

Abstract

This paper presents a new analysis of quirky subjects according to which quirky subjects bear multiple grammatical relations and hence differ syntactically from regular subjects. This contrasts with the standard analysis of quirky subjects according to which quirky subjects are regular subjects bearing lexical case and therefore differ only morphologically from regular subjects. Based on the behavior of quirky subjects in Faroese and German, I argue that the syntactic account is superior. Faroese shows that the case borne by a quirky subject is not lexical, whereas German shows that quirky subjects are not regular subjects to begin with. The behavior of quirky subjects in Icelandic, on which the standard analysis is based, is argued to be the result of a morphosyntactic peculiarity of Icelandic

1 The Standard Analysis of Quirky Subjects

Quirky subjects is the term used to refer to constructions where a subject bears unexpected (“quirky”) case, namely some object case instead of the expected nominative case.¹ Two examples from Icelandic are given in (1).

- (1) a. Jóni líkar þessi bók. b. Þeim var hjálpað.
Jón.DAT likes this book.NOM they.DAT was helped
‘Jón likes this book.’ ‘They were helped.’

Example (1a) illustrates a lexically determined quirky subject, example (1b) a quirky subject resulting from passivization. I will refer to the former as *lexical quirks*, and to the latter as *passive quirks*. The standard analysis for quirky subjects rests on the idea that they are regular subjects to which non-structural, lexical case is assigned. In (1a) the verb *líka* assigns lexical dative case to its subject *Jón*, in (1b) it is the verb *hjálpa* that assigns lexical dative case to its object. The dative case on the object is preserved after promotion of the object to subject in (1b) because lexically assigned case cannot be overwritten. Calling this analysis the standard analysis is due to its acceptance by virtually all grammar frameworks. Originally developed within LFG on the basis of Icelandic (Zaenen et al. 1985), it is adopted by LFG up to this day (Schätzle et al. 2015; Willgohe & Farrell 2009), as well as by HPSG (Bouma 1992; Sag et al. 1992), GB/Minimalism (Jónsson 1996, 2003; Sigurðsson 1989, 1992; Þráinsson 2007), and Construction Grammar (Barðdal 2006; Barðdal & Eyþórsson 2012).

[†] Many thanks to the anonymous reviewers of this paper, as well as the referees and the audience of HEADLEX16 (especially Miriam Butt, Joan Maling, and Manfred Sailer) for their comments and suggestions. A warning to the reader. There is only little of HPSG or LFG in this paper. This is due to the fact that the paper was submitted to a pre-conference workshop on the representation of grammatical functions, which was later included into the main session.

¹ For reasons of space, the status of the nominative object will be ignored throughout the paper.

This paper argues that despite this overall agreement across frameworks, the standard analysis is inadequate. It suffers from two defects. The first defect is that it confounds general aspects of the syntax of quirky subjects with language particular properties of Icelandic. I will show that the presence of lexical quirks neither goes along with the presence of passive quirks nor with the preservation of quirky case on lexical quirks. The second defect of the standard analysis is that it treats quirky subjects as subjects only. Yet in some languages quirky subjects show an inconsistent behavior, passing some subjects tests, but not all. The alternative analysis I will argue for is a revised version of the Relational Grammar analysis according to which quirky subjects are underlying subjects but surface objects. This analysis neither entails the existence of passive quirks nor case preservation nor a consistent behavior of quirky subjects vis-à-vis subject tests. These properties, which are found only in Icelandic, are argued to follow from a language particular property. The paper is structured as follows. I first review the evidence for the subject status of quirky subjects in section 2. In section 3, I present data from Faroese and German that the standard analysis cannot capture. In section 4, I present the alternative relational analysis and introduce some general technicalities. In section 5, I apply this analysis to Icelandic, Faroese, and German and argue that the differences between the three languages reduce to language particular requirements independent of, but with consequences for, quirky subject constructions. Section 6 concludes this paper.

2 Quirky Subjects and Subjecthood

The reason for analyzing quirky subject constructions as clauses containing a subject instead of impersonal clauses is that quirky subjects pass subject tests. Four well-known subject tests are control, reflexivization, subject-to-subject raising, and subject-to-object raising (ECM). Quirky subjects in Icelandic pass all these tests, cf. (2)-(5).

- (2) a. Jón_i vonast til að [PRO_i líka þessi bók].
 Jón hopes PREP to like this book
 ‘Jón hopes to like this book.’
 b. Ég_i vonast til að [PRO_i vera hjálpað].
 I hopes PREP to become helped
 ‘I hope to be helped.’
- (3) Henni_i leiðist bókin sín_i. (4) Ólaf_i virtist [t_i hafa leiðst].
 her.DAT bores book REFL Ólaf.DAT seemed have bored
 ‘She finds her book boring.’ ‘Olaf seemed to be bored.’
- (5) a. Hann telur Jón_i [t_i líka þessi bók].
 he believes Jón.DAT like this book
 ‘He believes Jón to like this book.’

- b. Hann telur Jóni_i [t_i hafa verið hjálpað].
 he believes Jón.DAT have become helped
 ‘He believes Jón to have been helped.’

The raising data in (4) and (5) are of special relevance for the standard analysis. They show that quirky subjects preserve their case under raising, in contrast to nominative case marked subjects, which lose their case under raising, cf. (6).

- (6) a. Guðrún saknar Haraldar.
 Guðrún.NOM misses Harald
 ‘Guðrún misses Harald.’
 b. Ég taldi Guðrúnu_i í barnaskap mínum [t_i sakna Haraldar].
 I believed Guðrún.ACC in foolishness my to.miss Harald
 ‘I believed Guðrún in my foolishness to miss Harald.’

The only subject test quirky subjects do not pass is verb agreement. The verb either agrees with the nominative marked nominal or, in case no nominative marked nominal is present, bears default third person marking.

- (7) a. Henni höfðu / *hafði ekki líkað hestarnir.
 she.DAT had.3.PL had.3.SG not liked horses
 ‘She had not liked the horses.’
 b. Mér verður / *verð ekki kalt.
 I.DAT will.3.SG will.1.SG not cold
 ‘I will not be cold.’

3 Problems for the Standard Analysis

In this section I present data from quirky subject constructions in Faroese (taken from Barnes 2001: chapter 4) and German which show that their properties cannot be captured by the standard analysis of quirky subjects as regular subjects bearing lexical case.

3.1 Quirky Subjects in Faroese

Similar to Icelandic, Faroese possesses lexical quirks passing subject tests like reflexivization and control.

- (8) a. Mær dámar mjólkina.
 I.DAT likes milk
 ‘I like milk.’
 b. Kjartani_i dámar væl nýggja bil sín_i.
 Kjartin.DAT likes well new car REFL
 ‘Kjartin likes his new car.’
 c. Hann_i royndi at [PRO_i dáma matin].
 he tried to like food
 ‘He tried to like the food.’

Quirky subjects in Faroese differ from those in Icelandic in two ways that are, however, unexpected under the standard analysis. The first difference is that the case of lexical quirks is not preserved under raising.

- (9) a. Jógvani tørvaði ein nýggjan bil.
 Jógvan.DAT needed a new car
 ‘Jógvan needed a new car.’
 b. Eg helt Jógvan_i [_i tørva ein nýggjan bil].
 I believed Jógvan.ACC need a new car
 ‘I believed Jógvan to need a new car.’

There is a confounding factor that needs to be excluded, namely that example (9b) is based on nominative subjects. This option suggests itself because quirky subjects tend to be replaced by nominative subjects in present day Faroese (Jónsson & Eyþórsson 2005: 227; Þráinsson et al. 2004: §5.4.2.1 & §7.6.2). Example (10) shows this for the verb *dáma* from example (8).

- (10) Eg dámi ikki tvøst.
 I.NOM like not whale.meat
 ‘I don’t like whale meat.’

But this option can be excluded because the verb *tørva* from (9) only allows dative-marked subjects even in modern Faroese (Þráinsson et al. 2004: 255). The second difference is that Faroese does not possess passive quirks. Instead, lexically case marked objects are promoted to nominative subjects.

- (11) √Eg / *mær verði hjálpin.
 I.NOM I.DAT become helped
 ‘I am helped.’

There is again a confounding factor because not all dative marked objects can be promoted to nominative marked subjects (Þráinsson et al. 2004: §5.4.4).

- | | |
|---|---|
| <p>(12) a. Teir takkaðu honum.
 they thanked he.DAT
 ‘They thanked him.’
 b. Honum bleiv takkað.
 he.DAT was thanked
 c. *Hann bleiv takkaður.
 he.NOM was thanked
 ‘He was thanked.’</p> | <p>(13) a. Tey trúðu henni.
 they believed she.DAT
 ‘They believed her.’
 b. Henni bleiv trúð.
 she.DAT was believed
 c. *Hon varð trúð.
 she.NOM was believed
 ‘She was believed.’</p> |
|---|---|

This could be taken as evidence that Faroese has some passive quirks but what seems more likely is that it only shows that certain datives fail to undergo passivization, a situation well-known from German.

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|--|--|
| <p>(14) a. Sie danken ihm.
 they thanked he.DAT
 ‘They thanked him.’</p> | <p>(15) a. Sie glauben ihr.
 they believed she.DAT
 ‘They believed her.’</p> |
|--|--|

- | | | | | | |
|-------------------|--------|----------|---------------------|--------|-----------|
| b. Ihm | wird | gedankt. | b. Ihr | wurde | geglaubt. |
| he.DAT | was | thanked | she.DAT | was | believed |
| c.*Er | bekam | gedankt. | c.*Sie | bekam | geglaubt. |
| he.NOM | became | thanked | she.NOM | became | believed |
| 'He was thanked.' | | | 'She was believed.' | | |

The problem then posed by Faroese is that it possesses quirky, non-nominative subjects whose properties differ in an unexpected way from Icelandic: their case can be overwritten. Moreover, Faroese lack passive quirks and promotes dative marked objects to nominative subjects in passives. Consequently, the dative borne by quirky subjects is not lexical. But if dative case is not lexical, then quirky subjects cannot be defined as subjects bearing lexical case.

3.2 Quirky Subjects in German

German too possesses constructions that look like lexical quirks.

- (16) Mir gefällt der Mann.
 I.DAT likes the man
 'I like the man.'

The first problem with German is that subject tests give conflicting results for the subject status of the dative nominal in (16). It cannot be controlled nor undergo raising to object (no matter what case it bears after raising) indicating that it is not a subject, cf. (17), but it can control itself an empty subject and bind a reflexive, indicating that it *is* a subject, cf. (18).

- (17) a.*Ich_i versuche [PRO_i der Mann zu gefallen].
 I try the man to like
 'I try to like the man.'
 b.*Ich sehe ihm_i / ihn_i [t_i der Mann gefallen].
 I see he.DAT he.ACC the man like
 'I see that he likes the man.'
- (18) a. Jedem_i gefiel das Buch [ohne PRO_i es gelesen zu haben].
 everyone.DAT liked the book without it read to have
 'Everyone liked the book without having read it.'
 b. Ihnen_i gefällt es miteinander_i.
 they.DAT likes it with.each.other
 'They enjoy each other.'

The two sets of tests really test for subjects. The ungrammaticality of the examples in (17) is irreducible to a semantic constraint requiring the controlled subject to be agentive. This becomes apparent when *gefallen* is replaced with the synonymous verb *mögen*, whose subject is equally non-agentive but bears nominative case. Sentences based on *mögen* instead of *gefallen* are fine.

- (19) a. Ich_i versuche [PRO_i den Mann zu mögen].
 I try the man to like
 ‘I try to like the man.’
 b. Ich sehe ihn_i [t_i den Mann mögen].
 I see he.ACC the man like
 ‘I see that he likes the man.’

Likewise, the grammaticality of the examples in (18) is not due to their dative marking for datives usually cannot control empty subjects or bind reflexives.

- (20) a. *Ich helfe jedem_i [ohne PRO_i danach gefragt zu haben].
 I help everyone.DAT without thereafter asked to have
 ‘I help everyone without that he asked for that.’
 b. *Ich habe den Ärzten_i einander_i empfohlen.
 I have the doctors.DAT each.other.ACC recommended
 ‘I have recommended the doctors to each other.’

The second problem posed by German is that clauses resembling passive quirks in German (cf. 21) pass no subject test whatsoever (cf. 22).

- (21) Jedem wurde geholfen.
 everyone.DAT became helped
 ‘Everyone was helped.’
 (22) a. *Er_i hofft [PRO_i geholfen zu werden].
 he hopes helped to become
 ‘They hope to be helped.’
 b. *Ich sehe jedem_i [t_i geholfen werden].
 I see everyone.DAT helped become
 ‘I see that everyone is helped.’
 c. *Jedem_i wird geholfen [ohne PRO_i es zu wollen].
 everyone.DAT becomes helped without it to want
 ‘Everyone is helped without wanting it.’
 d. *Den Ärzten_i wurde einander_i empfohlen.
 the doctors.DAT became each.other.ACC recommended
 ‘The doctors were recommended to each other.’

The contrast between (22) and (17)-(18) indicates that constructions superficially resembling passive quirks are impersonal clauses. This is a problem for the standard analysis of quirky subjects because it equates subject with the first argument. Since the examples in (21) and (16) both contain such a first argument bearing lexical case, both should behave identically.² This mismatch has not gone unnoticed in the literature and two strategies have been adopted to deal with it. According to one strategy, German lacks quirky subjects (Bayer 2004; Haider 2010; Müller 2008; Sigurðsson 2002). According to the other,

² This implicit assumption is found in section 5 of Zaenen et al. (1985), where it is argued on the behavior of passive quirks only that German lacks quirky subjects altogether.

German does have quirky subject construction identical to Icelandic (Barðdal 2006; Barðdal & Eypórssón 2003). Neither strategy is satisfactory. The first cannot explain why lexical quirks pass some subject tests, whereas the second cannot explain why they don't pass all subject tests. Moreover, both strategies fail to account for the absence of passive quirks in German.

3.3 Interim Conclusion and Outlook

The main result from this section is that a language can have quirky subjects but not behave like Icelandic. Faroese has lexical quirks whose case is not preserved under raising, and it lacks passive quirks. German too lacks passive quirks and its lexical quirks don't pass all subject tests. Such a state of affairs is a serious problem for the standard analysis because the Icelandic pattern is a consequence of the analysis of quirky subjects. To solve this problem, two routes can be taken. The first route is to take the properties of quirky subject constructions in Icelandic as definitional. So in order for some quirky subject like construction to count as a real quirky subject construction, it has to behave like Icelandic quirky subjects. Otherwise, it is not a quirky subject construction. This line of reasoning is not only implicitly assumed in most of the literature on German, it is also explicitly adopted in Willgoß & Farrell (2009: 640). The other route is to reject the premise that Icelandic is the prime example for quirky subject constructions and entertain the possibility that the properties of the Icelandic quirky subject construction result from the interaction of language particular properties with universal aspects of quirky subjects. It is the second route that I take in this paper.³

4 An Arc Pair Grammar Analysis of Quirky Subjects

4.1 Quirky Subject Constructions as Inversions

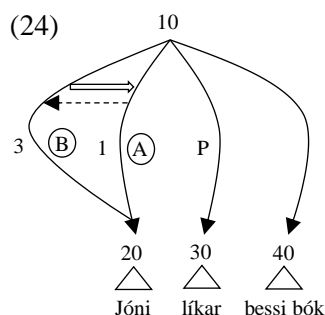
My analysis of quirky subjects is couched within the Arc Pair Grammar framework (Aissen 1987; Johnson & Postal 2013; Pankau 2013), a successor of Relational Grammar (Blake 1990; Perlmutter 1983; Perlmutter & Rosen 1984; Postal & Joseph 1990). The analysis is a modified version of the original Relational Grammar analysis, according to which quirky subjects result from an operation called *inversion*, cf. (23) & (24).⁴

(23) *Inversion Analysis of Quirky Subjects*

Quirky subjects are underlying subjects and surface indirect objects

³ The idea that Icelandic quirky subjects are not prototypical instances of quirky subjects was already foreseen in Davies (1988), which also suggested that Icelandic subject tests are sensitive to working 1s instead of final 1s (cf. §4.2). Unfortunately, the paper did not present an analysis for Icelandic comprising these insights. The present paper can be seen as taking this second step.

⁴ This term is due to Harris (1980), who adopted it from traditional Georgian grammar; cf. Moore & Perlmutter (2000) for an overview of the research on quirky subjects in Relational Grammar.



Arc Pair Grammar inherits the idea of Relational Grammar that grammatical relations are primitive. The grammatical relation of a constituent is indicated through an *R-sign* attached to the edge the constituent appears at (1=subject, 2=direct object, 3=indirect object, P=predicate). The resulting objects are called *arcs*. In (24), the nominal *Jóni* is a subject qua its R-sign 1 and is said to *head* a 1-arc, the verb *líkar* is the predicate qua its R-sign P and *heads* a P-arc; and so

forth. Unlabeled edges indicate arcs whose relational status is ignored. Circled letters are of no linguistic relevance but simply names for arcs. The structure in (24) also shows that Arc Pair Grammar features multidominance, called *overlapping*. So arc A and arc B overlap. In (24), this expresses that *Jóni* is both a subject and an indirect object.⁵ One innovation of Arc Pair Grammar is the idea that there are two metarelations between arcs, namely *Sponsor* and *Erase*, represented by a dotted arrow and a double arrow, respectively. Sponsor expresses the idea that an arc depends on the existence of another arc. In (24), that A, the 1-arc, sponsors B, the 3-arc, means that the nominal *Jóni* is first a subject and then an indirect object. Erase expresses the idea that the morphological invisibility of an arc is due to the visibility of another arc. In (24), this means that B, the 3-arc, determines case marking and not A, the 1-arc. Not all arcs are sponsored and not all arcs erased. Unsponsored arcs are called *initial* arcs, arcs not sponsoring any further arc are called *final* arcs⁶, and unerased arcs are called *output* arcs. The P-arc in (24) is both an initial, a final, and an output arc; the 1-arc is only an initial arc; and the 3-arc is a final and an output arc. The sponsor pair (A, B) is special in that it involves overlapping arcs. The sponsored arc is then called *successor* whereas the sponsoring arc is called *predecessor*. If the two arcs share the same tail node, the sponsored arc is a *L(ocal)-successor* and the sponsoring arc a *L(ocal)-predecessor*. If not, the sponsored arc is a *F(oreign)-successor* and the sponsoring arc a *F(oreign)-predecessor*. In (24), B is an L-successor of A, and A an L-predecessor of B. My relational analysis of quirky subjects differs from the traditional one in one detail Relational Grammar assumed that this R-sign of the final object arc is always 3 so that quirky subjects are always indirect objects and always bear dative case. This constraint is too strict because in Icelandic (25), Faroese (26), and German (27), quirky subjects can also bear other object cases.⁷

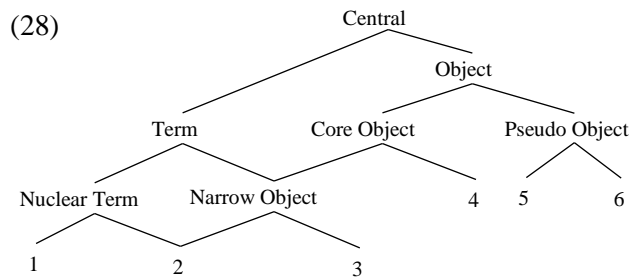
⁵ Arc Pair Grammar is multistratal but not transformational. Although it assumes that some constituent can bear multiple relations, this is expressed in a *single* object via overlapping arcs.

⁶ For reasons that I lack space to elucidate, I deviate here from standard assumptions (Johnson & Postal 1980; Postal 2010) according to which final arcs are also output arcs.

⁷ In Faroese, the genitive is extinct in the modern spoken language, and is in decline in German, so that genitive marked quirky subjects are absent from both languages.

- (25) a. Bátinn rak á land. b. Verkjanna gætir ekki.
boat.ACC drifted to land pains.GEN is.noticeable not
‘The boat drifted to shore.’ ‘The pains are not noticeable.’
- (26) Meg nøtrar í holdið. (27) Mich friert/dürstet.
I.ACC shudders in flesh I.ACC freezes/is.thirsty
‘I shudder.’ ‘I am cold/thirsty.’

The set of surface relations borne by quirky subjects must hence also include object relations other than the indirect object relation. The proposal I make regarding the class of object relations borne by quirky subjects builds on a modified version of Postal’s (2010: 72) taxonomy of *primitive* object relations.



Based on this taxonomy, the following class of *defined* object relations can be given.

- (29) Strict Object = Central - Nuclear Term

This set contains all central relations minus the nuclear term relations, that is, the resulting set contains indirect objects (=3), subobjects (=4), semiobjects (=5), and quasiobjects (=6). Semiobjects will be ignored throughout this paper. Quasiobjects correspond to genitive marked objects, subobjects correspond to non-adverbial accusative marked NPs. Due to their accusative case, subobjects are often conflated with direct objects. But they differ from direct objects in that they cannot be passivized⁸ nor form middles in English (Postal 2010: 57-60) or German (Pankau 2013: 232).

- (30) a. *Milk is not given by snakes. b. *Milk gives frequently.
- (31) a. *Milch wird täglich gegeben. b. *Milch gibt sich leicht.
milk becomes daily given milk gives REFL easy.
‘They give milk daily.’ ‘It is easy to give milk.’

Moreover, subobjects in German cannot undergo raising in constructions with the raising verbs *sein* or *gehören* implying a necessity (Pankau 2013: 235-6).

⁸ The constraint on non-passivizability applies to all subobjects in German, be they single objects or objects in double object constructions (Pankau 2013: 234). In English, they resist passivization only as single objects but not in double object constructions (Postal 2010: chapter 7).

- Since quirky subjects bearing accusative case also fail to undergo object raising and raising with *sein* and *gehören*, I analyze them as subobjects as well.

- Accordingly, I suggest the following revised inversion analysis for quirky subjects, cf. (34) & (35).

- (35)
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- The diagram illustrates a node '10' at the top, which branches into three paths leading to nodes '20', '30', and '40'. To the left of node '10' is a vertical list containing the numbers 3, 4, 5, and 6. A horizontal arrow points from this list towards node '10'. Below this arrow, there are two boxes: a small one labeled '1' and a larger one labeled 'P'. The paths from node '10' to '20', '30', and '40' are labeled with these boxes, indicating a change in grammatical relation.
- The crucial difference between my analysis and the standard analysis is that my analysis characterizes quirky subject constructions as constructions involving a change in grammatical relation and not by some exceptional case assignment. This is in sharp contrast to the standard analysis, where only exceptional case assignment is involved.

In order to develop the relational analyses for the three language, some background ideas of Arc Pair Grammar are needed.

(36)

(37)

The second idea needed is the notion of *working nuclear term*. This notion allows one to refer to nominals that are nuclear term arcs but not necessarily final nuclear terms, cf. (38).

(38) *Working Nuclear Term*

A working nuclear term is any final central arc R-sponsor-linked to a nuclear term arc

The definition mentions the defined relation *R-sponsor-linked* holding between two arcs. If two arcs A and B are sponsor-linked, then either A sponsors B or B sponsors A. The prefix ‘R’ indicates the ancestral of any relation (Johnson & Postal 1980: 25), turning it into a reflexive and transitive relation. Consequently, if A is R-sponsor-linked to B, then either A is sponsor-linked to B, or A is identical to B, or A is sponsor-linked to C and C is sponsor-linked to B, and so on. Since nuclear term arcs comprise 1-arc and 2-arcs, the notion working nuclear term consequently comprises *working 1s* and *working 2s*. In the relational literature, the necessity of working 1s has long been recognized (Dziwirek 1994; González 1988; Legendre 1994; Perlmutter 1984; Rosen & Wali 1989), whereas working 2s have not figured prominently (Berinstein 1986). In this paper, only working 1s are relevant. Crucially, an instance of a working 1 is the 3-arc in (24): it is a final central arc, namely a 3-arc, and it is R-sponsor-linked to a 1-arc, namely to its 1-arc predecessor. It is also important to note that working 1s also comprise final 1s: a final 1 is a final central arc and it is R-sponsor-linked to a 1, namely to itself (via reflexivity of the ancestral). In contrast to this, the demoted subject in a passive clause (cf. 36 & 37) does *not* head a working 1: the final 8-arc it heads is not a central arc, whereas the 1-arc it heads is a central arc, but not a final one. So although working 1s pick out a broader class of subjects than final 1s, they do *not* pick out *any* 1-arc sponsoring another arc. Grammatical relation changing operations affecting subjects will therefore not necessarily result in working 1s.

The third idea needed is the distinction between *laws* and *rules*. Laws and rules are formally identical – both are stated as implications – but differ in scope: rules are language specific whereas laws apply to all languages. Two important laws are given in (39) & (40).

(39) *Unique Eraser Law*

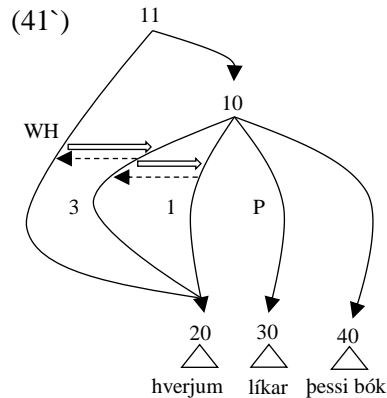
If A is erased by B and by C, then $B = C$

(40) *Single Mother Law*

No constituent can head more than one unerased arc

The first law says that no arc can have more than one eraser. The second law guarantees that a nominal bearing multiple grammatical relations will surface only with one of these relations. The third law required regulates case marking. In connection to (24) I said that the 3-arc determines case marking because it is unerased. But this is not fully correct. Consider in this respect example (41) whose structure is provided in (41').

- (41) Hverjum líkar þessi bók?
 who.DAT likes this book
 ‘Who likes this book?’



In (41), the quirky subject is wh-extracted. Extractions in Arc Pair Grammar are analyzed as unique grammatical relations, called *overlay* relations. In (41`), the interrogative pronoun *hverjum* heads an initial 1-arc sponsoring a 3-arc and an overlay arc with the R-sign *WH* erasing the 3-arc. But even though the 3-arc is erased, it still determines dative case on the interrogative pronoun. So case marking references a specific type of unerased arc, which is called *shallow arc*.

- (42) *Shallow Arc*

A shallow arc is any argumental arc that is not erased or erased by an overlay successor

Argumental arcs comprise object and oblique arcs, but crucially not overlay arcs. Shallow arcs are then defined as argumental arcs that are either unerased or erased by a successor that is an overlay arc. The 3-arc in (41`) satisfies the definition of shallow arc: although erased it is erased by a successor, it is erased by an overlay arc, namely the WH-arc. With this, the third law can be given.

- (43) *Case Marking Law*

Case marking is determined by shallow arcs only

The one rule needed in this paper applies to Icelandic and Faroese, both having a rather fixed word order regulated by surface grammatical relations (Þráinsson 2007; Þráinsson et al. 2004). Since surface grammatical relations correspond to final arcs in Arc Pair Grammar, I suggest the following rule.

- (44) *Final Arc Word Order Rule (Icelandic & Faroese)*

Final arcs determine word order

5 Quirky Subjects Reconsidered

My relational analysis for the behavior of quirky subjects in Icelandic, Faroese, and German rests on two ideas. First, only lexical quirks are typical quirky subjects. Case preservation and the presence of passive quirks are properties independent of quirky subjects proper and due to language particular rules. Second, subject tests do not reference necessarily final 1s, but also working 1s or output 1s. Languages then differ with respect to which type of subjecthood (working 1, final 1, output 1 etc.) is referenced by which subject test.

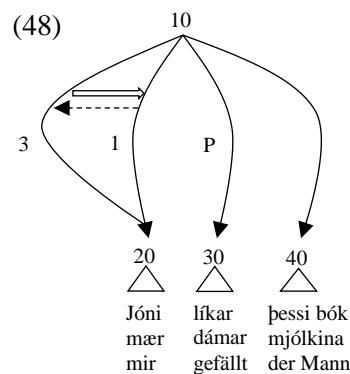
5.1 Lexical Quirkies

The structure for lexical quirkies in Icelandic (45), Faroese (46), and German (47) is identical in all three languages: they all feature inversion, cf. (48).

(45) Jóni líkar þessi bók.
Jón.DAT likes this book
'Jón likes this book.'

(46) Mær dámar mjólkina.
I.DAT likes milk
'I like milk.'

(47) Mir gefällt der Mann.
I.DAT likes the man
'I like the man.'



The analysis in (48) is straightforward. Each clause features inversion as presented in section 4.1, that is, an initial subject is demoted to a strict object. Since the structure for lexical quirkies is identical across the three languages, something else must be responsible for the different behavior vis-à-vis subject tests. The analysis I suggest for this is that more subject tests in Icelandic and Faroese reference working 1s than in German.

(49) *Subject Tests in Icelandic & Faroese*

- (i) A reflexive is anteceded by a nominal heading a working 1
- (ii) A controller nominal is a nominal heading a working 1
- (iii) A controlled nominal is a nominal heading a working 1
- (iv) A raising target is a nominal heading a working 1
- (v) Finite verbs agree with a nominal heading an output 1

(50) *Subject Tests in German*

- (i) A reflexive is anteceded by a nominal heading a working 1
- (ii) A controller nominal is a nominal heading a working 1
- (iii) A controlled nominal is a nominal heading a final 1
- (iv) A raising target is a nominal heading a final 1
- (v) Finite verbs agree with a nominal heading an output 1

Recall from section 4.2 that working 1s comprise final 1s and final strict object arcs R-sponsor-linked to a 1-arc. The former option corresponds to regular nominative marked subjects, as they head final 1-arcs. The latter option corresponds to quirky subjects because they head final strict object arcs R-sponsor-linked to a 1-arc. Consequently, the 3-arc in (48) counts as a working 1 as well. Since reflexivization is sensitive to nominals heading a working 1 in all three languages, reflexives can be anteceded by a regular nominative subject but also by a quirky subject. Similarly, a controller nominal is required

to head a working 1 in all three languages, so both regular nominative subjects and quirky subjects make licit controller nominals in the three languages. However, whereas a controlled nominal can head a working 1 in Icelandic and Faroese, it has to head a final 1 in German. This captures that only regular nominative subjects can be controlled nominals in German, whereas also quirky subjects can be controlled nominals in Icelandic and Faroese. Similarly for raising: only nominals heading a final 1 are licit raising targets in German, thereby excluding quirky subjects from undergoing raising. Importantly, this account solves the problem why raising of a lexical quirky is impossible in German no matter what case the raised lexical quirky bears after raising (cf. 17b): the lexical quirky is simply not a licit raising target to begin with. In Icelandic and Faroese, on the other hand, nominals heading a working 1 can be raised and hence also quirky subjects can undergo raising. Note that verb agreement is sensitive to nominals heading output 1s in all three languages, capturing that only regular nominative subjects trigger verb agreement in all three languages.

5.2 Case Preservation under Raising

I just said that both Icelandic and Faroese allow for raising of quirky subjects because raising is sensitive to nominals heading working 1s in these two languages. If so, then something else must be responsible for the fact that the case of the quirky subject is preserved under raising in Icelandic (cf. 51) but not Faroese (cf. 52).

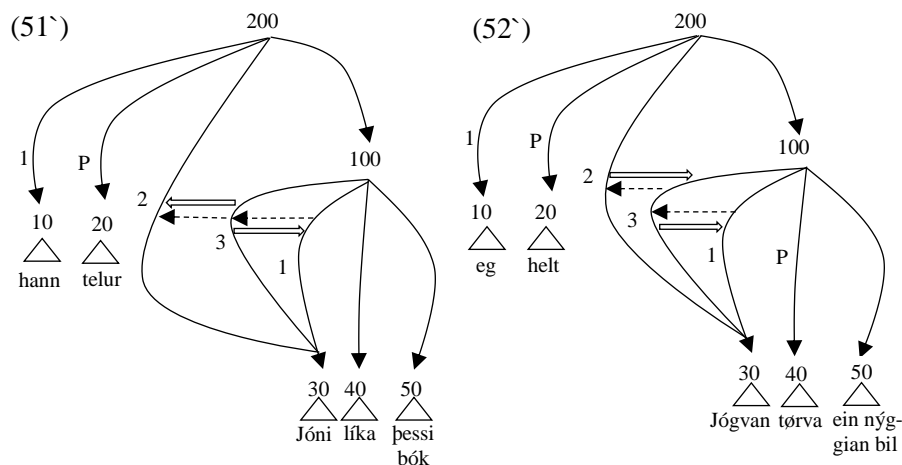
- (51) Hann telur Jóni_i [t_i líka þessi bók].
 he believes Jón.DAT like this book
 ‘He believes Jón to like this book.’

- (52) Eg held Jógvan_i [t_i tørva ein nýggjan bil].
 I believed Jógvan.ACC need a new car
 ‘I believed Jógvan to need a new car.’

What I suggest is that Icelandic puts an additional constraint on strict objects.

- (53) *Icelandic Strict Object Rule*
 Strict objects arcs must be shallow arcs

Consider now the respective structures for subject-to-object raising in the two languages.



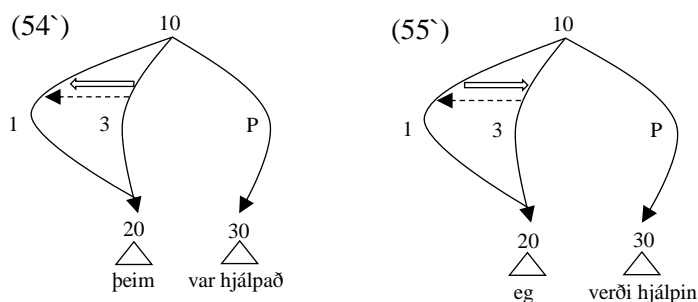
Raising in Arc Pair Grammar is analyzed as involving two overlapping central arcs such that the higher arc is an F-successor of the lower arc, that is, sponsored by the lower arc. In the case of subject-to-object raising, the higher arc is a 2-arc and the lower arc is some 1-arc. Both Icelandic and Faroese allow for nominals heading working 1s as raising targets. The quirky subjects in (51') and (52') are licit raising targets because they both head a working 1, namely the 3-arc sponsored by the 1-arc. In the general case, successors erase their predecessors. This can be seen in the Faroese raising structure (52'): the 2-arc erases the 3-arc. Nothing additional is required for Faroese. In Icelandic, however, the Icelandic Strict Object Rule prohibits erasure of the 3-arc by the 2-arc. If the 3-arc were erased, then it would cease to be a shallow arc. But the Icelandic Strict Object Rule requires all strict object arcs and hence also 3-arcs to be shallow arcs. Moreover, that one of the two arcs has to be erased follows from the Single Mother Law (cf. 40). Recall from section 4.2 that the Case Marking Law (cf. 43) identifies shallow arcs as being responsible for case marking, whereas the Final Arc Word Order Rule (cf. 44) identifies final arcs as determining word order. In the Faroese structure (52'), the quirky subject heads three arcs, a 1-arc, a 3-arc and 2-arc. The 1-arc is not a final arc (it sponsors the 3-arc) nor is it a shallow arc (it is erased by the 3-arc, a non-overlay successor). Similarly for the 3-arc: it is neither a final arc (it sponsors the 2-arc) nor a shallow arc (it is erased by the 2-arc, a non-overlay successor). Only the 2-arc is both a shallow arc and a final arc: it is unerased and doesn't sponsor another arc. In Faroese therefore the 2-arc determines word order according to the Final Arc Word Order Rule and accusative case marking on the quirky subject according to the Case Marking Law. In the Icelandic raising structure (51'), the quirky subject also heads three arcs. But contrary to Faroese, two different arcs are identified by the Case Marking Law and the Final Arc Word Order Rule. The 2-arc is still a final arc and determines word order, but it is not a shallow arc because it is erased by the 3-arc. The erasure

of the 2-arc by the 3-arc also changes the status of the 3-arc, which is now a shallow arc and hence determines case marking. Regarding the quirky subject, this means that it behaves as a direct object with respect to word order but as an indirect object with respect to case marking. So the mismatch in Icelandic between the morphological marking of the quirky subject and its positioning is not the result of a special type of case that cannot be overwritten, but simply results from the interaction of a language particular rule, the Icelandic Strict Object Rule, and other independent laws and rules, the Case Marking Law and the Final Arc Word Order Rule.

5.3 Passive Quirkies

The Icelandic Strict Object Rule is not only responsible for case preservation under raising in Icelandic, it is also responsible for the peculiarity that Icelandic possesses passive quirkies. Recall from section 4.2 that passives involve advancement from some object relation to subject. In case an indirect object⁹ in Icelandic undergoes passivization, the Icelandic Strict Object Rule demands that the 3-arc defining the indirect object erase its 1-arc successor. Given the absence of the Icelandic Strict Object Rule in Faroese, the 1-arc erases the 3-arc in Faroese passives. The resulting structure for the passive structures in (54) & (55) for Icelandic and Faroese, respectively, are given in (54') & (55').

- (54) Þeim var hjálpað. (55) Eg verði hjálpin.
 they.DAT was helped I.NOM become helped
 'They were helped.' 'I am helped.'

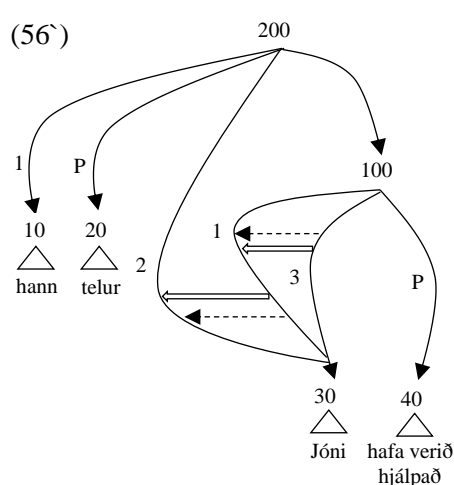


In the Faroese passive (55'), the 1-arc successor erases its 3-arc predecessor, this being the general case for successor-predecessor pairs. In the Icelandic passive (54'), however, this is impossible because the Icelandic Strict Object Rule requires 3-arcs to always be shallow arcs. Hence the 3-arc erases its 1-arc successor. Again, that one of the two has to be erased follows from the Single Mother Law. Note that passive quirkies have a very different structure from lexical quirkies. Passive quirkies are initial strict objects and final subjects,

⁹ Passivization of indirect objects is also found outside the Germanic languages, for example in Imbabura Quechua (Postal 1986, Jake 1983) and Ancient Greek (Feldman 1978).

whereas lexical quirks are initial subjects and final strict objects. Crucially, this difference is irrelevant for most subject tests in Icelandic. Since passive quirks head a final 1-arc, they also head a working 1 and are predicted to pass all subject tests in Icelandic referencing working 1s. So raising of passive quirks in Icelandic is possible as they head a final 1 and final 1s are subsumed under working 1s. (56') illustrates this for a raised passive quirky (cf. 56).

- (56) Hann telur Jóni_i [t_i hafa verið hjálpað].
 he believes Jón.DAT have become helped
 'He believes Jón to have been helped.'



The erasure of the 1-arc by the 3-arc follows from the Icelandic Strict Object Rule. The erasure of the 1-arc by the 2-arc follows from the Unique Eraser Law and the Single Mother Law. If the 2-arc erased the lower 1-arc, the 1-arc would have two erasers; and if neither the 2-arc nor the 1-arc were erased, the Single Mother Law would be violated. Similar to raising of a lexical quirky, the passive quirky in (56') heads three arcs. Of these three, the 3-arc determines case marking, whereas the 2-arc determines word order.

6 Discussion of Alternatives

There appear to exist two alternative ways to handle the data presented in this paper that do not invoke a change of grammatical relations.

The first is to distinguish two types of lexical case, strong and weak lexical case (cf. Holmberg & Platzack 1995: 273). Weak lexical case would differ from strong lexical case in that it can be overwritten and hence be lost under raising and passivization. Icelandic would then possess strong lexical case, whereas Faroese would have weak lexical case. Although this approach successfully captures the differences between Icelandic and Faroese, it fails to handle the German data. On the one hand, German has passives where dative objects are promoted to nominative subjects indicating that lexical case is weak, but German lacks raising of quirky subjects indicating that lexical case is strong. Obviously lexical case cannot be both strong and weak at the same time, as required by this state of affairs. On the other hand, this account offers no solution to the problem why quirky subjects in German pass fewer subject tests than quirky subjects in Icelandic and Faroese.

The other alternative relocates the relation changing operation to the lexicon (Dukes 1999; Manning & Sag 1999) by distinguishing ARG-ST from VALENCE lists. Lexical rules then allow a flexible mapping between these two lists. Alternatively, lexical rules map one lexical entry onto another and preserve the argument structure information of the input lexical entry on the ARG-ST list of the output lexical entry. The distinction between initial and final grammatical relations is then reconstructable through the positions each nominal bears on the respective lists. There are at least three problems with this alternative. On the more conceptual side, preserving information of a related lexical item is hardly compatible with monostratality in the strict sense, namely the idea that the grammatical properties of a sentence and its elements can be described with reference to this sentence alone. For what is preserved on the resulting lexical entry is information about the behavior of a lexical entry used in a *distinct* sentence. The second problem is that grammatical relations are defined via their positions on a list so that subjects of unaccusative and unergative predicates become indistinguishable. Adding an extra device to capture this difference (for example through a D(ESIGNATED) A(RGUMENT) list, cf. Müller 2008) only fixes the defect without actually solving the problem that created it. The third and most serious problem is that this alternative can only reconstruct nominals bearing at most two grammatical relations. However, the Relational Grammar literature documents cases where a nominal bears three grammatical relations. One example for this is described in Jake (1983: 209-217) for quirky subjects in Imbabura Quechua. The interaction between passivization and raising shows that quirky subjects are initial subjects, then demote to indirect object and finally advance to direct object. There is clearly no non-*ad hoc* way of capturing this three-way distinction with two lists only.

7 Conclusion

I have argued in this paper for a syntactic account of quirky subjects according to which they undergo a grammatical relation changing operation from subject to strict object. This account is superior to accounts that locate quirky subjects at the morphology-syntax interface or in the lexicon. Two conclusions can be drawn from this. First, the dichotomy between lexical and structural case is illusory. Nominals bear whatever case they have to bear with respect to one of their grammatical relation. As illustrated by Faroese and German, the question which grammatical operation can affect which nominal is solely determined by the grammatical relations of that nominal and not by its case. Second, the idea that a nominal can bear multiple grammatical relations has also far reaching consequences for subject tests. As argued, subject tests are sensitive to the types of grammatical relations a nominal bears in addition to its bearing a subject relation. Similar to the case of German discussed in this paper, this invites for a reevaluation of claims in the literature as to whether or not some nominal counts as a subject.

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