that movement across filled positions is costly.[28]

However, once we remove the assumption that the finite verb remains in V when an adverb seems to intervene, it is hard to tell what Holmberg's Generalisation actually buys us. The data that are covered by the generalisation include (i) no shift when the object occurs left of a non-finite main verb, (ii) shift permitted with V1, (iii) no shift that results in DO-IO order in double-object constructions, (iv) variation in particle-verb constructions, and (v) variation in *let*-constructions. For reasons of space, I do not explore the details of particle verbs or *let*-constructions here; examples of (i-iii) are shown in (258-260).[29] I assume following Potsdam (1998) the possibility of right-adjunction of the negative particle, which I posit for (260) in Danish, and more broadly in Scandinavian for ditransitives when pronominal objects appear to the left of the negative particle.

(258) **Icelandic:**

a. Ice. [$_{CP}$ *Af hverju hafði*$_{C}$ [$_{TP}$ *Pétur* [$_{vP}$[$_{v'}$ *aldrei* [$_{VP}$ *lesið*$_{V}$ *þessa bók?*]]]]]
why had Peter never read this book
'Why had Peter never read this book?'

[28] For a far more detailed overview of issues relevant to Scandinavian object shift, negative scrambling and adverb adjunction sites, see Þráinsson (2007:65–87).

[29] Examples from Engels and Vikner (2014:13,64–81).

b. Ice. * [$_{CP}$ *Af hverju hafði*$_{C}$ [$_{TP}$ *Pétur* [$_{VP}$ *þessa bók* [$_{V'}$ *aldrei lesið*$_{V}$*?*]]]]
why had Peter this book never read

(259) **Swedish:**

a. Swe. [$_{CP}$ *Kysst har*$_{C}$ [$_{TP}$ *jag* [$_{VP}$ *henne* [$_{V'}$ *inte*]]]]
kissed have I her not
'Kissed her, I haven't'

b. Swe. * [$_{CP}$ *Kysst har*$_{C}$ [$_{TP}$ *jag* [$_{vP}$[$_{v'}$ *inte* [$_{VP}$ *henne*]]]]]
kissed have I not her

(260) **Danish:**

a. Dan. [$_{TP}$ *Jeg gav*$_{T}$ [$_{VP}$ *hende den* [$_{V'}$ *ikke*]]]
I gave her it not
'I didn't give it to her'

b. Dan. * [$_{TP}$ *Jeg gav*$_{T}$ [$_{VP}$ *den hende* [$_{V'}$ *ikke*]]]
I gave it her not

What does seem consistent with Holmberg (1997) is that, when V is occupied by a non-finite verb shift does not occur, whereas it can occur when the V position is empty. However, I propose that we do not actually need a separate order-preservation or 'Holmberg's Generalisation' constraint, **or even to refer to movement/intervening material at all,** to capture these facts. The licensing constraints suffice.

'Movement across material' for object shift, i.e. the object occurring in Spec,VP, necessarily involves an additional violation of IdentCase, since the target position bears [–hr–lr] features. The object remaining in V,Comp incurs a violation of IdentDis since [–Foc] does not match [+Foc]. These featural mismatches are shown in (261) for Danish:

(261) a. Dan. [$_{TP}$ *Jeg har*$_{T}$ [$_{vP}$[$_{v'}$ *aldrig* [$_{VP}$ *set* *hende*$_{[+Foc]:[–Foc]}$]]]]
I have never seen her
'I have never seen her'

b. Dan. * [$_{TP}$ *Jeg har*$_{T}$ [$_{VP}$ *hende*$_{[–hr–lr]:[–hr]}$ [$_{V'}$ *aldrig set* ___$_{[–hr]:\varnothing}$]]]
I have her never seen

Therefore, we attribute the costliness of shift to the licensing constraints: when the object occurs in Spec,VP, a case feature mismatch ensues, whereas the pressure to shift arises from the discourse-feature mismatch of the [–Foc] object occurring in a [+Foc] position. Why, then, can the pronominal object not occur in Spec,VP in (261b), but obligatorily occurs there when the main verb is in T, in e.g. (255b)? The answer relies on the position of the negative adverb. When the adverb is adjoined to *v'*, it scopes over the entire VP, such that the Spec,VP and V,Comp positions both bear [+Foc]. In contrast, when adjoined to V', the negative adverb scopes only over V,Comp, and therefore the Spec,VP position bears [–Foc]. If we assume that [*v'*] is the only adverbial adjunction feature possible when V is occupied by a non-finite main verb, the facts fall out straightforwardly: shift will not 'save' the [+Foc]:[–Foc] mismatch in Spec,VP (i.e. remove an IdentDis violation) when the adverb is *v'*-adjoined, but *does* remove the IdentDis violation when V'-adjoined, since then only V,Comp bears [+Foc]. The relevant feature matrices for the case of Danish pronominal shift are shown in (262):

(262) a. Dan. [$_{TP}$ *Jeg læste*$_{T}$ [$_{VP}$ *den*$_{[-HR-LR]:[-HR],[-Foc]:[-Foc]}$ [$_{V'}$ *aldrig* ___$_{V}$ ___$_{[-HR]:\varnothing,[+Foc]:\varnothing}$]]]
I read it never
'I never read it'

b. Dan. * [$_{TP}$ *Jeg læste*$_{T}$ [$_{vP}$[$_{v'}$ *aldrig* [$_{VP}$ (Spec$_{[+Foc]}$) ___$_{V}$ *den*$_{[-HR]:[-HR],[+Foc]:[-Foc]}$]]]]
I read never it

As can be seen in (262b), even if *den* 'it' occurred in Spec,VP, this would not remove the IdentDis violation. The assumption that [*v'*] always occurs on negative adverbs when the main verb is finite is supported in two ways. Firstly, as an elsewhere case: [*v'*] is the unmarked sentential/clause-medial adverb site, but the adverb enters the input bearing [V'] when the condition of having the finite main verb in T is met. This is similar to the co-occurrence of two [+Q] features in a wh-question input: languages which convey information structure via word order may distribute the realisation of features across more than one item or constituent. Secondly, if sentential adverbs are also sensitive to tense, it is unsurprising that the adjunction sites adjacent to the tensed verb are preferred over adjunction to the non-finite verb (see Svenonius 2002 on the relation between adverb positions and tense). The conflict between IdentCase, IdentDis and IdentAdv derives the behaviour, provided the adverbs are adjoined at the right place, as shown for Icelandic examples (256a-b,258) in the following tableaux:[30]

(263) **Icelandic (258): no shift main verb in V, *v'*-adjunct**

{*af hverju,hafði*$_{[+fin]}$,*Pétur,aldrei*$_{[v']}$$_{,[+Foc]}$,*lesið*$_{[-fin]}$,[*þessa bók*]$_{[-HR],[-Foc]}$}	IdAdv	IdDis	IdC
☞ a. ... [$_{TP}$ *Pétur* [$_{vP}$[$_{v'}$ *aldrei*$_{[v']:[v']}$ [$_{VP}$ *lesið*$_{V}$ *þessa bók*$_{[+Foc]:[-Foc]}$*?*]]]]]		*	
b. ... [$_{TP}$ *Pétur* [$_{VP}$ *þessa bók*$_{[-Foc]:[-Foc],[-HR-LR]:[-HR]}$ [$_{V'}$ *aldrei*$_{[V']:[v']}$ *lesið*$_{V}$*?*]]]]	*!	*	*

(264) **Icelandic (256a): shift with main verb in C, V'-adjunct**

{*af hverju,las*$_{[+fin]}$,*Pétur,aldrei*$_{[V']}$$_{,[+Foc]}$,[*þessa bók*]$_{[-HR],[-Foc]}$}	IdAdv	IdDis	IdC
a. ... *las*$_{C}$ [$_{TP}$ *Pétur* [$_{vP}$[$_{v'}$ *aldrei*$_{[v']:[V']}$ [$_{VP}$ (Spec$_{[+Foc]}$) *þessa bók*$_{[+Foc]:[-Foc]}$*?*]]]]]	*!	*	
☞ b. ... *las*$_{C}$ [$_{TP}$ *Pétur* [$_{VP}$ *þessa bók*$_{[-Foc]:[-Foc],[-HR-LR]:[-HR]}$ [$_{V'}$ *aldrei*$_{[V']:[V']}$*?*]]]]		*	*

(265) **Icelandic (256b): no shift with main verb in C, *v'*-adjunct**

{*af hverju,las*$_{[+fin]}$,*Pétur,aldrei*$_{[v']}$$_{,[+Foc]}$,[*þessa bók*]$_{[-HR],[+Foc]}$}	IdAdv	IdDis	IdC
☞ a. ... *las*$_{C}$ [$_{TP}$ *Pétur* [$_{vP}$[$_{v'}$ *aldrei*$_{[v']:[v']}$ [$_{VP}$ *þessa bók*$_{[+Foc]:[+Foc]}$*?*]]]]]		*	
b. ... *las*$_{C}$ [$_{TP}$ *Pétur* [$_{VP}$ *þessa bók*$_{[-Foc]:[+Foc],[-HR-LR]:[-HR]}$ [$_{V'}$ *aldrei*$_{[V']:[v']}$*?*]]]]	*!	*	*

In summary, the restrictiveness of object shift is essentially determined by the availability of the Spec,VP position for a [–Foc] element to occur there: if the adverbial is *v'*-adjoined, shift cannot occur, whereas if adjoined to V', the object can occur in Spec,VP. Following Engels and Vikner (2014:47), I assume that this reflects the fact that certain adverbials mark focus, and therefore shift is a way of ensuring that a non-focused element does not occur in the adverbial's focus domain (see Engels 2012). If the focus-marking scope of the adverbial is dependent on its adjunction site, we can say that the V'-adjunction site triggers shift by marking [+Foc] in the VP-complement, whereas the *v'*-site has a broader scope that includes Spec,VP, and hence Spec,VP will also bear [+Foc]. This does not make different empirical predictions than the movement account, since the combination of a finite 'have'-auxiliary and a main verb in V will have either T-

[30]The violation of IdentDis incurred for the mismatch [+Foc]:∅ in V,Comp is also present in the winning candidates with shift.

or *v*'-adjunction and therefore preclude object shift. One significant advantage of this approach over the standard analysis, viz. that the finite verb does not move from V when 'blocked' by intervening material, is that we avoid the necessity for affix-hopping. Instead, tensed verbs do always occur at least as high as T in these languages, if we follow the hypothesis that adverb-placement is sensitive both to information structure and tense. Furthermore, on the OLG analysis the position of the object is not a mysterious dependency on movement, but determined by independently motivated information-structure constraints.

8.2.4 Factorial typology II

With our analysis of object shift in place, we are now in a position to test the hypothesised constraints with respect to the inputs in (267). A stipulated ranking given in (266) was tested. Since it has already been demonstrated that the alignment constraints generate the correct head-initial versus head-final typology, I did not include these. I consider expletives and topicalisation apart from object shift and negative scrambling, given the specificity and cross-linguistic rarity of these latter phenomena.

(266) **Faroese:**
MAX » ARGSP » DEP » IDADV » OBJDP » IDDIS » IDC

(267) j. /{music$_{[+Foc]}$,has,always,been}/
k. /{music$_{[-Foc]}$,has,always,been}/
l. /{must,have,always,been,[many folk]$_{[+Foc]}$}/
m. /{must,never,have,been,[native trees]$_{[+Foc]}$}/
n. /{I,will,not,have,[that old car]$_{[+Top]}$}/
o. /{I,read,not,book}/
p. /{I,read,not,it$_{[-Foc]}$}/
q. /{I,have,seen,no-one$_{[-Foc]}$}/
r. /{I,have,talked,with,[no student]$_{[-Foc]}$}/

With 7 constraints, there are 5,040 logically possible output languages. For expletive constructions and topicalisation of the type encountered in Germanic languages, there are four outputs generated:

(268) **Expletives and V2-topicalisation**

No.	EXPLETIVES	V2-TOPICALISATION	EXAMPLE LANGUAGE
1	✓	✓	Faroese, Icelandic, German
2	✓	×	English, Malagasy
3	×	✓	Estonian
4	×	×	Irish, Turkish

Additional constraints could be included to attempt to generate the differences between languages that do have clause-initial topic XPs with and without V2, and the implications of this with respect to "T-to-C",

but this is tangential to my point that the proposed constraints generate the attested possibilities without wildly overgenerating.

As for object shift and negative scrambling, five output languages are generated by these constraints. By negative scrambling, I refer to the sentences with negative-quantified objects such as (267q-r); see Þráinsson (2007:83–84) for reasons to consider this phenomenon separately from object shift.

(269) **Object shift and negative scrambling**

No.	Full DP OS	Pronoun OS	Neg. scrambling	Example language
1	×	✓	✓	Faroese, Danish
2	×	✓	×	
3	×	×	✓	German, Dutch
4	×	×	×	English
5	✓	✓	✓	Icelandic

Another advantage of adopting an OT-based approach is that it is easy to capture optionality via competing grammars (or a constraint tie). As Engels and Vikner (2014:52) note, the optionality observed with respect to object shift in some Scandinavian languages and dialects can be explained via an optional ranking of a pair of constraints. Translating their constraints into those adopted here, the following rankings generate the attested possibilities:

(270)

Language	Description	Ranking
Danish, Norwegian	no full DP OS, oblig. pronoun OS	ObjDP » IdDis » IdC
Icelandic	optional full DP OS, oblig. pronoun OS	{ObjDP, IdDis} » IdC
Swedish, SE Danish	no full DP OS, optional pronoun OS	ObjDP » {IdDis, IdC}
Elfdalian, Fin. Swedish	no full DP OS, no pronoun OS	ObjDP » IdC » IdDis

8.3 Summary

To conclude this chapter, it has been argued that the OLG framework adopted here is able to generate the attested Faroese sentence types, as well as reasonable typologies of real and logically possible languages, corresponding to the output permutations assuming the hypothesised inputs and constraints. Moreover, it has been shown that such an approach is both flexible enough to extend beyond the data presented in earlier chapters, and restrictive enough to rule out unattested sentence types, whether within a language (e.g. restrictions on object shift in Danish) or across all languages (e.g. the FOFC).

Chapter 9

Conclusion

In this thesis, I have approached the basic question: What is the best theory of case-marking? In order to answer this, a far broader and deeper investigation of phenomena relating to word order, case and agreement was necessary. The specific problem I broached was that of an intriguing difference between dative-subject predicates in Faroese and Icelandic: Why is the object marked nominative with number agreement in Icelandic, but accusative with default third person singular agreement in Faroese? The hypothesis I chose to test consisted of a model of grammar that recognises three levels of case, and imposes harmonisation on the mapping between levels. Linking Theory (Kiparsky 1997, 2001) implemented in Optimality Theory (Prince and Smolensky 1993) proved to be a useful framework to approach the broader question of how case systems work within the architecture of grammar. The key insight is that competing pressures, ranked differently between grammars, yield outputs that differ in precisely the way the Icelandic and Faroese sentence types do.

Substantial new data from the Faroe Islands and Iceland were brought to bear on the question, and turned out to be consistent with the initial hypothesis: the object in both Faroese and Icelandic dative-subject predicates behaves like a regular object with respect to Scandinavian object shift, and lack of number agreement with the nominative is consistently rejected in Icelandic, thus establishing Max[–hr] and AgrNom as the right constraints. The rankings Max[–hr] » AgrNom for Faroese and AgrNom » Max[–hr] were shown to capture the crucial difference between the two languages with respect to case-marking in dative-subject predicates; in this way, the difference was shown not to be idiosyncratic or language-specific, but systematic and predictable. Moreover, the behaviour of case-preservation and availability of the passive with quirky case verbs in Faroese is correctly predicted by the proposed model: two grammars are synchronically accessible to Faroese speakers, one which results in case-preservation and non-availability of passive, the other which yields non-preservation and the passive with nominative subject. The interrelatedness of these patterns is lost on a theory with only construction-specific constraints or filters, but readily explicable by a grammar-specific ranking that accounts for several related morphosyntactic phenomena. The competing grammars model was also tested via statistical and computational methods, and shown to provide insight into sociolinguistic factors in case selection.

Finally, the OLG model is not only conceptually self-consistent and empirically sound, but also generates realistic typologies of cross-linguistic variation. A fascinating avenue for investigation is that of languages with similar case-marking patterns but from disparate families: for instance, the dative-accusative case frames attested in languages as diverse as Nepali, Lithuanian, Basque and Wangkumara. Approaches based on similar starting assumptions to OLG have already been shown to account for diachronic changes in Indo-Aryan (Deo and Sharma 2006, Kiparsky 2017). Furthermore, it has been demonstrated that all the constraints proposed for Faroese and Icelandic do in fact generate attested languages and rule out unattested types. I have endeavoured to show that such a model of grammar both achieves descriptive adequacy and offers deeper explanations for a wide range of linguistic phenomena. I hope that this will provide a basis for future research on syntax and how it interfaces with other components of grammar.

Bibliography

Allen, Cynthia. 1995. *Case Marking and Reanalysis: Grammatical Relations from Old to Early Modern English*. Oxford: Clarendon Press.

Andrews, Avery. 1976. The VP complement analysis in Modern Icelandic. *NELS* 6.1–21.

Angantýsson, Ásgrímur. 2007. Verb-third in embedded clauses in Icelandic. *Studia Linguistica* 61.3.237–260.

Asarina, Alevtina (Alya). 2011. *Case in Uyghur and Beyond*. PhD dissertation, Massachusetts Institute of Technology.

Baker, Mark C. 2008. *The Syntax of Agreement and Concord*. Cambridge: CUP.

Barðdal, Jóhanna. 2001. The perplexity of DAT-NOM verbs in Icelandic. *Nordic Journal of Linguistics* 24.1.47–70.

Barðdal, Jóhanna. 2002. 'Oblique subjects' in Icelandic and German. *Working Papers in Scandinavian Syntax* 70.61–99.

Barðdal, Jóhanna and Þórhallur Eyþórsson. 2003. The change that never happened: the story of oblique subjects. *Journal of Linguistics* 39.439–472.

Barnes, Michael. 1986. Subject, nominative and oblique case in Faroese. *Scripta Islandica* 37.13–46.

Barnes, Michael. 1992. Faroese syntax — Achievements, goals and problems. In Louis-Jensen, Jonna and Jóhan H. W. Poulsen (eds.), *The Nordic Languages and Modern Linguistics* 7, 17–37. Tórshavn: Føroya Fróðskaparfelag.

Barss, A. and H. Lasnik. 1986. A note on anaphora and double objects. *Linguistic Inquiry* 17.347–354.

Bell, Allan. 1984. Language style as audience design. *Language in Society* 13.2.145–204. Cambridge: CUP.

Bentzen, Kristine, Piotr Garbacz, Caroline Heycock and Gunnar Hrafn Hrafnbjargarson. 2009. On variation in Faroese verb placement. *Nordlyd: NORMS Papers on Faroese* 36.2.78–102.

van Bergen, Geertje and Peter de Swart. 2009. Definiteness and scrambling in Dutch: where theory meets practice. *NELS* 38.113–124.

van Bergen, Geertje and Peter de Swart. 2010. Scrambling in spoken Dutch: Definiteness versus weight as determinants of word order variation. *Corpus Linguistics and Linguistic Theory* 6.2.267–295.

Biberauer, Theresa, Anders Holmberg and Ian Roberts. 2007. Disharmonic word-order systems and the Final-Over-Final-Constraint (FOFC). In Bisetto, A. and F. Barbieri (eds.), *Proceedings of XXXIII Incontro di Grammatica Generativa*, 86–105.

Biberauer, Theresa, Anders Holmberg and Ian Roberts. 2008. Structure and linearization in disharmonic word orders. In Chang, C. B. and H. J. Haynie (eds.), *Proceedings of the 26th WCCFL*, 96–104.

Bierwisch, Manfred. 1983. Semantische und konzeptuelle Reprasentation lexikalischer Einheiten. In Růžička and Wolfgang Motsch (eds.), *Untersuchungen zur Semantik*, 61–99. Berlin: Akademie Verlag.

Bierwisch, Manfred. 1986. On the nature of semantic form in natural language. In Klix, F. and H. Hangendorf (eds.), *Human Memory and Cognitive Capabilities*, Part B, 765–83. Amsterdam: Elsevier.

Bobaljik, Jonathan. 2008. Where's phi? Agreement as a post-syntactic operation. In Harbour, Daniel, David Adger and Susana Béjar (eds.), *Phi Theory: Phi Features across Interfaces and Modules*, 295–328. Oxford: OUP.

Boersma, Paul. 1998. *Functional phonology: Formalizing the interactions between articulatory and perceptual drives*. Ph.D. dissertation, University of Amsterdam.

Boersma, Paul and Bruce Hayes. 2001. Empirical tests of the Gradual Learning Algorithm. *Linguistic Inquiry* 32.45–86.

Börjars, Kersti and Mark Donohue. 2000. Much ado about nothing: Features and zeros in Germanic noun phrases. *Studia Linguistica* 54.3.309–353.

Bresnan, Joan (ed.). 1982. *The Mental Representation of Grammatical Relations*. Cambridge, MA: MIT Press.

Bresnan, Joan. 2001. *Lexical-Functional Syntax*. Oxford: Blackwell.

Bresnan, Joan and Tatiana Nikitina. 2009. The gradience of the dative alternation. In Uyechi, Linda Ann and Lian-Hee Wee (eds.), *Reality Exploration and Discovery: Pattern Interaction in Language and Life*, 161–184. Stanford, CA: CSLI Publications.

Bruening, Benjamin. 2010. Double object constructions disguised as prepositional datives. *Linguistic Inquiry* 41.287–305.

Bruening, Benjamin. 2018. Double object constructions and prepositional dative constructions are distinct: A reply to Ormazabal and Romero 2012. *Linguistic Inquiry* 49.1.123–150.

Burnett, Heather. 2017. Sociolinguistic interaction and identity construction: The view from game-theoretic pragmatics. *Journal of Sociolinguistics* 21.2.238–271.

Burzio, Luigi. 1986. *Italian Syntax*. Dordrecht: Reidel.

Choi, Hye-Won. 2001. Binding and discourse prominence: Reconstruction in 'focus' scrambling. In Legendre, Geraldine, Jane Grimshaw and Sten Vikner (eds.), *Optimality-Theoretic Syntax*, 143–169. Cambridge, MA: MIT Press.

Chomsky, Noam. 1957. *Syntactic Structures*. Berlin: Mouton de Gruyter.

Chomsky, Noam. 1970. Remarks on nominalization. In Jacobs, R. A. and P. S. Rosenbaum (eds.), *Readings in English Transformational Grammar*, 184–221. Waltham, MA: Ginn.

Chomsky, Noam. 1975. *The Logical Structure of Linguistic Theory*. New York: Springer.

Chomsky, Noam. 1986. *Barriers*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1994. Bare Phrase Structure. *MIT Occasional Papers in Linguistics* vol. 5. Cambridge, MA: MIT Press.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In Kenstowicz, Michael (ed.), *Ken Hale: A Life in Language*, 1–52. Cambridge, MA: MIT Press.

Christensen, R. H. B. 2018. *ordinal - Regression Models for Ordinal Data*. R package version 2018.4-19. Available at <http://www.cran.r-project.org/package=ordinal/>, accessed on 8/5/18.

Creissels, Denis. 2006. A typology of subject and object markers in African languages. In Voeltz, F.K. Erhard (ed.), *Studies in African Linguistic Typology*, 43–70. Amsterdam: Benjamins.

Cole, P., W. Harbert, G. Hermon and S. N. Sridhar. 1978. On the acquisition of subjecthood. *Studies in the Linguistic Sciences* 8.42–71.

Dalrymple, Mary, and Irina Nikolaeva. 2011. *Objects and Information Structure*. Cambridge: CUP.

Deo, Ashwini and Devyani Sharma. 2006. Typological variation in the ergative morphology of Indo-Aryan languages. *Linguistic Typology* 10.369–418.

Derbyshire, Desmond D. 1977. Word order universals and the existence of OVS languages. *Linguistic Inquiry* 8.3.590–599.

Diesing, Molly and Eloise Jelinek. 1995. Distributing arguments. *Natural Language Semantics* 3.2.123–176.

Dixon, R. M. W. 1979. Ergativity. *Language* 55.59–138.

van der Does, Jaap and Helen de Hoop. 1998. Type-shifting and scrambled definites. *Journal of Semantics* 15.393–416.

Donohue, Cathryn. 2004. *Morphology matters: Case licensing in Basque*. PhD dissertation, Stanford University.

Dryer, Matthew S. 2013. Polar questions. In Dryer, Matthew S. and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. Available online at <http://wals.info/chapter/116>, accessed on 8/3/18.

Eckert, Penelope. 2008. Variation and the indexical field. *Journal of Sociolinguistics* 12.453–476.

Engels, Eva. 2012. *Optimizing Adverb Positions*. Amsterdam: John Benjamins.

Engels, Eva and Sten Vikner. 2014. *Scandinavian Object Shift and Optimality Theory*. New York: Springer.

van der Gaaf, W. 1904. *The transition from the impersonal to the personal construction in Middle English*. Heidelberg: Carl Winter. (Reprinted 1967, Amsterdam: Swets & Zeitlinger.)

Galbraith, Daniel. 2013. *Positional and morphological case in Faroese*. MPhil dissertation, University of Cambridge.

Galbraith, Daniel. 2017. *Faroese and Icelandic syntactic survey data: quirky case predicates, mono- and ditransitive passives, object shift and position of negative adverbs*. Stanford Digital Repository. Available at: <https://purl.stanford.edu/nd533ns7207>.

Gazdar, Gerald, Ewan Klein, Geoffrey K. Pullum and Ivan A. Sag. 1985. *Generalized Phrase Structure Grammar*. Cambridge, MA: Harvard University Press.

Goldwater, Sharon and Mark Johnson. 2003. Learning OT constraint rankings using a Maximum Entropy model. In Spenader, Jennifer, Anders Eriksson and Östen Dahl (eds.), *Proceedings of the Stockholm Workshop on Variation within Optimality Theory*, 111–120. Stockholm: Stockholm University.

Goodman, Noah D. and Michael C. Frank. 2016. Pragmatic language interpretation as probabilistic inference. *Trends in Cognitive Sciences* 20.11.818–829.

Green, Georgia M. 1974. *Semantics and Syntactic Regularity*. Bloomington, IN: Indiana University Press.

Grimshaw, Jane. 1997. Projection, heads and optimality. *Linguistic Inquiry* 28.373–422.

Grimshaw, Jane. 2001. Economy of structure in OT. Unpublished ms., Rutgers University. *Rutgers Optimality Archive* 434-0601.

Haider, Hubert. 2010. *The Syntax of German*. Cambridge: CUP.

Halle, Morris. 1973. Prolegomena to a theory of word formation. *Linguistic Inquiry* 4.3–16.

Halle, Morris and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In Hale, Kenneth and S. Jay Keyser (eds.), *The View from Building 20*, 111–176. Cambridge, MA: MIT Press.

Halle, Morris and Alec Marantz. 1994. Some key features of Distributed Morphology. In Carnie, Andrew and Heidi Harley (eds.), *MITWPL 21: Papers on phonology and morphology*, 275–288. Cambridge, MA: MITWPL.

Hankamer, Jorge and Line Mikkelsen. 2002. A morphological analysis of definite nouns in Danish. *Journal of Germanic Linguistics* 14.2.137–175.

Hankamer, Jorge and Line Mikkelsen. 2005. When movement must be blocked: A reply to Embick and Noyer. *Linguistic Inquiry* 36.85–125.

Hawkins, John A. Processing complexity and filler-gap dependencies across grammars. *Language* 75.2.244–285.

Hayes, Bruce, Bruce Tesar and Kie Zuraw. 2013. OTSoft 2.5. Software package, accessible at <http://www.linguistics.ucla.edu/people/hayes/otsoft/>.

Henderson, Brent. 2011. Agreement, locality, and OVS in Bantu. *Lingua* 121.5.742–753.

Heycock, Caroline, Antonella Sorace, and Zakaris Svabo Hansen. 2010. V-to-I and V2 in subordinate clauses: an investigation of Faroese in relation to Icelandic and Danish. *Journal of Comparative Germanic Linguistics* 13.61–97.

Heycock, Caroline, Antonella Sorace, Zakaris Svabo Hansen, Sten Vikner, Frances Wilson. 2012. Detecting the late stages of syntactic change: the loss of V-to-T in Faroese. *Language* 88.3.558–600.

Holmberg, Anders. 1986. *Word Order and Syntactic Features in the Scandinavian Languages and English*. Doctoral dissertation, University of Stockholm.

Holmberg, Anders. 1997. The true nature of Holmberg's Generalization. *NELS* 27.203–218.

Holmberg, Anders and Þorbjörg Hróarsdóttir. 2003. Agreement and movement in Icelandic raising constructions. *Lingua* 113.997–1019.

de Hoop, Helen. 2000. Optional scrambling and interpretation. In Bennis, H., M. Everaert and E. Reuland (eds.), *Interface Strategies*, 153–168. Amsterdam: Royal Netherlands Academy of Arts and Sciences.

de Hoop, Helen. 2003. Scrambling in Dutch: optionality and optimality. In Karimi, Simin (ed.), *Word Order and Scrambling*, 201–216. Oxford: Blackwell.

de Hoop, Helen and Andrej Malchukov. 2008. Case-marking strategies. *Linguistic Inquiry* 39.565–587.

Hrafnbjargarson, Gunnar Hrafn. 2001. An Optimality Theory analysis of agreement in Icelandic DAT-NOM constructions. *Working Papers in Scandinavian Syntax* 68.15–47.

Iggesen, Oliver A. 2013. Number of cases. In Dryer, Matthew S. and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. Available online at <http://wals.info/chapter/49>, accessed on 6/19/18.

Irimia, Monica-Alexandrina. 2012. *Secondary Predicates*. Doctoral dissertation, University of Toronto.

Jacobson, Steven A. 1979. *A Grammatical Sketch of Siberian Yupik Eskimo*. Fairbanks, AK: University of Alaska.

Jäger, Gerhard. 1995. Topic, scrambling, and Aktionsart. In Kohlhof, Inga, Susanne Winkler and Hans Bernhard Drubig (eds.), *Proceedings of the Göttingen Focus Workshop*, 19–34. Tübingen: Arbeitspapiere des SFB 340 'Sprachtheoretische Grundlagen für die Computerlinguistik'.

Jäger, Gerhard. 2007. Maximum Entropy models and Stochastic Optimality Theory. In Zaenen, Annie, Jane Simpson, Tracy Holloway King, Jane Grimshaw, Joan Maling, and Chris Manning (eds.), *Architectures, Rules, and Preferences: Variations on Themes by Joan W. Bresnan*, 467–479. Stanford: CSLI Publications.

Jespersen, Otto. 1927. *A Modern English Grammar on Historical Principles* vol. 3. London: Allen & Unwin.

Jónsson, Jóhannes Gísli. 1997-8. Sagnir með aukafallsfrumlagi. *Íslenskt mál og almenn málfræði* 19,20:11–43.

Jónsson, Jóhannes Gísli. 2009. Covert nominative and dative subjects in Faroese. *Nordlyd: NORMS Papers on Faroese* 36.2.142–164.

Jónsson, Jóhannes Gísli and Þórhallur Eyþórsson. 2005. Variation in subject case marking in Insular Scandinavian. *Nordic Journal of Linguistics* 28.223–245.

Kalin, Laura. 2011. *Hixkaryana: the derivation of Object Verb Subject word order*. Master's thesis, UCLA.

Kaplan, Ronald M. and Joan Bresnan. 1982. Lexical-Functional Grammar: A formal system for grammatical representation. In Bresnan, Joan (ed.), *The Mental Representation of Grammatical Relations*, 173–281. Cambridge, MA: MIT Press.

Kayne, Richard S. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.

Keenan, Edward. 1976. Towards a universal definition of subject. In Li, Charles (ed.), *Subject and Topic*, 303–333. Cambridge, MA: Academic Press.

Kiesling, Scott Fabius. 1998. Men's identities and sociolinguistic variation: The case of fraternity men. *Journal of Sociolinguistics* 2.69–99.

Kiparsky, Paul. 1997. The rise of positional licensing. In van Kemenade, Ans and Nigel Vincent (eds.), *Parameters of Morphosyntactic Change*. Oxford: OUP.

Kiparsky, Paul. 2001. Structural case in Finnish. *Lingua* 111.315–376.

Kiparsky, Paul. 2013. Towards a null theory of the passive. *Lingua* 125.7–33.

Kiparsky, Paul. 2017. Typologies as fitness landscapes: Modeling word order change. Presentation at University of Oslo, *Workshop on Variation and Change in the Scandinavian Verb Phrase*, May 16, 2017.

Koenig, Jean-Pierre and Karin Michelson. 2015. Invariance in argument realization: The case of Iroquoian. *Language* 91.1–47.

Kroch, Anthony. 1989. Function and grammar in the history of English: Periphrastic *do*. In Fasold, Ralph and Deborah Schiffrin (eds.), *Language Change and Variation*, 133-172. Amsterdam: John Benjamins.

Labov, William. 1972. The isolation of contextual styles. In Labov, W., *Sociolinguistic Patterns*, 70–109. Philadelphia, PA: University of Pennsylvania Press.

de Lacy, Paul. 2011. Markedness and faithfulness constraints. In Oostendorp, M., C. J. Ewen, E. Hume and K. Rice (eds.), *The Blackwell Companion to Phonology*, vol. III ch. 63. New York: John Wiley.

Larson, Richard K. 1988. On the double object construction. *Linguistic Inquiry* 19.335–391.

Launey, Michel. 1981. *Introduction à la langue et à la littérature aztèques 1*. Paris: l'Harmattan.

Legendre, Géraldine, Paul Smolensky and Colin Wilson. 1998. When is less more? Faithfulness and minimal links in wh-chains. In Barbosa, P., D. Fox, P. Hagstrom, M. McGinnis and D. Pesetsky (eds.), *Is the Best Good Enough? Optimality and Competition in Syntax*, 249–289. Cambridge, MA: MIT Press.

Legendre, Geraldine, Jane Grimshaw and Sten Vikner (eds.). 2001. *Optimality-Theoretic Syntax*. Cambridge, MA: MIT Press.

Levin, Lori and Jane Simpson. 1981. Quirky case and lexical representation of Icelandic verbs. *Chicago Linguistic Society* 17.185–196.

Lockwood, W. B. 1977. *An Introduction to Modern Faroese*. Tórshavn: Føroya Skúlabókagrunnur.

Mahajan, Anoop. 2007. Reverse engineering two word order generalizations. Presentation at *GLOW in Asia VI: Parametric syntax and language acquisition*, The Chinese University of Hong Kong, December 27-29, 2007.

Marschner, Ian C. 2011. glm2: Fitting generalized linear models with convergence problems. *The R Journal* 3.2.12–15.

Marten, Lutz and Jenneke van der Wal. 2014. A typology of Bantu subject inversion. *Linguistic Variation* 14.2.318–368.

Meinunger, André. 2000. *Syntactic Aspects of Topic and Comment*. Amsterdam: John Benjamins.

McCarthy, John J. *Doing Optimality Theory: Applying Theory to Data*. New York: John Wiley.

McCarthy, John and Alan Prince. 1995. Faithfulness and reduplicative identity. In Beckman, J., L. W. Dickey and S. Urbanczyk (eds.), *University of Massachusetts Occasional Papers in Linguistics* 18.249–384. Amherst, MA: GLSA Publications.

McCloskey, Jim. 2000. Quantifier float and wh-movement in an Irish English. *Linguistic Inquiry* 31.57–84.

McCullagh, Peter. 1980. Regression models for ordinal data. *Journal of the Royal Statistical Society* 42.2.109–142.

McFadden, Thomas. 2002. The rise of the *to*-dative in Middle English. In Lightfoot, David W. (ed.), *Syntactic Effects of Morphological Change*, 107–123. Oxford: OUP.

Montague, Richard. 1973. The proper treatment of quantification in ordinary English. In Hintikka, K. J., J. M. E. Moravcsik and P. Suppes (eds.), *Approaches to Natural Language: Proceedings of the 1970 Stanford Workshop on Grammar and Semantics*, 221–242. Dordrecht: Reidel.

Müller, Gereon. 2009. Optimality-Theoretic Syntax. 'Comparing Frameworks' lectures, Utrecht Institute of Linguistics (OTS), September 24-26, 2009. Text available at <http://home.uni-leipzig.de/muellerg/mu235.pdf>, accessed 8/5/18.

Narita, Hiroki. 2014. *Endocentric Structuring of Projection-Free Syntax*. Amsterdam: John Benjamins.

Oehrle, Richard. 1976. *The Grammatical Status of the English Dative Alternation*. Doctoral dissertation, MIT.

Oehrle, Richard T., Emmon Bach and Deirdre Wheeler (eds.). 1988. *Categorial Grammars and Natural Language Structures*. Dordrecht: Reidel.

Ormazabal, Javier, and Juan Romero. 2012. PPs without disguises: Reply to Bruening. *Linguistic Inquiry* 43.455–474.

Pater, Joe. 2000. Nonuniformity in English stress: The role of ranked and lexically specific constraints. *Phonology* 17.2.237–274.

Pater, Joe. 2009. Weighted constraints in generative linguistics. *Cognitive Science* 33.999–1035.

Pearson, Matthew. 1998. Predicate raising and 'VOS' order in Malagasy. In Paul, Ileana (ed.), *The Structure of Malagasy* vol. 2. UCLA Occasional Papers in Linguistics, No. 20.

Pearson, Matthew. 2005. The Malagasy subject/topic as an A'-element. *Natural Language and Linguistic Theory* 23.2.381–457.

Pedregosa, F., G. Varoquaux, A. Gramfort, V. Michel, B. Thirion, O. Grisel, M. Blondel, P. Prettenhofer, R. Weiss, V. Dubourg, J. Vanderplas, A. Passos, D. Cournapeau, M. Brucher, M. Perrot and E. Duchesnay. 2011. Scikit-learn: Machine Learning in Python. *Journal of Machine Learning Research* 12.2825–2830.

Perlmutter, David M. 1978. Impersonal passives and the unaccusative hypothesis. *Proceedings of the Annual Meeting of the Berkeley Linguistics Society* 38.157–189.

Petersen, Hjalmar P. 2010. *The Dynamics of Faroese-Danish Language Contact*. Heidelberg: Universitätsverlag Winter.

Pickering, Martin J., Stephen Barton, and Richard Shillcock. 1994. Unbounded dependencies, island constraints and processing complexity. In Clifton, Charles Jr., Lyn Frazier and Keith Rayner (eds.), *Perspectives on Sentence Processing*, 199–224. Mahwah, NJ: Lawrence Erlbaum Associates.

Pintzuk, Susan, 1999. *Phrase Structures in Competition: Variation and Change in Old English*. New York: Garland.

Pollard, Carl and Ivan Sag. 1987. *Information-based Syntax and Semantics, Vol. 1: Fundamentals*. Stanford, CA: CSLI Publications.

Pollard, Carl and Ivan Sag. 1994. *Head-Driven Phrase Structure Grammar*. Chicago, IL: University of Chicago Press.

Pollock, Jean-Yves. 1989. Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry* 20.3.365–424.

Potsdam, Eric. 1998. A syntax for adverbs. *WECOL* 27. Fresno, CA: California State University.

Preminger, Omer. 2011. *Agreement as a fallible operation*. Doctoral dissertation, MIT.

Preminger, Omer. 2014. *Agreement and Its Failures.* Linguistic Inquiry Monograph 68. Cambridge, MA: MIT Press.

Prince, Alan and Paul Smolensky. 1993. *Optimality Theory: Constraint Interaction in Generative Grammar*. Citations from Rutgers Optimality Archive version [Aug. 2002], accessible at <http://roa.rutgers.edu/files/537-0802/537-0802-PRINCE-0-0.PDF>.

Qing, Ciyang and Reuben Cohn-Gordon. 2018. Non-descriptive/use-conditional meaning in Rational Speech Act models. Presentation at *Sinn und Bedeutung* 23, Centre de Lingüística Teòrica, Universitat Autònoma de Barcelona.

R Core Team. 2012. *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. Austria: Vienna. URL <http://www.R-project.org/>.

Rappaport Hovav, Malka and Beth Levin. 2008. The English dative alternation: The case for verb sensitivity. *Journal of Linguistics* 44.129–167.

Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, MA: MIT Press.

Rögnvaldsson, Eiríkur. 1995. Old Icelandic: a non-configurational language? *NOWELE* 26.3–29.

Rohrbacher, Bernhard. 1994. *The Germanic Languages and the Full Paradigm: A Theory of V to I Raising*. Doctoral dissertation, University of Massachusetts, Amherst.

Santorini, Beatrice. 1992. Variation and change in Yiddish subordinate clause word order. *Natural Language and Linguistic Theory* 10.4.595–640.

Scannell, Kevin. 2011. *Corpus of Faroese-language blogs*. Stanford Digital Repository. Available at: <https://purl.stanford.edu/qt590wf1460>.

Sells, Peter. 2001. *Structure, Alignment and Optimality in Swedish*. Stanford, CA: CSLI Publications.

Seržant, Ilja A. 2013. Rise of canonical objecthood with the Lithuanian verbs of pain. *Baltic Linguistics* 4:187–211.

Sheehan, Michelle, Theresa Biberauer, Ian Roberts and Anders Holmberg. 2017. *The Final-Over-Final Condition: A Syntactic Universal*. Linguistic Inquiry Monograph 76. Cambridge, MA: MIT Press.

Siegel, Dorothy. 1974. *Topics in English Morphology*. New York: Garland.

Siewierska, Anna. 2013. Verbal person marking. In Dryer, Matthew S. and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. Available online at <http://wals.info/chapter/102>, accessed on 6/19/18.

Sigurðsson, Halldór Ármann. 1989. *Verbal Syntax and Case in Icelandic*. Doctoral dissertation, Lund University.

Sigurðsson, Halldór Ármann. 1991. Icelandic Case-marked PRO and the Licensing of Lexical Arguments. *Natural Language and Linguistic Theory* 9.327–363.

Sigurðsson, Halldór Ármann. 1996. Icelandic finite verb agreement. *Working Papers in Scandinavian Syntax* 57.1–46.

Sigurðsson, Halldór Ármann. 1997. Öðruvísi frumlög. In Agnarsdóttir, Anna and Torfi Tulinius (eds.), *Milli himins og jarðar. Maður, guð og menning í hnotskurn hugvísinda*, 299–306. Reykjavík: Háskólaútgáfan.

Sigurðsson, Halldór Ármann. 2004. Agree and agreement: Evidence from Germanic. In Abraham, Werner (ed.), *Focus on Germanic Typology*, Studia Typologica 6, 61–103. Berlin: Akademie Verlag.

Sigurðsson, Halldór Ármann and Anders Holmberg. 2008. Icelandic dative intervention. In D'Alessandro, R., S. Fischer, and G. H. Hrafnbjargarson (eds.), *Agreement Restrictions*, 251–279. Berlin: Mouton de Gruyter.

Silverstein, Michael. 2003. Indexical order and the dialectics of sociolinguistic life. *Language and Communication* 23.193–229.

Sipser, Michael. 1997. *Introduction to the Theory of Computing*. Boston, MA: PWS Publishing Company.

Smolensky, Paul. 1996. On the comprehension/production dilemma in child language. *Linguistic Inquiry*, 27.4.720–731.

Smolensky, P. and Geraldine Legendre. 2006. *The Harmonic Mind: From Neural Computation to Optimality-Theoretic Grammar (Cognitive architecture)*, vol. 1. Cambridge, MA: MIT Press.

Sportiche, Dominique. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19.3.

Svenonius, Peter. 2002. Subject positions and the placement of adverbials. In Svenonius, Peter (ed.), *Subjects, Expletives, and the Extended Projection Principle*, 199–240. Oxford: OUP.

Taraldsen, Knut Tarald. 1995. On agreement and nominative objects in Icelandic. In Haider, Hubert, Susan Olsen and Sten Vikner (eds.), *Studies in Comparative Germanic Syntax*, 307–327. Kluwer: Dordrecht.

Terrill, Angela. 2003. *A Grammar of Lavukaleve*. Berlin: Mouton de Gruyter.

Þráinsson, Höskuldur. 2007. *The Syntax of Icelandic*. Cambridge: Cambridge University Press.

Þráinsson, Höskuldur. 2010. Predictable and unpredictable sources of variable verb and adverb placement in Scandinavian. *Lingua* 120.1062–1088.

Þráinsson, Höskuldur. 2013. Full NP object shift: The Old Norse puzzle and the Faroese puzzle revisited. *Nordic Journal of Linguistics* 36.2.153–186.

Þráinsson, Höskuldur. 2016. There is no 'Icelandic A and B' nor 'Faroese 1 and 2'. Presentation delivered at *GLAC* 22, Reykjavík, 5/21/16.

Þráinsson, Höskuldur, Hjalmar P. Petersen, Jógvan í Lon Jacobsen, and Zakaris Svabo Hansen. 2004. First edition. *Faroese: An Overview and Reference Grammar*. Reykjavík and Tórshavn: University of Iceland and University of the Faroe Islands.

Þráinsson, Höskuldur, Hjalmar P. Petersen, Jógvan í Lon Jacobsen, and Zakaris Svabo Hansen. 2012. Second edition. *Faroese: An Overview and Reference Grammar*. Reykjavík and Tórshavn: University of Iceland and University of the Faroe Islands.

Tourangeau, Roger, Lance J. Rips, and Kenneth Rasinski. *The Psychology of Survey Response*. Cambridge: CUP.

Vangsnes, Øystein Alexander. 2002. Icelandic expletive constructions and the distribution of subject types. In Svenonius, Peter (ed.), *Subjects, Expletives and the Extended Projection Principle*, 43–70. Oxford: OUP.

Vikner, Sten. 1991. Relative *der* and other C^0 elements in Danish. *Lingua* 84.109–136.

Vikner, Sten. 1995. *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford: OUP.

Wasow, Thomas. 2002. *Postverbal Behavior*. Stanford, CA: CSLI Publications.

Woolford, Ellen. 2001. Case patterns. In Legendre, Geraldine, Jane Grimshaw and Sten Vikner (eds.), *Optimality-Theoretic Syntax*, 509–543. Cambridge, MA: MIT Press.

Woolford, Ellen. 2007. Case locality: Pure domains and object shift. *Lingua* 117.1591–1616.

Wunderlich, Dieter. 1997. Cause and the structure of verbs. *Linguistic Inquiry* 28.27–68.

Wunderlich, Dieter. 2000. Optimal case in Hindi. Unpublished ms., University of Düsseldorf.

Wunderlich, Dieter. 2002. Argument linking types approached from the perspective of LDG. In Suzuki, Hidekazu (ed.), *Report of the Special Research Project for the Typological Investigation of Languages and Cultures of the East and West 2001, Part II*, 777–799. University of Tsukuba.

Wunderlich, Dieter. 2008. The force of lexical case: German and Icelandic compared. In Hanson, Kristin and Sharon Inkelas (eds.), *The Nature of the Word: Studies in honor of Paul Kiparsky*, 587–620. Cambridge, MA: MIT Press.

Wunderlich, Dieter. 2012. Lexical decomposition in grammar. In Werning, Markus, Wolfram Hinzen, and Edouard Machery (eds.), *The Oxford Handbook of Compositionality*, 307–327. Oxford: OUP.

Yip, Moira, Joan Maling and Ray Jackendoff. 1987. Case in tiers. *Language* 63.217–250.

Zaenen, Annie, Joan Maling and Höskuldur Þráinsson. 1985. Case and grammatical functions: the Icelandic passive. *Natural Language and Linguistic Theory* 3.441–483.

Zepter, Alex. 2000. Specifiers and adjuncts. Unpublished ms., Rutgers University. *Rutgers Optimality Archive* 413-0900.

Appendices

Appendix A: Faroese clause structure

Appendix A1: Table of possible analyses

In this table, question mark does not indicate a native speaker judgement, but a possible position I deemed less likely than the hypothesis represented in Table 2.1, that nevertheless cannot be definitively ruled out by the data I looked at in the thesis. In (45e), the finite verb *sigur* can only be occupying T if the adverb *altíð* is adjoined at T', since otherwise the unacceptable order **sigur altíð* would hold. I have notated (45h) with a double question mark if the negative word *ikki* is adjoined at T', since (i) there is no definitive evidence that *ikki* ever shows up here, and (ii) it requires the analysis that the subject and finite verb are occupying Spec,CP and C respectively, which entails Spec,CP being an extra subject-licensing position, whereas the facts can still be covered if only Spec,TP is subject-licensing.

Table 9.1: Faroese clause structure: possible analyses

	Spec,CP	C	Spec,TP	T'	T	*v'*	*v*	Spec,VP	V'	V	V,Comp
45a.	(?*Tey*)	(?*hava*)	*Tey*		*hava*	*aldri*			(?*aldri*)	*lisið*	*bókina*
45b.	*Tá*	*hava*	*tey*	(?*aldri*)		*aldri*			(?*aldri*)	*lisið*	*bókina*
45c'.		*at*	*Jógvan*		*hevur*	*aldri*			(?*aldri*)	*lisið*	*bókina*
45c''.		*at*	*Jógvan*	*aldri*	*hevur*					*lisið*	*bókina*
45d.			*hvør*	*aldri*	*hevði*					*lisið*	*bókina*
45e.		*um*	*hon*	(?*altíð*)	(?*sigur*)	*altíð*			(?*altíð*)	*sigur*	*satt*
45f.	(?*Tey*)	(?*lósu*)	*Tey*		*lósu*	*aldri*			(?*aldri*)		*bókina*
46a.	*Ivaleyst*	*skulu*	*tey*	(?*ongantíð*)		*ongantíð*	*selja*	*dreingjunum*			*teldurnar*
47a.	*Ivaleyst*	*góvu*	*tey*	(?*ongantíð*)		*ongantíð*		*dreingjunum*			*teldurnar*
50b'.	(?*Tað*)	(?*hevur*)	*Tað*	(?*altíð*)	*hevur*	*altíð*			(?*altíð*)	*verið*	*tónleikur*
50b''.	*Tað*	*hevur*	*tónleikur*	(?*altíð*)		*altíð*			(?*altíð*)	*verið*	
52a.	(?*Tað*)	(?*má*)	*Tað*		*má*		*hava*		*altíð*	*verið*	*nógv fólk*
54a.	(?*Tað*)	(?*má*)	*Tað*	(?*ongantíð*)	*má*	*ongantíð*	*hava*			*verið*	*innlendsk trø*
45g.	*Tann gamla bilin*	*vil*	*eg*	(?*ikki*)		*ikki*			(?*ikki*)	*hava*	
45h.	(?*Eg*)	(?*las*)	*Eg*	(??*ikki*)	*las*	*ikki*			(?*ikki*)		*bókina*
45i.	(?*Eg*)	(?*las*)	*Eg*		*las*			*hana*	*ikki*		
45j.	(?*Eg*)	(?*havi*)	*Eg*		*havi*			*ongan*		*sæð*	
45k.	(?*Eg*)	(?*havi*)	*Eg*		*havi*			*ongan næming*		*tosað*	*við __*

Appendix A2: Constraints

Definitions of all the constraints proposed in this thesis are presented in the table below, roughly in order of presentation and separated into the appropriate categories.

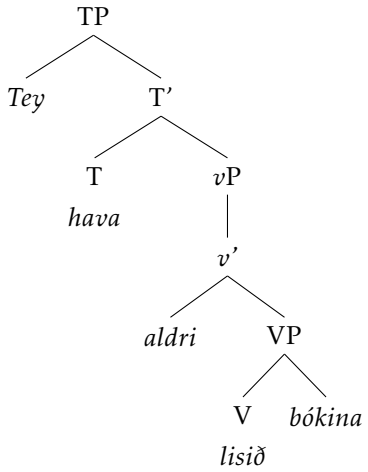
Constraint	Formulation
Undominated constraints	
*EmptyStruc (*EmpStr)	Assign a violation for each empty position in the output that does not satisfy requirements of an input feature.
Subcat	Assign a violation for each subcategorisation feature not satisfied in the output.
Faithfulness constraints	
Max	Assign a violation for each feature or item present in the input that is not present in the output.
Max[–hr]	Assign a violation for each [–hr] abstract case feature on an input argument that is not realised by a [–hr] morphosyntactic case feature on an output argument.
Max[–lr]	Assign a violation for each [–lr] abstract case feature on an input argument that is not realised by a [–lr] morphosyntactic case feature on an output argument.
Max[LexCase] (Max[LC])	Assign a violation for each lexical case feature on an argument at the level of abstract case that does not correspond to the same lexical feature value on an argument at the level of morphosyntactic case.
Dep	Assign a violation for each feature or item not present in the input that is present in the output.
Parse	Assign a violation for a null parse of the input (i.e. if the output is zero).
Markedness constraints	
F<XP	Assign a violation for each operator, i.e. functional head, that does not precede its operand, i.e. complement phrase.
HeadFinal (HdFin)	Assign a violation for each head that does not occur in the final position of its phrase.
Harmony (Hrm)	Assign a violation for each phrase XP embedded in a phrase YP where XP and YP do not have the same headedness.
ObHead (ObHd)	Assign a violation for each phrase not containing an overt head.
ObSpec (ObSp)	Assign a violation for each phrase not containing a specifier.
IdentF (IdF)	Assign a violation for each positional feature matrix F[$vals_{pos}$] that is not identical to its corresponding item feature matrix F[$vals_{item}$].
IdentCase (IdC)	Assign a violation for each positional case feature matrix F[$vals_{pos}$] that is not identical to its corresponding item case feature matrix F[$vals_{item}$].
IdentDis (IdDis)	Assign a violation for each positional discourse-feature matrix F[$vals_{pos}$] that is not identical to its corresponding item discourse-feature matrix F[$vals_{item}$].

IdentAdv (IdAdv)	Assign a violation for each positional adverbial-adjunction feature matrix F[$vals_{pos}$] that is not identical to its corresponding item adverbial-adjunction feature matrix F[$vals_{item}$].
CheckTns (ChkT)	Assign a violation for each Tense (T) head position not occupied by an item bearing a [±fin] feature (i.e. of category V).
VfinHi (VfHi)	Assign a violation for each finite verb not occurring in the highest available functional head position in the clause (CP).
ArgSP	Assign a violation for each finite TP in which no argument occupies subject position (Spec,TP).
ObjectDP (ObjDP)	Assign a violation for each V,Comp position not occupied by a full DP.
AgrNom	Assign a violation if the agreement value of the verb does not match that of a nominative argument in the same clause.
SubjNom (SNom)	Assign a violation for each subject position (Spec,TP) not occupied by a nominative argument.
$SubjHi_{\theta}$	Assign a violation for each argument in subject position (Spec,TP) that does not bear the highest theta-role.

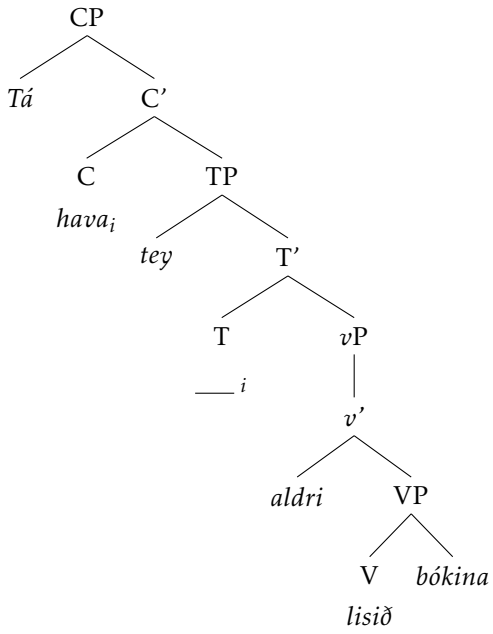
Appendix A3: Tree structures

Tree structure diagrams for the proposed winning candidates for all of the Faroese sentence types in Chapter 2, Table 2.1 and Chapter 8, Table 8.2 are shown below.

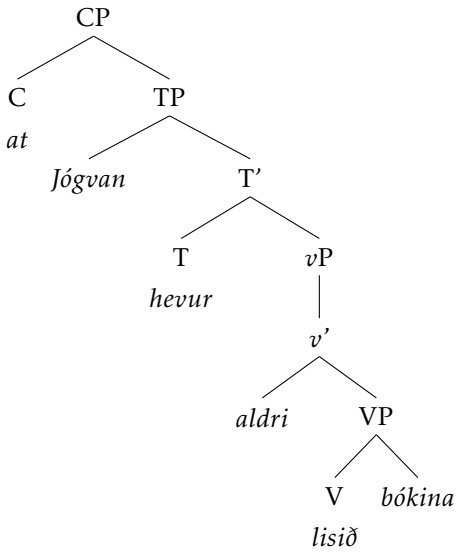
(271)



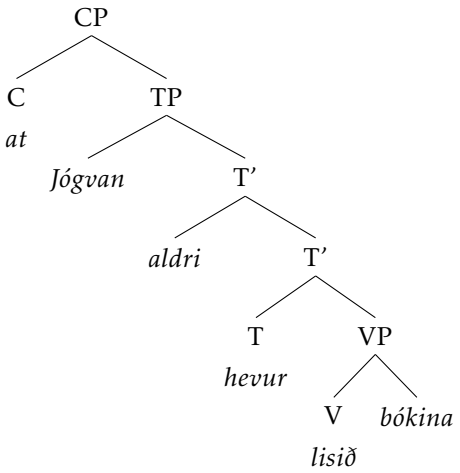
(272)


CP
Tá
C'
C
TP
hava$_i$
tey
T'
T
vP
___ i
v'
aldri
VP
V
bókina
lisið

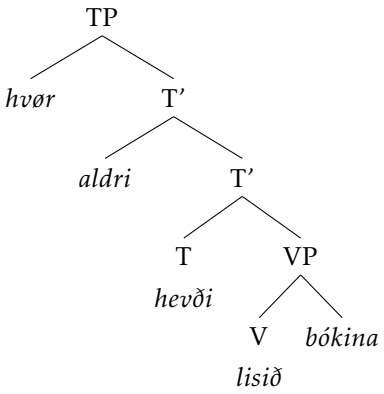
(273)


CP
C
TP
at
Jógvan
T'
T
vP
hevur
v'
aldri
VP
V
bókina
lisið

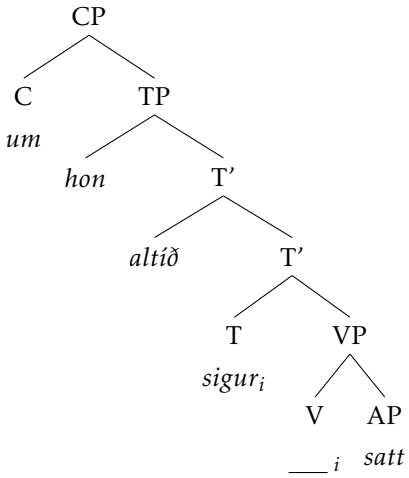
(274)


CP
C
TP
at
Jógvan
T'
aldri
T'
T
VP
hevur
V
bókina
lisið

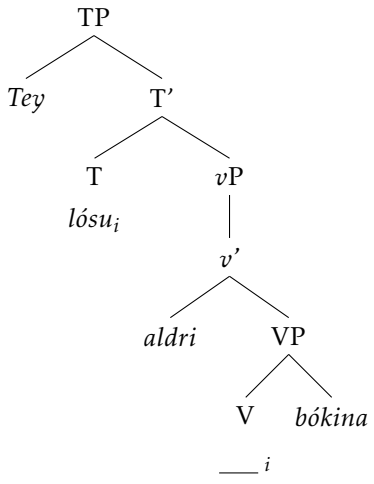
(275)


TP
hvør
T'
aldri
T'
T
VP
hevði
V
bókina
lisið

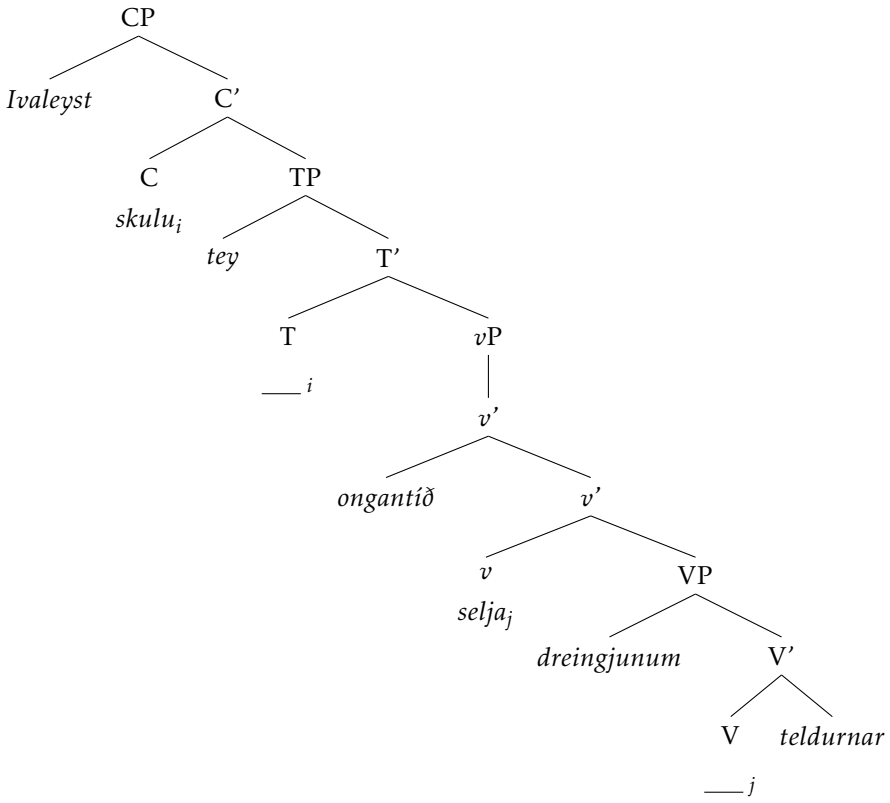
(276)


CP
C
TP
um
hon
T'
altíð
T'
T
VP
sigur$_i$
V
AP
___ $_i$
satt

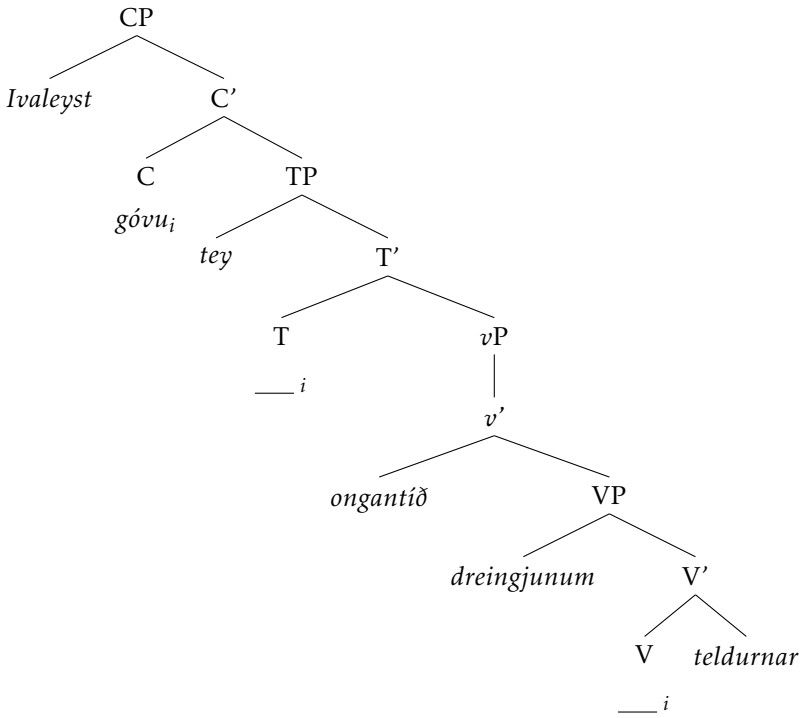
(277)


TP
Tey
T'
T
lósu$_i$
vP
v'
aldri
VP
V
bókina
___ i

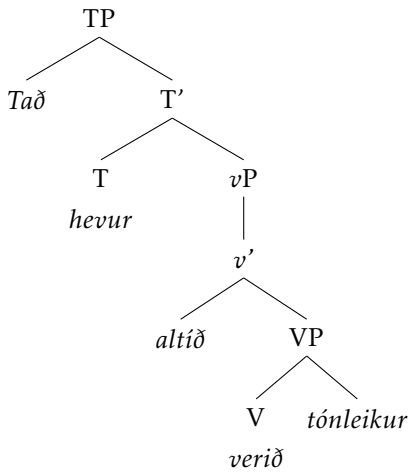
(278)


CP
Ivaleyst
C'
C
skulu$_i$
TP
tey
T'
T
___ i
vP
v'
ongantíð
v'
v
selja$_j$
VP
dreingjunum
V'
V
teldurnar
___ j

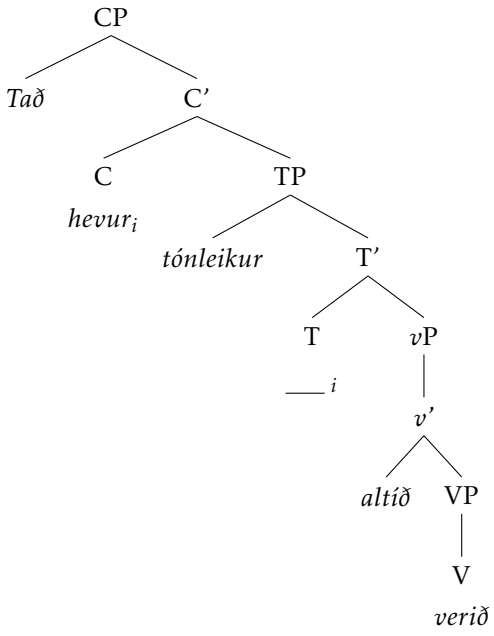
(279)


CP
Ivaleyst
C'
C
TP
góvu$_i$
tey
T'
T
vP
___ i
v'
ongantíð
VP
dreingjunum
V'
V
teldurnar
___ i

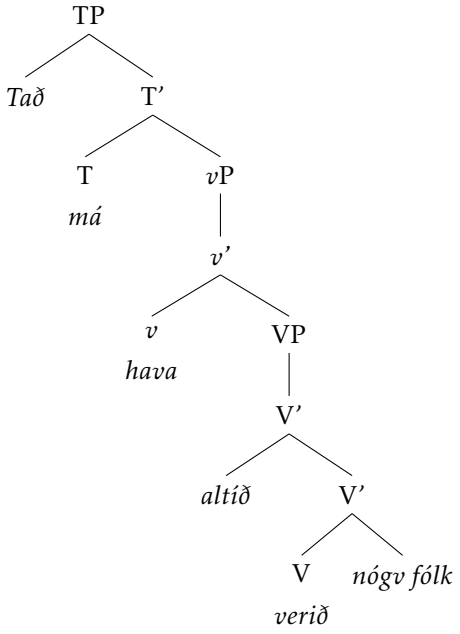
(280)


TP
Tað
T'
T
vP
hevur
v'
altíð
VP
V
tónleikur
verið

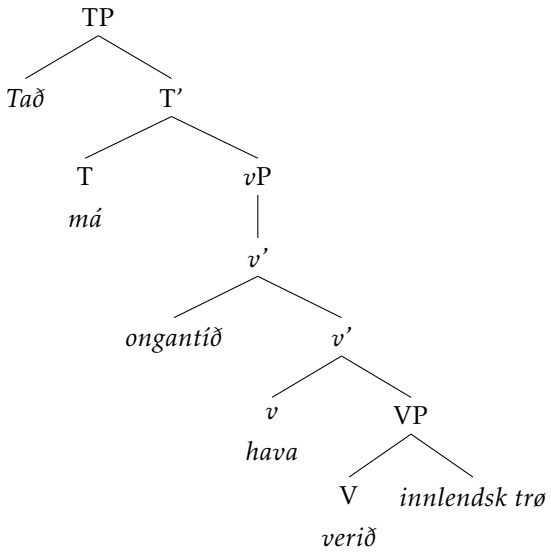
(281)


CP
Tað
C'
C
hevur$_i$
TP
tónleikur
T'
T
___ $_i$
vP
v'
altíð
VP
V
verið

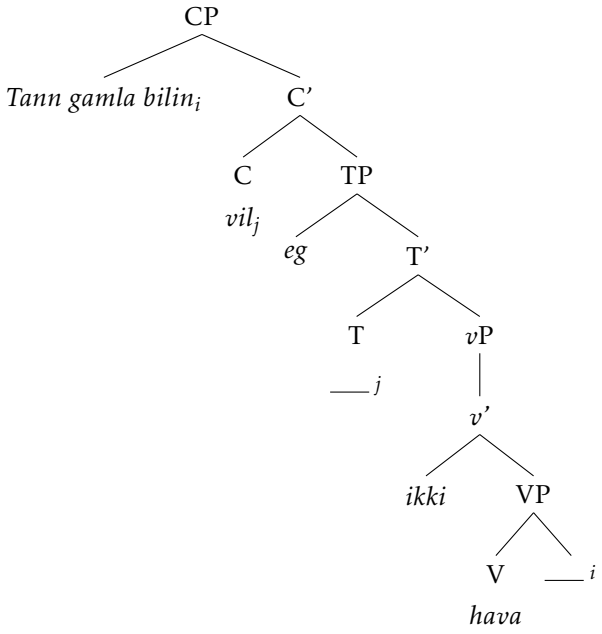
(282)


TP
Tað
T'
T
má
vP
v'
v
hava
VP
V'
altíð
V'
V
verið
nógv fólk

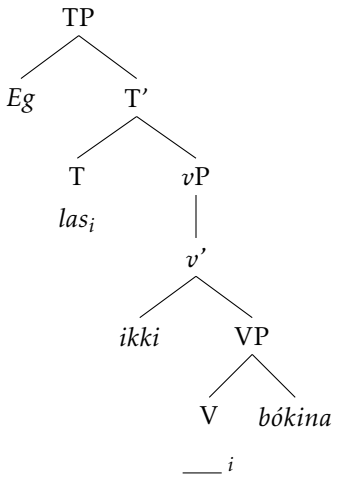
(283)


TP
Tað
T'
T
má
vP
v'
ongantíð
v'
v
hava
VP
V
innlendsk trø
verið

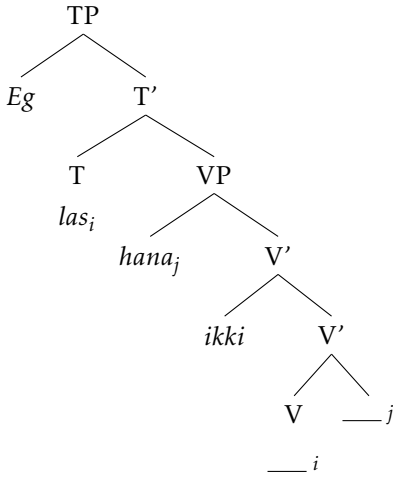
(284)


CP
Tann gamla bilin$_i$
C'
C
vil$_j$
TP
eg
T'
T
__ j
vP
v'
ikki
VP
V
__ i
hava

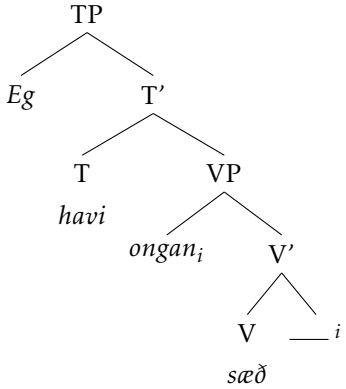
(285)


TP
Eg
T'
T
vP
las$_i$
v'
ikki
VP
V
bókina
___ i

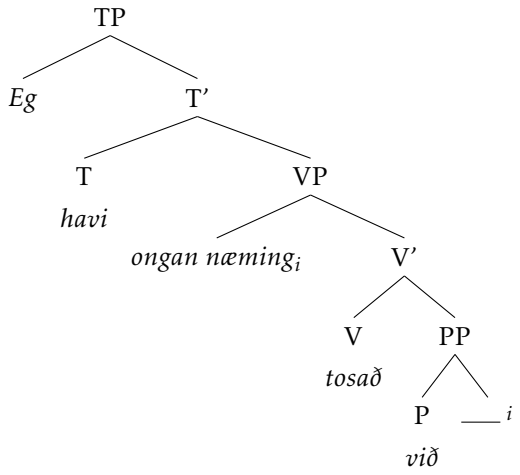
(286)


TP
Eg
T'
T
VP
las$_i$
hana$_j$
V'
ikki
V'
V
___ j
___ i

(287)


TP
Eg
T'
T
VP
havi
ongan$_i$
V'
V
___ i
sæð

(288)



Appendix B: Stimuli sentences for surveys

In the following appendices, the sentences presented for participants for judgement are listed with glosses and translations. Sentences are marked for mean acceptability. The data can be accessed at <https://purl.stanford.edu/nd533ns7207>.

Appendix B1: Faroese passive survey 1, no agent phrase

Table 9.3 shows the sentences presented to participants in the first Faroese passive survey, excluding filler.

Key to judgements: * = mean acceptability < 2.5, ?? = 2.5–3, ? = 3–4, (?) = 4–4.1, no mark = mean > 4

Table 9.3: **Faroese passive survey 1: sentences**

№	μ	σ	Faroese sentence	English translation
1	4.5	0.8	*Hon varð elskað* she.NOM was.SG loved.NOM.F.SG	'She was loved'
2	4.4	0.7	*Hann bleiv sæddur* he.NOM was.SG seen.NOM.M.SG	'He was seen'
3	4.4	0.9	*Breyðið varð etið* bread-the.NOM was.SG eaten.NOM.N.SG	'The bread was eaten'
4	4.2	1.1	*Hon bleiv gloymd* she.NOM was.SG forgotten.NOM.F.SG	'She was forgotten'
5	4.6	0.9	*Veggurin varð málaður* wall-the.NOM was.SG painted.NOM.M.SG	'The wall was painted'
6	4.9	0.3	*Hann bleiv sligin* he.NOM was.SG hit.NOM.M.SG	'He was hit'

7	4.5	0.8	*Hon varð sparkað* she.NOM was.SG kicked.NOM.F.SG	'She was kicked'
8	4.5	0.7	*Hon bleiv eygleidd* she.NOM was.SG watched.NOM.F.SG	'She was watched'
9	4.0	1.0	*(?)Bókin varð lisin* book-the.NOM was.SG read.NOM.F.SG	'The book was read'
10	4.5	1.0	*Har varð dansað alla náttina* EXPL was.SG danced.SUP all.ACC night.ACC	'There was danced all night'
11	2.5	1.0	*??Har bleiv sungið í kirkju* EXPL was.SG sung.SUP in church.DAT	'There was sung in church'
12	3.8	1.3	Þ *?Har varð drukkið í Irish Pub* EXPL was.SG drunk.SUP in Irish Pub	'There was drunk in the Irish Pub' [*well known pub in Tórshavn*]
13	3.5	1.2	Þ *?Har bleiv etið í Kaffihúsinum* EXPL was.SG eaten.SUP in coffee.house-the.DAT	'There was eaten at the Kaffihús' [*well known cafe in Tórshavn*]
14	3.7	1.3	Þ *?Har varð málað í Tilhaldinum* EXPL was.SG painted.SUP in Tilhaldið.DAT	'There was painted at Tilhaldið' [*well known community building in Tórshavn*]
15	1.1	0.3	**Har bleiv sligin* EXPL was.SG hit.NOM.M/F.SG	'There was hit'
16	3.8	1.2	Þ *?Har varð sparkað* EXPL was.SG kicked.SUP	'There was kicked'
17	4.0	1.1	*(?)Har bleiv lisið* EXPL was.SG read.SUP	'There was read'

Appendix B2: Faroese survey 2: passives with agent phrase & sentences with *tróta*

Table 9.4 shows the passive sentences presented in the second Faroese passive survey, excluding filler. The relatively high mean acceptability of the impersonal passive examples with 'eat' and 'drink' possibly results from respondents interpreting the prepositional phrase as meaning 'of all types', i.e. 'all types (of food/drink) were eaten/drunk'. Within the same survey, sentences involving the verb *tróta* 'exhaust, run out of' were also tested; these are shown in Table 9.5. All of the sentences with *tróta* were judged unacceptable.

Key to judgements: * = mean acceptability < 2.5, ?? = 2.5–3, ? = 3–4, no mark = mean > 4

Table 9.4: **Faroese survey 2: passive sentences**

№	μ	σ	Faroese sentence	English translation
1	4.3	0.7	*Hon varð elskað av øllum* she.NOM was.SG loved.NOM.F.SG by all.DAT	'She was loved by all'

2	3.3	1.0	*?Hann bleiv sæddur av gentuni* he.NOM was.SG seen.NOM.M.SG by girl-the.DAT	'He was seen by the girl'
3	2.9	1.4	B *??Breyðið varð etið av teimum* bread-the.NOM was.SG eaten.NOM.N.SG by them.DAT	'The bread was eaten by them'
4	3.3	1.3	B *?Hon bleiv gloymd av honum* she.NOM was.SG forgotten.NOM.F.SG by him.DAT	'She was forgotten by him'
5	3.1	1.2	B *?Veggurin varð málaður av teimum* wall-the.NOM was.SG painted.NOM.M.SG by them.DAT	'The wall was painted by them'
6	3.8	1.3	B *?Hann bleiv sligin av honum* he.NOM was.SG hit.NOM.M.SG by him.DAT	'He was hit by him'
7	3.2	1.4	B *?Hon varð sparkað av henni* she.NOM was.SG kicked.NOM.F.SG by her.DAT	'She was kicked by her'
8	3.7	1.2	B *?Hon bleiv eygleidd av honum í ein tíma* she.NOM was.SG watched.NOM.F.SG by him.DAT in one hour	'She was watched by him for an hour'
9	2.4	1.1	**Bókin varð lisin av teimum í ein tíma* book-the.NOM was.SG read.NOM.F.SG by them.DAT in one hour	'The book was read by them for an hour'
10	2.0	0.9	**Har varð dansað av øllum* EXPL was.SG danced.SUP by all.DAT	'There was danced by all'
11	2.3	1.3	**Har bleiv sungið av øllum* EXPL was.SG sung.SUP by all.DAT	'There was sung by all'
12	3.2	1.5	B *?Har varð drukkið av øllum* EXPL was.SG drunk.SUP by all.DAT	'There was drunk by all'
13	3.9	1.3	B *?Har bleiv etið av øllum* EXPL was.SG eaten.SUP by all.DAT	'There was eaten by all'
14	2.4	1.1	**Har varð málað av øllum* EXPL was.SG painted.SUP by all.DAT	'There was painted by all'
15	1.7	1.2	**Har bleiv sligin av honum* EXPL was.SG hit.NOM.M/F.SG by him.DAT	'There was hit by him'
16	1.6	0.9	**Har varð sparkað av teimum* EXPL was.SG kicked.SUP by them.DAT	'There was kicked by them'
17	2.3	1.0	**Har bleiv lisið av øllum* EXPL was.SG read.SUP by all.DAT	'There was read by all'

Table 9.5: **Faroese survey 2: *tróta* sentences**

№	μ	σ	Sentence	Case & Agr
1	2.2	1.2	**Eg snakkaði við hann, og hann segði, at honum trutu pengarnir, sum hann hevði fingið* I talked to him and he said that him.DAT exhausted.PL money-the.NOM.PL that he had got	DAT V NOM [+agr]
2	2.4	1.2	**Eg snakkaði við hann, og hann segði, at honum treyt pengarnir, sum hann hevði fingið* I talked to him and he said that him.DAT exhausted.SG money-the.NOM.PL that he had got	DAT V NOM [–agr]
3	1.8	1.2	**Eg snakkaði við hann, og hann segði, at honum trutu pengarnar, sum hann hevði fingið*	DAT V ACC

			I talked to him and he said that him.DAT exhausted.PL money-the.ACC.PL that he had got	[+agr]
4	2.3	1.3	**Eg snakkaði við hann, og hann segði, at honum treyt pengarnar, sum hann hevði fingið*	DAT V ACC
			I talked to him and he said that him.DAT exhausted.SG money-the.ACC.PL that he had got	[–agr]
5	2.3	1.0	**Eg snakkaði við hann, og hann segði, at pengarnir trutu honum*	NOM V DAT
			I talked to him and he said that money-the.NOM.PL exhausted.PL him.DAT	[+agr]
6	1.5	0.8	**Eg snakkaði við hann, og hann segði, at pengarnir treyt honum*	NOM V DAT
			I talked to him and he said that money-the.NOM.PL exhausted.SG him.DAT	[–agr]
7	2.3	1.1	**Eg snakkaði við hann, og hann segði, at pengarnar trutu honum*	ACC V DAT
			I talked to him and he said that money-the.ACC.PL exhausted.PL him.DAT	[+agr]
8	1.7	1.0	**Eg snakkaði við hann, og hann segði, at pengarnar treyt honum*	ACC V DAT
			I talked to him and he said that money-the.ACC.PL exhausted.SG him.DAT	[–agr]
9	1.8	0.9	**Viðvíkjandi hansara fíggarstøðu, tað tykist at honum trutu ognirnar, ið hann hevði fingið*	DAT V {N,A}
			regarding his finances it seems that him.DAT exhausted.PL assets-the.{N,A} that he had got	[+agr]
10	1.9	1.1	**Viðvíkjandi hansara fíggarstøðu, tað tykist at honum treyt ognirnar, ið hann hevði fingið*	DAT V {N,A}
			regarding his finances it seems that him.DAT exhausted.SG assets-the.{N,A} that he had got	[–agr]
11	1.6	1.0	**Viðvíkjandi hansara fíggarstøðu, tað tykist at honum treyt ognin, ið hann hevði fingið*	DAT V NOM
			regarding his finances it seems that him.DAT exhausted.SG asset-the.NOM that he had got	[?+agr]
12	1.7	0.9	**Viðvíkjandi hansara fíggarstøðu, tað tykist at honum treyt ognina, ið hann hevði fingið*	DAT V ACC
			regarding his finances it seems that him.DAT exhausted.SG asset-the.ACC that he had got	[–agr]
13	1.8	0.9	**Viðvíkjandi hansara fíggarstøðu, tað tykist at ognirnar trutu honum*	{N,A} V DAT
			regarding his finances it seems that assets-the.{N,A} exhausted.PL him.DAT	[+agr]
14	1.4	0.8	**Viðvíkjandi hansara fíggarstøðu, tað tykist at ognirnar treyt honum*	{N,A} V DAT
			regarding his finances it seems that assets-the.{N,A} exhausted.SG him.DAT	[–agr]
15	1.7	1.0	**Viðvíkjandi hansara fíggarstøðu, tað tykist at ognin treyt honum*	NOM V DAT
			regarding his finances it seems that asset-the.NOM exhausted.SG him.DAT	[?+agr]
16	1.3	0.6	**Viðvíkjandi hansara fíggarstøðu, tað tykist at ognina treyt honum*	ACC V DAT
			regarding his finances it seems that asset-the.ACC exhausted.PL him.DAT	[–agr]

Appendix B3: Faroese 'give' passive surveys

Table 9.6 shows the sentences presented in the Faroese 'give' passive surveys, excluding filler and the active forms with '*mann*'. In the Agreement column, agreement patterns in curly brackets are possibilities that exist due to ambiguous morphology, namely that the *–ar* participial suffix is the same for ACC.M.PL, NOM.F.PL and ACC.F.PL; there is also syncretism in the neuter, which has the same nominative and accusative nominal and participial forms in both singular and plural. When there is ambiguity as to which argument is the target of agreement, both possibilities are presented in the Agreement columnn; a question mark in the Agreement column indicates a mismatch in case or gender. As can be seen, none of these sentences were judged acceptable, although sentences 11 and 15 had mean acceptability between 3–4.

Key to abbreviations: Aux = auxiliary, X = expletive, Go = goal, Th = theme

Key to judgements: * = mean acceptability < 2.5, ?? = 2.5–3, ? = 3–4, no mark = mean > 4

Table 9.6: **Faroese 'give' passive surveys: sentences**

№	μ	σ	Sentence	Word order	Theme case	Agreement
1	2.0	1.2	**Monnunum varð givið tveir nýggir bátar* men-the.DAT.M.PL was.3SG given.SUP two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL The men were given two new boats	Go-V-Th	NOM	Default/3SG
2	1.9	1.2	**Monnunum varð givið tveir nýggjar bátar* men-the.DAT.M.PL was.3SG given.SUP two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL The men were given two new boats	Go-V-Th	ACC	Default/3SG
3	2.1	1.1	**Konunum vórðu givnir tveir nýggir bátar* women-the.DAT.F.PL were.3PL given.NOM.M.PL two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL The women were given two new boats	Go-V-Th	NOM	Th: NOM.M.PL
4	1.8	1.0	**Konunum vórðu givnar tveir nýggjar bátar* women-the.DAT.F.PL were.3PL given.{{N,A}.F.PL,ACC.M.PL} two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL The women were given two new boats	Go-V-Th	ACC	Th: ACC.M.PL Go: {?N,?A}.F.PL
5	1.8	1.0	**Konunum vórðu givnar tveir nýggir bátar* women-the.DAT.F.PL were.3PL given.{{N,A}.F.PL,ACC.M.PL} two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL The women were given two new boats	Go-V-Th	NOM	Go: {?N,?A}.F.PL Th: NOM.?F.PL
6	1.5	0.9	**Dreingjunum vórðu givnir tvey dýr klaver* boys-the.DAT.M.PL were.3PL given.NOM.M.PL two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL The boys were given two expensive pianos	Go-V-Th	{N,A}	Go: ?NOM.M.PL
7	2.4	1.2	**Dreingjunum vórðu givin tvey dýr klaver* boys-the.DAT.M.PL were.3PL given.{N,A}.N.PL two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL The boys were given two expensive pianos	Go-V-Th	{N,A}	Th: {N,A}.N.PL
8	1.5	0.7	**Dreingjunum varð givin tvey dýr klaver* boys-the.DAT.M.PL was.3SG given.{N,A}.N.PL two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL The boys were given two expensive pianos	Go-V-Th	{N,A}	Default/3SG + Th: {N,A}.N.PL
9	1.6	1.0	**Tveir nýggir bátar varð givið monnunum* two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL was.3SG given.SUP men-the.DAT.M.PL Two new boats were given (to) the men	Th-V-Go	NOM	Default/3SG

10	1.4	0.8	**Tveir nýggjar bátar varð givið monnunum* two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL was.3SG given.SUP men-the.DAT.M.PL Two new boats were given (to) the men	Th-V-Go	ACC	Default/3SG
11	3.3	1.2	*ℬ ?Tveir nýggir bátar vórðu givnir konunum* two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL were.3PL given.NOM.M.PL women-the.DAT.F.PL Two new boats were given (to) the women	Th-V-Go	NOM	Th: NOM.M.PL
12	2.1	1.3	**Tveir nýggir bátar vórðu givnar konunum* two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL were.3PL given.{{N,A}.F.PL,ACC.M.PL} women-the.DAT.F.PL Two new boats were given (to) the women	Th-V-Go	NOM	Go: {?N,?A}.F.PL Th: NOM.?F.PL
13	1.9	1.3	**Tveir nýggjar bátar vórðu givnar konunum* two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL were.3PL given.{{N,A}.F.PL,ACC.M.PL} women-the.DAT.F.PL Two new boats were given (to) the women	Th-V-Go	ACC	Th: ACC.M.PL Go: {?N,?A}.F.PL
14	1.5	0.8	**Tvey dýr klaver vórðu givnir dreingjunum* two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL were.3PL given.NOM.M.PL boys-the.DAT.M.PL Two expensive pianos were given (to) the boys	Th-V-Go	{N,A}	Go: ?NOM.M.PL
15	3.4	1.3	*ℬ ?Tvey dýr klaver vórðu givin dreingjunum* two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL were.3PL given.{N,A}.N.PL boys-the.DAT.M.PL Two expensive pianos were given (to) the boys	Th-V-Go	{N,A}	Th: {N,A}.N.PL
16	1.4	0.7	**Tvey dýr klaver varð givin dreingjunum* two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL was.3SG given.{N,A}.N.PL boys-the.DAT.M.PL Two expensive pianos were given (to) the boys	Th-V-Go	{N,A}	Default/3SG + Th: {N,A}.N.PL
17	1.5	0.8	**Tveir nýggir bátar varð monnunum givið* two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL was.3SG men-the.DAT.M.PL given.SUP Two new boats were (to) the men given	Th-Aux-Go-V	NOM	Default/3SG
18	1.3	0.6	**Tveir nýggjar bátar varð monnunum givið* two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL was.3SG men-the.DAT.M.PL given.SUP Two new boats were (to) the men given	Th-Aux-Go-V	ACC	Default/3SG
19	1.9	1.1	**Tveir nýggir bátar vórðu konunum givnir* two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL were.3PL women-the.DAT.F.PL given.NOM.M.PL Two new boats were (to) the women given	Th-Aux-Go-V	NOM	Th: NOM.M.PL

20	1.5	0.9	**Tveir nýggir bátar vórðu konunum givnar* two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL were.3PL women-the.DAT.F.PL given.{{N,A}.F.PL,ACC.M.PL} Two new boats were (to) the women given	Th-Aux-Go-V	NOM	Go: {?N,?A}.F.PL Th: NOM.?F.PL
21	1.3	0.5	**Tveir nýggjar bátar vórðu konunum givnar* two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL were.3PL women-the.DAT.F.PL given.{{N,A}.F.PL,ACC.M.PL} Two new boats were (to) the women given	Th-Aux-Go-V	ACC	Th: ACC.M.PL Go: {?N,?A}.F.PL
22	1.4	0.6	**Tvey dýr klaver vórðu dreingjunum givnir* two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL were.3PL boys-the.DAT.M.PL given.NOM.M.PL Two expensive pianos were (to) the boys given	Th-Aux-Go-V	{N,A}	Go: ?NOM.M.PL
23	2.0	0.9	**Tvey dýr klaver vórðu dreingjunum givin* two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL were.3PL boys-the.DAT.M.PL given.{N,A}.N.PL Two expensive pianos were (to) the boys given	Th-Aux-Go-V	{N,A}	Th: {N,A}.N.PL
24	1.2	0.5	**Tvey dýr klaver varð dreingjunum givin* two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL was.3SG boys-the.DAT.M.PL given.{N,A}.N.PL Two expensive pianos were (to) the boys given	Th-Aux-Go-V	{N,A}	Default/3SG + Th: {N,A}.N.PL
25	2.0	1.0	**Tað varð givið monnunum tveir nýggir bátar* EXPL was.3SG given.SUP men-the.DAT.M.PL two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL It was given (to) the men two new boats	X-V-Go-Th	NOM	Default/3SG
26	2.3	1.2	**Tað varð givið monnunum tveir nýggjar bátar* EXPL was.3SG given.SUP men-the.DAT.M.PL two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL It was given (to) the men two new boats	X-V-Go-Th	ACC	Default/3SG
27	2.2	1.1	**Tað vórðu givnir konunum tveir nýggir bátar* EXPL were.3PL given.NOM.M.PL women-the.DAT.F.PL two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL It was given (to) the women two new boats	X-V-Go-Th	NOM	Th: NOM.M.PL
28	1.8	0.9	**Tað vórðu givnar konunum tveir nýggir bátar* EXPL were.3PL given.{{N,A}.F.PL,ACC.M.PL} women-the.DAT.F.PL two.{N,A}.M new.NOM.M.PL boats.NOM.M.PL It was given (to) the women two new boats	X-V-Go-Th	NOM	Go: {?N,?A}.F.PL Th: NOM.?F.PL
29	1.7	0.8	**Tað vórðu givnar konunum tveir nýggjar bátar* EXPL were.3PL given.{{N,A}.F.PL,ACC.M.PL} women-the.DAT.F.PL two.{N,A}.M new.ACC.M.PL boats.ACC.M.PL It was given (to) the women two new boats	X-V-Go-Th	ACC	Go: {?N,?A}.F.PL Th: NOM.?F.PL
30	1.7	1.0	**Tað vórðu givnir dreingjunum tvey dýr klaver*	X-V-Go-Th	{N,A}	Go: ?NOM.M.PL

		EXPL were.3PL given.NOM.M.PL boys-the.DAT.M.PL two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL It was given (to) the boys two expensive pianos			
31	2.6 1.2	ℬ *??Það vórðu givin dreingjunum tvey dýr klaver* EXPL were.3PL given.{N,A}.N.PL boys-the.DAT.M.PL two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL It was given (to) the boys two expensive pianos	X-V-Go-Th	{N,A}	Th: {N,A}.N.PL
32	1.6 0.8	**Það varð givin dreingjunum tvey dýr klaver* EXPL was.3SG given.{N,A}.N.PL boys-the.DAT.M.PL two.{N,A}.N dear.{N,A}.N.PL pianos.{N,A}.N.PL It was given (to) the boys two expensive pianos	X-V-Go-Th	{N,A}	Default/3SG + Th: {N,A}.N.PL

Appendix B4: Icelandic 'give' passive & quirky case survey

Icelandic 'give' passive

Table 9.7 shows the sentences presented in the Icelandic 'give' passive survey. In the same way as for the Faroese 'give' passive survey, in the Agreement column a question mark indicates a mismatch in case or number. I have also notated dative intervention, i.e. when a dative argument intervenes between the participle and the target of agreement, with the phrase 'across DAT' in the Agreement column.

Key to abbreviations: Aux = auxiliary, X = expletive, Go = goal, Th = theme
Key to judgements: * = mean acceptability < 2.5, ?? = 2.5–3, ? = 3–4, no mark = mean > 4

Table 9.7: **Icelandic 'give' passive survey: sentences**

№	μ σ	Sentence	Word order	Theme case	Agreement
1	4.7 1.0	*Mönnunum voru gefnir tveir nýir bátar* men-the.DAT.M.PL were.3PL given.NOM.M.PL two.NOM.M new.NOM.M.PL boats.NOM.M.PL The men were given two new boats	Goal-V-Theme	NOM	Th: NOM.M.PL
2	1.0 0.0	**Mönnunum voru gefnir tvo nýja báta* men-the.DAT.M.PL were.3PL given.NOM.M.PL two.ACC.M new.ACC.M.PL boats.ACC.M.PL The men were given two new boats	Goal-V-Theme	ACC	Go: ?NOM.M.PL
3	1.0 0.0	**Mönnunum voru gefna tvo nýja báta* men-the.DAT.M.PL were.3PL given.ACC.M.PL two.ACC.M new.ACC.M.PL boats.ACC.M.PL	Goal-V-Theme	ACC	Th: ACC.M.PL

		The men were given two new boats			
4	1.4 1.1	**Mönnunum var gefið tveir nýir bátar* men-the.DAT.M.PL was.3SG given.SUP two.NOM.M new.NOM.M.PL boats.NOM.M.PL The men were given two new boats	Goal-V-Theme	NOM	Default/3SG
5	1.2 0.6	**Mönnunum voru gefnum tveir nýir bátar* men-the.DAT.M.PL were.3PL given.DAT.M.PL two.NOM.M new.NOM.M.PL boats.NOM.M.PL The men were given two new boats	Goal-V-Theme	NOM	Go: DAT.M.PL
6	4.3 1.0	*Tveir nýir bátar voru gefnir mönnunum* two.NOM.M new.NOM.M.PL boats.NOM.M.PL were.3PL given.NOM.M.PL men-the.DAT.M.PL Two new boats were given (to) the men	Theme-V-Goal	NOM	Th: NOM.M.PL
7	1.0 0.0	**Tvo nýja báta voru gefnir mönnunum* two.ACC.M new.ACC.M.PL boats.ACC.M.PL were.3PL given.NOM.M.PL men-the.DAT.M.PL Two new boats were given (to) the men	Theme-V-Goal	ACC	Go: ?NOM.M.PL
8	1.1 0.3	**Tvo nýja báta voru gefna mönnunum* two.ACC.M new.ACC.M.PL boats.ACC.M.PL were.3PL given.ACC.M.PL men-the.DAT.M.PL Two new boats were given (to) the men	Theme-V-Goal	ACC	Th: ACC.M.PL
9	1.1 0.4	**Tveir nýir bátar var gefið mönnunum* two.NOM.M new.NOM.M.PL boats.NOM.M.PL was.3SG given.SUP men-the.DAT.M.PL Two new boats were given (to) the men	Theme-V-Goal	NOM	Default/3SG
10	1.3 0.8	**Tveir nýir bátar voru gefnum mönnunum* two.NOM.M new.NOM.M.PL boats.NOM.M.PL were.3PL given.DAT.M.PL men-the.DAT.M.PL Two new boats were given (to) the men	Theme-V-Goal	NOM	Go: DAT.M.PL
11	3.3 1.5	ℬ *?Tveir nýir bátar voru mönnunum gefnir* two.NOM.M new.NOM.M.PL boats.NOM.M.PL were.3PL men-the.DAT.M.PL given.NOM.M.PL Two new boats were (to) the men given	Th-Aux-Go-V	NOM	Th: NOM.M.PL across DAT
12	1.1 0.4	**Tvo nýja báta voru mönnunum gefnir* two.ACC.M new.ACC.M.PL boats.ACC.M.PL were.3PL men-the.DAT.M.PL given.NOM.M.PL Two new boats were (to) the men given	Th-Aux-Go-V	ACC	Go: ?NOM.M.PL
13	1.0 0.0	**Tvo nýja báta voru mönnunum gefna*	Th-Aux-Go-V	ACC	Th: ACC.M.PL

		two.acc.m new.acc.m.pl boats.acc.m.pl were.3pl men-the.dat.m.pl given.acc.m.pl Two new boats were (to) the men given			across dat
14	1.4	1.1	**Tveir nýir bátar var mönnunum gefið* two.nom.m new.nom.m.pl boats.nom.m.pl was.3sg men-the.dat.m.pl given.sup Two new boats were (to) the men given	Th-Aux-Go-V	nom	Default/3sg across dat
15	1.1	0.3	**Tveir nýir bátar voru mönnunum gefnum* two.nom.m new.nom.m.pl boats.nom.m.pl were.3pl men-the.dat.m.pl given.dat.m.pl Two new boats were (to) the men given	Th-Aux-Go-V	nom	Go: dat.m.pl
16	2.1	1.4	**Það voru tveir nýir bátar mönnunum gefnir* expl were.3pl two.nom.m new.nom.m.pl boats.nom.m.pl men-the.dat.m.pl given.nom.m.pl It was two new boats (to) the men given	X-Th-Go-V	nom	Th: nom.m.pl across dat
17	1.1	0.3	**Það voru tvo nýja báta mönnunum gefnir* expl were.3pl two.acc.m new.acc.m.pl boats.acc.m.pl men-the.dat.m.pl given.nom.m.pl It was two new boats (to) the men given	X-Th-Go-V	acc	Go: ?nom.m.pl
18	1.0	0.0	**Það voru tvo nýja báta mönnunum gefna* expl were.3pl two.acc.m new.acc.m.pl boats.acc.m.pl men-the.dat.m.pl given.acc.m.pl It was two new boats (to) the men given	X-Th-Go-V	acc	Th: acc.m.pl across dat
19	1.1	0.3	**Það var tveir nýir bátar mönnunum gefið* expl was.3sg two.nom.m new.nom.m.pl boats.nom.m.pl men-the.dat.m.pl given.sup It was two new boats (to) the men given	X-Th-Go-V	nom	Default/3sg across dat
20	1.3	0.8	**Það voru tveir nýir bátar mönnunum gefnum* expl were.3pl two.nom.m new.nom.m.pl boats.nom.m.pl men-the.dat.m.pl given.dat.m.pl It was two new boats (to) the men given	X-Th-Go-V	nom	Go: dat.m.pl
21	1.5	1.1	**Það voru mönnunum tveir nýir bátar gefnir* expl were.3pl men-the.dat.m.pl two.nom.m new.nom.m.pl boats.nom.m.pl given.nom.m.pl It was (to) the men two new boats given	X-Go-Th-V	nom	Th: nom.m.pl
22	1.1	0.3	**Það voru mönnunum tvo nýja báta gefnir* expl were.3pl men-the.dat.m.pl two.acc.m new.acc.m.pl boats.acc.m.pl given.nom.m.pl It was (to) the men two new boats given	X-Go-Th-V	acc	Go: ?nom.m.pl
23	1.0	0.0	**Það voru mönnunum tvo nýja báta gefna*	X-Go-Th-V	acc	Th: acc.m.pl

		EXPL were.3PL men-the.DAT.M.PL TWO.ACC.M new.ACC.M.PL boats.ACC.M.PL given.acc.m.pl It was (to) the men two new boats given			
24	1.0 0.0	**Það var mönnunum tveir nýir bátar gefið* EXPL was.3SG men-the.DAT.M.PL TWO.NOM.M new.NOM.M.PL boats.NOM.M.PL given.sup It was (to) the men two new boats given	X-Go-Th-V	NOM	Default/3SG
25	1.0 0.0	**Það voru mönnunum tveir nýir bátar gefnum* EXPL were.3PL men-the.DAT.M.PL TWO.NOM.M new.NOM.M.PL boats.NOM.M.PL given.dat.m.pl It was (to) the men two new boats given	X-Go-Th-V	NOM	Go: DAT.M.PL
26	2.1 1.4	**Það voru gefnir mönnunum tveir nýir bátar* EXPL were.3PL given.nom.m.pl men-the.DAT.M.PL TWO.NOM.M new.NOM.M.PL boats.NOM.M.PL It was given (to) the men two new boats	X-V-Go-Th	NOM	Th: NOM.M.PL across DAT
27	1.1 0.3	**Það voru gefnir mönnunum tvo nýja báta* EXPL were.3PL given.nom.m.pl men-the.DAT.M.PL TWO.ACC.M new.ACC.M.PL boats.ACC.M.PL It was given (to) the men two new boats	X-V-Go-Th	ACC	Go: ?NOM.M.PL
28	1.0 0.0	**Það voru gefna mönnunum tvo nýja báta* EXPL were.3PL given.acc.m.pl men-the.DAT.M.PL TWO.ACC.M new.ACC.M.PL boats.ACC.M.PL It was given (to) the men two new boats	X-V-Go-Th	ACC	Th: ACC.M.PL across DAT
29	1.1 0.4	**Það var gefið mönnunum tveir nýir bátar* EXPL was.3SG given.sup men-the.DAT.M.PL TWO.NOM.M new.NOM.M.PL boats.NOM.M.PL It was given (to) the men two new boats	X-V-Go-Th	NOM	Default/3SG across DAT
30	1.0 0.0	**Það voru gefnum mönnunum tveir nýir bátar* EXPL were.3PL given.dat.m.pl men-the.DAT.M.PL TWO.NOM.M new.NOM.M.PL boats.NOM.M.PL It was given (to) the men two new boats	X-V-Go-Th	NOM	Go: DAT.M.PL
31	3.2 1.6	𝔅 *?Það voru tveir nýir bátar gefnir mönnunum* EXPL were.3PL TWO.NOM.M new.NOM.M.PL boats.NOM.M.PL given.nom.m.pl men-the.DAT.M.PL It was two new boats given (to) the men	X-Th-V-Go	NOM	Th: NOM.M.PL
32	1.0 0.0	**Það voru tvo nýja báta gefnir mönnunum* EXPL were.3PL TWO.ACC.M new.ACC.M.PL boats.ACC.M.PL given.nom.m.pl men-the.DAT.M.PL It was two new boats given (to) the men	X-Th-V-Go	ACC	Go: ?NOM.M.PL
33	1.1 0.5	**Það voru tvo nýja báta gefna mönnunum*	X-Th-V-Go	ACC	Th: ACC.M.PL

		EXPL were.3PL two.ACC.M new.ACC.M.PL boats.ACC.M.PL given.acc.m.pl men-the.DAT.M.PL It was two new boats given (to) the men			
34	1.0 0.0	**Það var tveir nýir bátar gefið mönnunum* EXPL was.3PL two.NOM.M new.NOM.M.PL boats.NOM.M.PL given.sup men-the.DAT.M.PL It was two new boats given (to) the men	X-Th-V-Go	NOM	Default/3SG
35	1.1 0.4	**Það voru tveir nýir bátar gefnum mönnunum* EXPL were.3PL two.NOM.M new.NOM.M.PL boats.NOM.M.PL given.dat.m.pl men-the.DAT.M.PL It was two new boats given (to) the men	X-Th-V-Go	NOM	Go: DAT.M.PL

Icelandic dative-subject verbs

The 54 sentences shown in Table 9.8 involving dative-subject predicates were tested in the same Icelandic survey as the sentences in Table 9.7.

Key to judgements: * = mean acceptability < 2.5, ?? = 2.5–3, ? = 3–4, (?) = 4–4.1, no mark = mean > 4.1

Table 9.8: **Icelandic quirky case verbs survey**

№	μ	σ	SENTENCE
1	2.5	1.4	B *??Mér líkaði ekki þessir hestar* Me.DAT.SG liked.SG not these.NOM.M.PL horses.NOM.M.PL
2	2.2	1.3	**Mér líkaði þessir hestar ekki* Me.DAT.SG liked.SG these.NOM.M.PL horses.NOM.M.PL not
3	4.4	1.2	*Mér líkuðu ekki þessir hestar* Me.DAT.SG liked.PL not these.NOM.M.PL horses.NOM.M.PL
4	4.1	1.3	*(?)Mér líkuðu þessir hestar ekki* Me.DAT.SG liked.PL these.NOM.M.PL horses.NOM.M.PL not
5	1.5	0.7	**Mér líkaði ekki þeir* Me.DAT.SG liked.SG not they.NOM.M.PL
6	2.7	1.5	B *??Mér líkaði þeir ekki* Me.DAT.SG liked.SG they.NOM.M.PL not
7	2.3	1.2	**Mér líkuðu ekki þeir* Me.DAT.SG liked.PL not they.NOM.M.PL
8	4.1	1.4	*Mér líkuðu þeir ekki* Me.DAT.SG liked.PL they.NOM.M.PL not
9	1.2	0.6	**Það líkaði mér ekki þessir hestar* EXPL liked.SG me.DAT.SG not these.NOM.M.PL horses.NOM.M.PL

10	1.2	0.6	**Það líkuðu mér ekki þessir hestar* EXPL liked.PL me.DAT.SG not these.NOM.M.PL horses.NOM.M.PL
11	1.1	0.3	**Það líkaði mér ekki þeir* EXPL liked.SG me.DAT.SG not they.NOM.M.PL
12	1.1	0.3	**Það líkaði mér þeir ekki* EXPL liked.SG me.DAT.SG they.NOM.M.PL not
13	1.1	0.3	**Það líkuðu mér ekki þeir* EXPL liked.PL me.DAT.SG not they.NOM.M.PL
14	1.1	0.3	**Það líkuðu mér þeir ekki* EXPL liked.PL me.DAT.SG they.NOM.M.PL not
15	1.8	1.6	**Það hafa bara einum nemanda líkað þessar hugmyndir* EXPL have.3PL only one.DAT.M.SG student.DAT.M.SG liked these.NOM.F.PL ideas.NOM.F.PL
16	4.3	1.4	*Það hefur bara einum nemanda líkað þessar hugmyndir* EXPL has.3SG only one.DAT.M.SG student.DAT.M.SG liked these.NOM.F.PL ideas.NOM.F.PL
17	4.2	1.5	*Honum hafa alltaf líkað þessar hugmyndir* Him.DAT.M.SG have.3PL always liked these.NOM.F.PL ideas.NOM.F.PL
18	3.5	1.5	ʁ *?Honum hefur alltaf líkað þessar hugmyndir* Him.DAT.M.SG has.3SG always liked these.NOM.F.PL ideas.NOM.F.PL
19	1.4	0.8	**Það líka honum þessar hugmyndir* EXPL like.3PL him.DAT.M.SG these.NOM.F.PL ideas.NOM.F.PL
20	1.3	0.6	**Það líkar honum þessar hugmyndir* EXPL likes.3SG him.DAT.M.SG these.NOM.F.PL ideas.NOM.F.PL
			Áður en ég heyrði Siggu syngja... Before that I.NOM.SG heard.SG Sigga.ACC.F.SG sing.INF
21	2.2	1.3	*...*hafði mér enginn söngvari líkað* had.SG me.DAT.SG no.NOM.M.SG singerNOM.M.SG liked
22	1.4	0.8	*...*hafði mér líkað enginn söngvari* had.SG me.DAT.SG liked no.NOM.M.SG singer.NOM.M.SG
23	1.6	0.9	*...*hafði mér líkað engin lög* had.SG me.DAT.SG liked no.NOM.N.PL songs.NOM.N.PL
24	2.3	1.3	*...*hafði mér engin lög líkað* had.SG me.DAT.SG no.NOM.N.PL songs.NOM.N.PL liked
25	1.5	0.9	*...*höfðu mér líkað engin lög* had.PL me.DAT.SG liked no.NOM.N.PL songs.NOM.N.PL
26	2.9	1.3	ʁ *...??höfðu mér engin lög líkað* had.PL me.DAT.SG no.NOM.N.PL songs.NOM.N.PL liked
27	2.3	1.2	*...*hafði mér aldrei neinn söngvari líkað* had.SG me.DAT.SG never any.NOM.M.SG singer.NOM.M.SG liked
28	4.4	1.1	*...hafði mér aldrei líkað neinn söngvari*

			had.SG me.DAT.SG never liked any.NOM.M.SG singer.NOM.M.SG
29	1.2	0.6	...**hafði mér neinn söngvari aldrei líkað*
			had.SG me.DAT.SG any.NOM.M.SG singer.NOM.M.SG never liked
30	1.4	1.1	...**hafði mér líkað aldrei neinn söngvari*
			had.SG me.DAT.SG liked never any.NOM.M.SG singer.NOM.M.SG
31	2.0	1.2	...**hafði mér aldrei nein lög líkað*
			had.SG me.DAT.SG never any.NOM.N.PL songs.NOM.N.PL liked
32	3.5	1.3	Þ ...*?hafði mér aldrei líkað nein lög*
			had.SG me.DAT.SG never liked any.NOM.N.PL songs.NOM.N.PL
33	1.1	0.4	...**hafði mér nein lög aldrei líkað*
			had.SG me.DAT.SG any.NOM.N.PL songs.NOM.N.PL never liked
34	1.3	0.8	...**hafði mér líkað aldrei nein lög*
			had.SG me.DAT.SG liked never any.NOM.N.PL songs.NOM.N.PL
35	2.1	1.1	...**höfðu mér aldrei nein lög líkað*
			had.PL me.DAT.SG never any.NOM.N.PL songs.NOM.N.PL liked
36	4.2	1.2	...*höfðu mér aldrei líkað nein lög*
			had.PL me.DAT.SG never liked any.NOM.N.PL songs.NOM.N.PL
37	1.2	0.4	...**höfðu mér nein lög aldrei líkað*
			had.PL me.DAT.SG any.NOM.N.PL songs.NOM.N.PL never liked
38	1.8	1.3	...**höfðu mér líkað aldrei nein lög*
			had.PL me.DAT.SG liked never any.NOM.N.PL songs.NOM.N.PL
			Áður en þeir heyrðu Siggu syngja...
			Before that they.NOM.M.PL heard.PL Sigga.ACC.F.SG sing.INF
39	1.9	1.1	...**hafði þeim eflaust aldrei nein lög líkað*
			had.SG them.DAT.M.PL doubtless never any.NOM.N.PL songs.NOM.N.PL liked
40	3.3	1.3	Þ ...*?hafði þeim eflaust aldrei líkað nein lög*
			had.SG them.DAT.M.PL doubtless never liked any.NOM.N.PL songs.NOM.N.PL
41	1.1	0.5	...**hafði þeim eflaust nein lög aldrei líkað*
			had.SG them.DAT.M.PL doubtless any.NOM.N.PL songs.NOM.N.PL never liked
42	1.4	0.9	...**hafði þeim eflaust líkað aldrei nein lög*
			had.SG them.DAT.M.PL doubtless liked never any.NOM.N.PL songs.NOM.N.PL
43	2.1	1.3	...**höfðu þeim eflaust aldrei nein lög líkað*
			had.PL them.DAT.M.PL doubtless never any.NOM.N.PL songs.NOM.N.PL liked
44	3.2	1.7	Þ ...*?höfðu þeim eflaust aldrei líkað nein lög*
			had.PL them.DAT.M.PL doubtless never liked any.NOM.N.PL songs.NOM.N.PL
45	1.1	0.3	...**höfðu þeim eflaust nein lög aldrei líkað*
			had.PL them.DAT.M.PL doubtless any.NOM.N.PL songs.NOM.N.PL never liked
46	1.0	0.0	...**höfðu þeim eflaust líkað aldrei nein lög*
			had.PL them.DAT.M.PL doubtless liked never any.NOM.N.PL songs.NOM.N.PL
			Vegna þess að þær hafa aldrei horft á fótboltaleik áður...

			Because they.NOM.F.PL have.3PL never watched on football.match.ACC.M.SG before
47	1.2	0.4	...**gæti þeim hafa aldrei neinir leikmenn líkað*
			must.SG them.DAT.F.PL have.INF never any.NOM.M.PL players.NOM.M.PL liked
48	1.5	0.9	...**gæti þeim hafa aldrei líkað neinir leikmenn*
			must.SG them.DAT.F.PL have.INF never liked any.NOM.M.PL players.NOM.M.PL
49	1.5	0.9	...**gæti þeim aldrei hafa neinir leikmenn líkað*
			must.SG them.DAT.F.PL never have.INF any.NOM.M.PL players.NOM.M.PL liked
50	3.5	1.7	ʔ ...*?gæti þeim aldrei hafa líkað neinir leikmenn*
			must.SG them.DAT.F.PL never have.INF liked any.NOM.M.PL players.NOM.M.PL
51	1.3	0.8	...**gætu þeim hafa aldrei neinir leikmenn líkað*
			must.PL them.DAT.F.PL have.INF never any.NOM.M.PL players.NOM.M.PL liked
52	1.8	1.3	...**gætu þeim hafa aldrei líkað neinir leikmenn*
			must.PL them.DAT.F.PL have.INF never liked any.NOM.M.PL players.NOM.M.PL
53	1.4	0.7	...**gætu þeim aldrei hafa neinir leikmenn líkað*
			must.PL them.DAT.F.PL never have.INF any.NOM.M.PL players.NOM.M.PL liked
54	3.3	1.6	ʔ ...*?gætu þeim aldrei hafa líkað neinir leikmenn*
			must.PL them.DAT.F.PL never have.INF liked any.NOM.M.PL players.NOM.M.PL

Appendix B5: Faroese ditransitive passive survey, verbs other than 'give'

Table 9.9 shows the sentences presented in the survey on Faroese ditransitive passives with verbs other than 'give'. Unfortunately, the incorrect case inflection of *pensiónir* 'pensions' was tested in the examples with *veita* 'bestow, grant': for intended NOM.PL *–ir* the form GEN.SG *–ar* was used. Other confounds exist with *veita*, since the verb itself is infrequent and one speaker commented that the word *eftirløn* 'pension' was more acceptable than the Danish loanword *pensión*.

Key to judgements: * = mean acceptability < 2.5, ?? = 2.5–3, ? = 3–4, no mark = mean > 4

Table 9.9: **Faroese ditransitive passive survey, verbs other than 'give': sentences**

№	μ	σ	Sentence	Word order
1	4.5	0.9	*Absalon trýr, at teir seldu sjómonnunum bátin* Absalon believes that they.NOM sold seamen-the.DAT boat-the.ACC 'Absalon believes that they sold the seamen the boat'	Agent-Goal-Theme
2	2.2	1.4	**Ása trýr, at pensiónar vórðu veittar monnunum* Ása believes that pensions.*GEN.SG were.PL bestowed.NOM.F.PL men-the.DAT 'Ása believes that pensions were granted to the men'	Theme-Goal
3	4.9	0.3	*Bogi segði, at báturin varð seldur í gjár* Bogi said that boat-the.NOM was.SG sold.NOM.M.SG yesterday 'Bogi said that the boat was sold yesterday'	Theme only
4	1.3	0.6	**Edvard trúði, at sjómonnunum varð seldur báturin* Edward believed that seamen-the.DAT was.SG sold.NOM.M.SG boat-the.NOM 'Edward believed that the seamen were sold the boat'	Goal-Theme
5	3.6	1.4	ℬ *?Eg haldi, at pengar vórðu lovaðir gentunum* I think that money.NOM were.PL promised.NOM.M.PL girls-the.DAT 'I think that the money was promised to the girls'	Theme-Goal
6	3.8	1.0	*?Eg hoyrdi, at Bjarni flutti pengarnar yvir til bankan* I heard that Bjarni.NOM moved.SG money-the.ACC over to bank-the.ACC 'I heard that Bjarni transferred the money to the bank'	Agent-Theme-Goal
7	4.4	1.1	*Eg sá, at Jógvan handaði konuni pennin* I saw that John.NOM handed.SG woman-the.DAT pen-the.ACC 'I saw that John handed the woman the pen'	Agent-Goal-Theme
8	3.2	1.1	ℬ *?Eg segði teimum, at vit buðu monnunum bilettir* I said them that we.NOM offered.PL men-the.DAT tickets.ACC 'I said to them that we offered the men tickets'	Agent-Goal-Theme
9	3.6	1.3	ℬ *?Elinborg helt, at teldurnar blivu læntar gentuni* Elinborg thought that computers-the.NOM were.PL lent.NOM.F.PL girl-the.DAT 'Elinborg thought that the computers were lent to the girl'	Theme-Goal
10	3.5	1.2	ℬ *?Erla gloymdi, at bøkurnar vórðu vístar dreinginum* Erla forgot that books-the.NOM were.PL shown.NOM.F.PL boy-the.DAT 'Erla forgot that the books were shown to the boy'	Theme-Goal
11	1.7	0.9	**Finnur helt, at dreinginum vórðu vístir pennarnir* Finnur thought that boy-the.DAT were.PL shown.NOM.M.PL pens-the.NOM 'Finnur thought that the boy was shown the pens'	Goal-Theme
12	1.1	0.4	**Gerda heldur, at gentuni bleiv lænt teldan* Gerda thinks that girl-the.DAT was.SG lent.NOM.F.SG computer-the.NOM 'Gerda thinks that the girl was lent the computer'	Goal-Theme
13	2.9	1.6	ℬ *??Guðrið segði, at gentunum vórðu lovaðir pengar* Guðrið said that girls-the.DAT were.PL promised.NOM.M.PL money.NOM 'Guðrið said that the girls were promised money'	Goal-Theme
14	2.4	1.5	**Hákun gloymdi, at pensiónar vórðu veittar í fjør* Hákun forgot that pensions.*GEN.SG were.PL granted.NOM.F.PL last year	Theme only

			'Hákun forgot that pensions were granted last year'	
15	4.5	1.1	*Hann heldur, at Sigmundur vísti dreinginum bókina* he thinks that Sigmund.NOM showed.SG boy-the.DAT book-the.ACC 'He thinks that Sigmund showed the boy the book'	Agent-Goal-Theme
16	2.7	0.9	*??Hann segði mær, at skjølini blivu handað fyri 2 minuttir síðani* he said me that files-the.NOM were.PL handed.NOM.N.PL for 2 minutes ago 'He said to me that the files were handed two minutes ago'	Theme only
17	4.4	0.9	*Henný gloymdi, at teldan bleiv lænt í fjør* Henný forgot that computer-the.NOM was.SG lent.NOM.F.SG last year 'Henný forgot that the computer was lent last year'	Theme only
18	4.0	1.0	*Jákup trúði, at hesir pengarnir vórðu lovaðir í fjør* Jacob believed that these.NOM money-the.NOM were.PL promised.NOM.M.PL last year 'Jacob believed that this money was promised last year'	Theme only
19	1.6	1.2	**Johann helt, at bankanum blivu yvirfluttir pengarnir* Johann thought that bank-the.DAT were.PL transferred.NOM.M.PL money-the.NOM 'Johann thought that the money was transferred to the bank'	Goal-Theme
20	4.6	0.6	*Jónvør heldur, at báturin varð seldur sjómonnunum* Jónvør thinks that boat-the.NOM was.SG sold.NOM.M.SG seamen-the.DAT 'Jónvør thinks that the boat was sold to the seamen'	Theme-Goal
21	3.9	0.9	*?Katrin segði, at húsið varð víst í gjár* Katrin said that house-the.NOM was.SG shown.NOM.N.SG yesterday 'Katrin said that the house was shown yesterday'	Theme only
22	2.0	1.3	**Oddmar sigur, at monnunum blivu bjóðaðar bilettirnar* Oddmar says that men-the.DAT were.PL offered.NOM.F.PL tickets-the.NOM 'Oddmar says that the men were offered the tickets'	Goal-Theme
23	2.1	1.2	**Pætur helt, at monnunum vórðu veittar pensiónar* Peter thought that men-the.DAT were.PL bestowed.NOM.F.PL pensions.*GEN.SG 'Peter thought that the men were granted pensions'	Goal-Theme
24	3.5	1.3	Ɓ *?Rógvi heldur, at bilettirnar blivu bodnar konunum* EXPL was.SG read.SUP by all.DAT 'Rógvi thinks that the tickets were offered to the women'	Theme-Goal
25	4.8	0.4	*Súsanna segði, at hon lænti gentuni telduna* Susanna said that she.NOM lent.SG girl-the.DAT computer-the.ACC 'Susanna said that she lent the girl the computer'	Agent-Goal-Theme
26	3.5	1.2	Ɓ *?Teir sóu, at pengarnir blivu yvirfluttir í fjør* they saw that money-the.NOM were.PL transferred.NOM.M.PL last year 'They saw that the money was transferred last year'	Theme only
27	1.6	0.7	**Tey søgdu, at konuni bleiv handaður pennurin* they said that woman-the.DAT was.SG handed.NOM.M.SG pen-the.NOM 'They said that the woman was handed the pen'	Goal-Theme
28	3.5	1.3	Ɓ *?Tit gloymdu, at pengarnir blivu yvirfluttir til bankan.* you.PL forgot that money-the.NOM were.SG transferred.NOM.M.PL to bank-the.ACC	Theme-Goal

			'You forgot that the money was transferred to the bank'	
29	4.8	0.4	*Uni helt, at tær lovaðu gentunum pengar* Uni thought that they.NOM.F.PL promised.PL girls-the.DAT money.ACC 'Uni thought that they promised the girls money'	Agent-Goal-Theme
30	2.3	1.4	**Vit hoyrdu, at stjórnin veitti monnunum pensiónar* we heard that boss-the.NOM bestowed.SG men-the.DAT pensions.*GEN.SG 'We heard that the boss granted the men pensions'	Agent-Goal-Theme
31	3.8	1.2	𝔅 *?Vit sóu, at pennurin bleiv handaður konuni* we saw that pen-the.NOM was.SG handed.NOM.M.SG girl-the.DAT 'We saw that the pen was handed to the woman'	Theme-Goal