Udmurt as an OV language.

And Finnish as a VO language

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Contents

Abbreviations

1	First person
2	Second person
3	Third person
ABL	Ablative
ACC	Accusative
ADD	Additive particle
ADV	Adverbial
ALL	Allative
AUX	Auxiliary
CAUS	Relativpronomen
COMP	Complementizer
CONNEG	Connegative
DAT	Dative
DEM	Demonstrative
DO	Direct object
ELA	Elative
ETK	"element(s) of the third kind"
EVD	Evidential particle
FREQ	Frequentive
FUT	Future
GEN	Genitive
GER	Gerund
ICL	Interrogative clitic
ILL	Illative
IN	Inessive
INF	Infinitive
IO	Indirect object
KIN	-kin (Finnish particle)
MP	Indicates the 'missing person' in Finnish generic sentences
NEG	Negative
NEGV	Negative verb
NOM	Nominative
PAR	Partitive
PDI	Principle of Directional Identification
PL	Plural
PRS	Present
PRT	Particle
PST	Past
2PST	Second past
PTCP	Participle
SG	Singular
TERM	Terminative
TRANSL	Translative

1 Introduction

Among the most popular researchers on either end of the usage-based vs. rule-based spectrum — e.g., Adele Goldberg vs. Noam Chomsky — neither would predict there to be syntactic consequences of linear order. In Goldberg's construction grammar, linear order is merely a statistical trend and could barely bear on the question of, say, whether a language exhibits the subject condition on extraction. In Chomsky's theorising since 1995, all that matters in syntax are hierarchical relations whereas linearisation is merely a phonological necessity; since movement restrictions are to be explained in the syntactic component, as it was done with the subject condition in Chomsky (2013), linear order should not play a role in determining movement-related syntactic properties of a language.

In contrast to Chomsky, the followers of his proclaimed predecessors from Port Royal (Chomsky, 1966) were eager to classify languages based on their word order, as described by Bossong (2001). For example, Girard (1747, 23–25) divides the languages into the ones that rigidly follow the 'natural' order of constituents, and the ones that do not. This 'natural' order of constituents is, of course, "*sujet agissant* [. . .] *action* [. . .] *objet/terme*", in English, 'agentive subject – action – object/predicate' (Bossong, 2001, ch. 3.2.2). According to Girard, several further properties as the absence and presence of case markers were associated with the affiliation to either type (ibid.).

The main thesis of the present study is that the eighteenth-century grammarians could have been on the right track when they investigated correlations between word order and syntactic properties. Basic word order could turn out to be the super-parameter that was sought after since the advent of the principles and parameter approach, and which, for example, the pro-drop parameter did not turn out to be (Newmeyer, 2006, vs. Holmberg, 2010; Biberauer, Holmberg, Roberts, and Sheehan, 2010). Word order as a parameter could even act as initially intended as a means for constraining the possibility space in language acquisition since there is evidence that it is acquired receptively even before the first single-word utterances (Gervain, Nespor, Mazuka, Horie, & Mehler, 2008; Yoshida et al., 2010; Bernard & Gervain, 2012; Gervain & Werker, 2013). In what follows, it will be shown that word order has not been considered as a possible parameter for the cross-linguistic, syntactic differences for the OV language Japanese yet, even though Japanese is a literal textbook example of a language in which the constituents do not follow the natural, French or English subject–verb–object, SVO, order.

A lot of typological research dealt with properties that correlate with the different basic word orders (for an overview see Biberauer and Sheehan, 2013). As an example, the word order correlations in Dryer (1992) focus, e.g., on the surface word order of head and complement across different categories, e.g., English has V–O order inside VP and P–XP order inside PP whereas Japanese has O–V order inside VP and XP–P order inside PP.

Apart from surface word order correlations, Naoki Fukui (1986) shows several syntactic properties in which Japanese differs from English: there is no subject-verb agreement in Japanese (ibid., 204), there is no subject–auxiliary inversion in interrogative sentences (ibid.), there is no subject condition on extraction (ibid., 205), there can be mutliple nominative NPs in one sentence (ibid., 236), adverbials can intervene between the verb and its complement (ibid., 195), there is "multiple scrambling" (ibid., 237), there is no full VP-fronting (ibid., 247), and there is no obligatory fronting of interrogative phrases (ibid., 258).

According to Fukui's (1986) analysis, the syntactic properties above follow from the absence of ϕ-features in Japanese as indicated by the absence of subject–verb agreement (ibid., 235 and 244). This leads to the absence of the English subject position, SpecIP, which results in the availability of multiple-subject constructions (ibid., 236) and in the absence of the subject–object asymmetry with respect to extraction (ibid., 206). Word order does not play a role in this analysis.

Even to date there is the recent proposal by Oseki and Miyamoto (to appear) which links missing subject–object asymmetries in Japanese, the subject condition and the *that*–trace effect, to the absence of subject–verb agreement due to movement of the subject to Spec,CP. In support of their claim, they show that Mongolian and Turkish do not exhibit subject–object asymmetries as well, and that Mongolian does not show subject–verb agreement either. The fact that Turkish exhibits subject–verb agreement is not regarded as counterevidence because ϕ-inflection morphemes follow complementizer-morphemes in Turkish.

Two further languages that do not show subject–object asymmetries can be added to Japanese, Mongolian, and Turkish: German and Udmurt (Uralic, Finnic branch). In these languages, inflection is directly postverbal, and in light of German's V2 phenomenon, it is completely untenable to assume that subjects move to Spec,CP in German (cf., e.g., Fanselow, 2009).

What German, Udmurt, Japanese, Mongolian, and Turkish have in common, and what distinguishes them from English, is that they are OV languages. In fact, Haider (2010, 2013) explicitly claims that the English subject–object asymmetries are systematically absent from OV languages for principled reasons.

It is the theory and conviction behind Hubert Haider's scientific endeavours since 1991 (Haider, 2013, ix) that there is a syntactic difference between head-final phrases and head-initial phrases, and that, therefore, there should be systematic syntactic differences between OV languages and VO languages. These differences concern what could be considered narrow syntactic properties, such as the subject condition, but Haider (2010, 2013, 2014) accumulated several further properties in which, arguably, the Germanic OV languages differ from the Germanic VO languages. That last part of the sentence hints towards the problem of Haider's proposed differences: the data basis for his proposal is mainly restricted to German and English, with merely occasional inclusion of data from Dutch, as another OV language, and data from the Scandinavian languages, as further VO languages.

Because of the sparse data provided by Haider, Haider's (2010, 2013, 2014) set of differences between OV languages and VO languages can be considered a set of *predictions* construed on the basis of the observations in the Germanic languages. If another non-Germanic OV language could be shown to pattern with German in its differences to English, and if another non-Germanic VO language could be shown to pattern with English, this would be first evidence for calling these differences *systematic* in the sense of a systematic cross-linguistic difference. However, from the view of the followers of Kayne (1994), an English-like language would simply be the default. Therefore, the investigation of a further OV language is even more interesting. In order to provide a state of *ceteris partibus*, such an investigation could begin with two related languages. As will be discussed below (section 2.2), the two languages of choice are the OV language Udmurt and the VO language Finnish. So the question arises:

With respect to the differences between German and English observed by Haider (2010, 2013, 2014), does the non-Germanic OV language Udmurt exhibit the same syntactic properties as German, and does the non-Germanic VO language Finnish exhibit the same properties as

English?

The main aim of this study is to determine whether the differences between the Germanic OV and VO languages can also be found in another language family. Therefore comparative empirical data from two Uralic languages, Udmurt and Finnish, will be gathered. The OV language Udmurt will be the focus of the study since it is the OV language that is expected to diverge from English. As a side effect of the main goal, syntactically relevant data on a hitherto sparsely covered language will be collected. It is beyond the scope of the present work to discuss how the findings fit into current theories of syntax. This sets up the structure for the present study.

In the first section, Haider's general theory will be outlined and the complete list of proposed differences between OV and VO languages will be presented. Afterwards, the choice of the Uralic family and the OV–VO-pair Udmurt–Finnish as the target of investigation will be motivated followed by a brief overview of Udmurt's morphosyntactic properties. As a final preparation, the methodology employed to gather the data of the present study will be described. The sections thereafter, 3 to 6, represent the core of the study. Each section will cover a group of related phenomena, and each section will be structured in roughly the same way: First, a theoretical background will be provided. This comprises a presentation of Haider's basic data that show how German and English differ with regard to the respective phenomenon, Haider's explanation of the difference, and a formulation of the predictions for OV and VO languages in general based on the Germanic data. Additionally, Haider's explanation will be broken down to a set of assumptions. As such, the theoretical backgrounds will to a large extent be replications of Haider's work and I do not claim intellectual property for his observations and analyses. Following the respective theoretical background, the predictions will be tested in Udmurt and Finnish. First, the existing literature on the topic will be reviewed, and then the data collected for the purposes of this study will be presented. These data will be discussed and analysed with regard to Haider's predictions. Based on the respective discussion, a conclusion will be drawn at the end of each section as to whether the predictions are borne out.

Section 3 will follow this structure on the topic of the relations between the verb and VP-internal elements. Haider's prediction will be that *adverbial intervention* and VP-internal *scrambling* are available in OV languages only.

In section 4, one of Haider's most controversial claims will be discussed: OV languages do not have an obligatory subject position or even a TP-layer. As a consequence, English *subject–object asymmetries*, the *subject condition* and *superiority effects*, will be predicted to be absent from OV languages.

Section 5 on constructions involving a series of verbs is split into two parts. The first part (section 5.1) deals with partial VP fronting, which is predicted to be available to OV languages only. The second part (section 5.2) will cover three predictions about the linear order of inter-dependent verbs.

In the final empirical section, number 6, the distribution of resultative phrases and verb particles in relation to the verb will be discussed.

Section 7 will contain a synopsis of the data. In this section, final conclusions will be drawn as to whether Haider's predictions for OV languages and VO languages are borne out for Udmurt and Finnish (sections 7.1 and 7.2). Since Haider's predictions will be judged valid, an outlook for future research will be provided (section 7.3).

2 Theoretical background

2.1 Hubert Haider's theory

The idiosyncrasies of Haider's theory diverge from mainstream generativist, derivational theorising. A basic understanding of Haider's theory is required in order to see how systematic *syntactic* differences can follow from the assumption that linear order is at work at narrow syntax.

There is no question that there are major commonalities between Haider's theory and (what may be the consensus in) mainstream minimalist theory: strictly binary, right-branching structures. This is the reason why Haider has to repeatedly point out the differences between his approach and Kayne's (1994) LCA (as a summary, Haider, 2013, ch. 9). The relevant restriction is stated in (1) together with a necessary definition.

(1) *Basic branching constraint* (BBC)
     "The structural build-up (merger) of phrases and their functional extensions is universally *right-branching*." (Haider, 2013, 3)
     "Right-branching $=_{\text{def}}$ a structure is right-branching iff the node on the projection line follows the node attached to the projection line. In other words, the branching node on the projection line is on the right-hand side." (Haider, 2013, 3, fn. 6)

However, the main driving force in Haider's theory, which is also the one that ought to predict the differences between OV and VO languages, has no correlate in minimalism: the *Principle of Directional Identification* (PDI), stated in (2) with the required definition in (3).

(2) "*Principle of Directional Identification* (PDI):
     A merged phrase P must be properly identified." (Haider, 2010, 29)

(3) "A merged phrase P is properly identified by the head of the host phrase h^0 iff
     (i)   P is in the directionality domain of h^0, and
     (ii) P and an extension of h^0 *minimally, mutually c-command* each other.
           (extension of $h^0 =_{\text{def}} h^0$ or a projection of h^0)" (Haider, 2010, 29)

Finally, the term *(canonical) directionality* is defined as in (4).

(4) "The directionality value [. . .] is the grammatical feature that governs the application of merger." (Haider, 2010, 28)

The specifications of this feature can be "progressive = left = forward = $\Leftarrow$" or "regressive = right = backward = $\Rightarrow$" (Haider, 2010, 28; also *anterograde* and *retrograde* in Haider, 2013, 30). These two specifications are the "specified" option, but the directionality parameter can also be "un(der)specified" or "flexible" as well (Haider, 2013, 111; Haider and Szucsich, to appear).

According to the PDI, every non-head in a sentence needs to *identified* by the head of the phrase the non-head belongs to. If any element is not identified, the result will be an ungrammatical structure. This way *identification* in Haider's theory plays the critical role of Chomsky's (1957, 13) "fundamental aim" of separating the "grammatical sequences" from the "ungrammatical sequences": identification is a necessary condition for the well-formedness of a structure.

The directionality value separates OV language from VO languages. When the first constituent is merged to V^0, it is merged in the direction specified by the directionality value. Hence, when the direct object O is merged as the first constituent to V^0, O *precedes* V^0 when the directionality value is *progressive* = $\Leftarrow$, resulting in OV *base order*; when the directionality

value is *regressive* $= \Rightarrow$, O *follows* V^0, resulting in VO *base order*, as shown in (5) (following Haider, 2010, 28).

(5)   a.   [$\overrightarrow{V^0}$ O]
        b.   [O $\overleftarrow{V^0}$]

The word *base order* is emphasized because it is crucial to Haider's theory that linear order is represented at the syntactic level. While earlier works suggested a universal OV base order (Haider, 2000), systematic differences follow from different base orders of head-final and head-initial phrases in Haider (2010, 2013). As Haider (2013, 219) puts it in his defence against Kayne's LCA: "if OV contains VO as a derivationally transformed core, *ceteris partibus*, OV is predicted to embody VO properties (that is, at least the subset that is unaffected by derivational changes) plus a derivational fringe benefit". So when VO is the only base order, OV languages are predicted to not show differential behaviour with respect to, e.g., the syntactic properties of preverbal phrases, in comparison to VO languages (Haider, 2013, 223*f.*). Likewise, *set Merge* (Chomsky, 1995, 2008) or *simplest Merge* (Epstein, Kitahara, & Seely, 2013), that would leave the order of sister nodes undetermined, are not applicable to Haider's theory.

According to Haider, the difference in directionality values leads to a difference in the structure of head-final phrases in comparison to head-initial phrases (e.g., Haider, 2013, 98). In the present study, it will be investigated whether there is evidence for the different structural makeup of head-final and head-initial phrases proposed by Haider. The theoretical assumptions in terms of the BBC and the PDI that lead to the different structures will be delineated for each structure but will not be the focus of this study. This way, Haider's theory as a whole will not be at issue, only Haider's hypothesis regarding specific phenomena.

Haider (2000, 2010, 2013) observes syntactic differences between the Germanic OV languages and the Germanic VO languages, and also between head-final phrases in German, VP and AP, and head-initial phrases in German, NP and PP. Haider (2010, 43) calls these observations "[t]he systematic correlation between OV and VO, and the set of syntactic properties that hold or do not hold" and Haider (2013, 94) states that "[t]he cascade of effects triggered by the BBC and the directionality parameter invite a typological assessment". This invitation is accepted in the present study. As stated in the introduction, the core aim of the present studies lies in determining whether an OV language and a VO language from another language family also show these differences. The proposed points of difference are grouped into fields in (6). All of these observations stem from Haider, and the phrasing of these differences is taken almost word-by-word, but with slight changes, from the citation behind the respective difference because they could hardly be made more to the point.

(6)   *Proposed systematic differences between OV and VO languages* (Haider, 2010, 11 and 25 and 43; 2013, 62*f.* and 130*f.*; 2014)
        a.   **Properties of the VP**
             (i)   Head-initial VPs are *compact*, head-final VPs are *not compact*.
                                                                                    (Haider, 2010, 11)
             (ii)   Head-initial VPs exhibit *rigid word order*, head-final VPs allow for *variable word order* (*scrambling*). (Haider, 2010, 11)
        b.   **Properties regarding subject–object asymmetries**
             (i)   Extraction from preverbal phrases is *not possible* in VO, extraction from preverbal phrases is possible in OV. (Haider, 2014, 25*f.*)
             (ii)   Interrogative subjects *cannot* follow another interrogative phrase in VO (*su-*

periority), interrogative subjects *can* stay another interrogative phrase in OV. (Haider, 2014, 23)

    (iii)   *Obligatory subject expletives* in subjectless constructions in VO, no subject expletives in general in OV. (Haider, 2013, 130)

    (iv)   *Quirky subjects* are possible in VO, quirky subjects are not possible in OV. (Haider, 2010, 11)

c. **Properties regarding resultative phrases and verb particles**

    (i)   Verb particles follow the verb in VO, verb particles precede the verb in OV. (Haider, 2010, 11)

    (ii)   Verb particles can be non-adjacent to the verb in VO, verb particles are obligatorily adjacent to the verb in OV. (Haider, 2010, 11)

d. **Properties regarding the verb-auxiliary complex**

    (i)   Aux–V order in VO, V–Aux order in OV. (Haider, 2013, 130*f.*)

    (ii)   *Strict* Aux–V order in VO, word order variation between V and Aux in OV. (Haider, 2013, 130*f.*)

    (iii)   The Aux–V sequence is *not compact* in VO, the V–Aux sequence is compact in OV. (Haider, 2013, 130*f.*)

    (iv)   Only full-VP fronting in VO, partial-VP fronting in OV. (Haider, 2014, 24)

    (v)   No possibility of V–V–V nominalisations in VO, possibility of V–V–V nominalisations in OV. (Haider, 2014, 28)

e. Edge effects for head-initial phrases, no edge effects for head-final phrases.

<div align="right">(Haider, 2013, 130f.)</div>

Some notes are required regarding (6). The "edge effect" in (6e) is the effect that the "head of a preceding modifier phrase [...] must be adjacent [to the head of the modified phrase]" (Haider, 2013, 130). Udmurt exhibits exclusively head-final phrases F. Gulyás (2011b) such that counterevidence is not attainable (see Haider, 2014, 15). The counterevidence could have been obtained for Finnish, but since Udmurt is the focus of this study, this criterion will be omitted. Quirky subjects (6b-iv) will be discussed neither because the data are not even clear for Icelandic and German (Barðdal & Eythórsson, 2005). Later in the text, the study of obligatory subject expletives (6b-iii) and the nominalisation of verb-sequences (6d-v) will also be omitted. The remaining nine properties will be investigated.

Another note is necessary regarding the possibility of languages with un(der)specified directionality, type-3 languages. The core surface property of these constructions is the O–V–O word order in which one object precedes the verb and another one follows. Haider (2013, 59) provides means for distinguishing VO languages from type-3 languages, but the only difference between OV languages and type-3 languages is the frequent appearance of postverbal elements. Haider (2013, 2014) and Haider and Szucsich (to appear) mostly mention type-3 languages that are misclassified as VO languages, concentrating on the Slavic languages, but Yiddish is mentioned as language that has been classified as both a VO and a OV language in the past, and which is a type-3 language according to Haider (2013, ch. 5), and Latin is another candidate for a type-3 language with OV as the most frequent order (Haider, 2013, 102). However, Haider did not yet present *comprehensive* data on the syntactic properties of type-3 languages and therefore there would not be a means of reference.

It has to be mentioned that the assumption of type-3 languages bears the risk of an immunisation of Haider's claims against counterevidence. If Udmurt or Finnish do not fulfil the criteria in (6), they could simply be classified as type-3 languages and would, thus, be in line with Haider's predictions after all. This would mean that the differences in (6) are not predictions about what to expect in a language, but that they would be criteria for the classification of languages. A

means of classifying languages does not bear as much theoretical impact, and therefore it is not as interesting as a set of predictions about syntactic properties that follow directly from the linearisation inside the VP. Consequently, the languages under discussion, Udmurt and Finnish, will be looked upon as OV and VO languages, while the type-3 option will not be rigorously pursued.

2.2   General information on the languages to be investigated

The Uralic languages are a suitable testing ground for the empirical investigation of Haider's claims because there are both OV and VO languages in this language family. Vilkuna (1998, 178) identifies four SOV languages: on the one hand Nenets, which has very rigid SOV order, and on the other hand Udmurt, Mari, and Southern Sami, which also show postverbal elements. Among the Uralic SVO languages, there is the "Eastern" type with Komi, Mordvin, Karelian, and Vepsian, where verb-final orders are rather frequent, and there is the "Western" type with Finnish, Estonian, Northern Sami, and Inari Sami, where "the occurrence of OV is restricted to specific constructions" (ibid.).

There are several possible pairs of languages for the present study. For example, Nenets could represent a prototypical OV language because it does not allow for postverbal material. It could be paired with any of the Western SOV languages in order to contrast a presumably strict OV language with a relatively strict VO language. However, Nenets is not accessible enough for the scope of a Master's thesis. The same problem applies to the comparison of a Northern Sami language (VO) and a Southern Sami language (OV).

Udmurt was chosen as the Uralic OV language because it is more accessible than the other OV languages. Furthermore, the VO language Komi is a close relative of Udmurt in the Permic branch. For reasons of feasibility however, Finnish was chosen as the VO language of the present study because it is a relatively strict VO language, because it is very accessible, and because there is already a lot of literature on Finnish. The lesser known languages of this study will be briefly introduced in the following paragraphs. For an overview over Finnish with further references to introductions to Finnish, see Huhmarniemi (2012, ch. 2).

Udmurt has SXV-order as its neutral and most frequent order (Vilkuna, 1998, 178 and 186*f*.; Tánczos, 2010). According to F. Gulyás (2011b)[1], Udmurt is in line with Vennemann's (1974) proposed correlations regarding surface word order typology: nominal modifiers precede the noun, genitive possessors precede the noun, infinite relative clauses precede the noun, nominals precede postpositions, complement clauses precede the selecting verb, and lexical verbs precede auxiliaries. In other words, almost every phrase is head-final in Udmurt. Regarding morphology, Udmurt is a "strongly agglutinating" language employing almost exclusively suffixation (Winkler, 2011, 29). Nouns inflect for number (SG vs. PL) and case (Winkler, 2011, 36). As a typical Uralic language it has 15 cases with a wealth of locative cases (ibid., 39). There is almost no syncretism in the case system (ibid., 41). Udmurt exhibits differential object marking in that animate direct objects are always marked by the accusative, while inanimate direct objects can also receive nominative case when they are indefinite (ibid., 46). There is an extensive use of possessive suffixes in Udmurt (ibid., 60*ff*.). In this study, possessive suffixes are glossed by their person features. There are no obligatory determiners in Udmurt and there is no gender in Udmurt. Verbs inflect for tense, mood, and phi-features, and again, there is almost no syncretism in the

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[1]This Hungarian paper was translated with the help of Julia Bácskai-Atkári. Thank you very much!

system (ibid., 93). There are four synthetic tense forms, and five analytical tense forms (ibid., 95). Negation involves, in most cases, a negation verb which makes the negated verb appear in connegative form (ibid., 105*ff.*). There are nine infinite verb forms among which there are several participle and gerundial forms (ibid., 111). Many structures that would involve finite embedding in English are formed using infinite verb forms and nominalisations in Udmurt (ibid., 171*ff.*).

A final note on the representation of examples in this work. Udmurt sentences are glossed showing every morpheme involved in order to make the examples transparent for criticism based on morphological structure. These glosses follow the Leipzig Glossing Rules (Bickel, Comrie, & Haspelmath, 2008). The first line is not italicised on purpose. Morphemes are separated from the root by dashes when it is important to the question under discussion. Finnish on the other hand is more well-known and information on the morphological structure of a Finnish verb can be looked up quickly without a reference grammar using websites such as Wiktionary[2]. Therefore, the glosses only follow the glosses used in the original source such that, e.g., verbal inflection is not always transparent from the gloss. Furthermore, the Udmurt examples are represented in the way speakers of Udmurt write and read, in Cyrillic script. This was done because Udmurt *has* an own orthography. Furthermore, the use of Latin script would make the examples hardly retranslatable into Cyrillic script in case one were to test the sentences of the present study with further speakers of Udmurt. A Latin transcript was omitted, first, in interest of space, and second, because it would not have added much information. Instead, there is a table which shows the grapheme–phoneme correspondences of Udmurt at the end of this work (page 91) taken from Winkler (2011, Appendix 1).

2.3   Method

The main informant of the present study was Dr. Svetlana Edygarova (Светлана Едыгарова). Svetlana Edygarova is a linguist who wrote her dissertation on *The category of possession in the Udmurt language* (Edygarova, 2010). She is a native speaker of Udmurt. For some sentences, additional judgements were provided by the Udmurt native speaker Anna Semenova, who studied Udmurt philology and works at the National Library of Udmurtia at the time. I am very thankful for these cooperations!

For the elicitation of grammatical judgements, sentences were mostly taken from Winkler (2011) and rearranged or modified with help of an online Udmurt-Russian dictionary[3], and later with Edygarova & Mantel (2007), in order to test for the relevant properties. Seldom, sentences were taken from the automatically annotated Udmurt web corpus[4] by Maria Medvedeva and Timofey Arkhangelskiy. Further examples were provided by Svetlana Edygarova in those cases in which the structure in question could not be found in Winkler (2011) or in the web corpus. In very few cases, examples were created from scratch using all of the aforementioned literature.

Svetlana Edygarova was presented with lists of the sentences constructed in the way described above via e-mail. No fillers were included and Svetlana Edygarova was informed about what the sentences ought to test such that she could tell whether an ungrammatical sentence was grammatical or ungrammatical for the intended reason. She judged the sentences, provided information on the source of ungrammaticality, and corrected mistakes in spelling and morphology. As a linguist, she could also provide information on Udmurt grammar in general and was

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[2]en.wiktionary.org
[3]http://udmurtinfo.ru/russko-udmurtskij-slovar/
[4]http://web-corpora.net/UdmurtCorpus/search/

open to a discussion of the proposed analyses. At this point, I would like to say that I am very grateful and indebted to Svetlana Edygarova for the insight she provided!

For Finnish, the present study could rely more extensively on the existing literature because Finnish has already been subject to linguistic investigation. Nonetheless, two linguistically trained native speakers of Finnish provided additional judgements and commentary: Susanna Tavi and Lauri Tavi. Thank you very much for the help and discussion! Even further judgements have been acquired by questioning random users in Finnish-speaking channels of the Internet Relay Chat (IRC) at Ubuntu Servers, namely #jollasuomi, #reddit-suomi, and #learnfinnish. I am thankful for the friendly comments from this helpful and friendly internet community! The material has been constructed in the same way as described for Udmurt, and the procedure was also the same.

3 VP-Compactness and word order variability

3.1 Haider's theory of adverbial intervention

In Haider's theory, the compactness of English VPs follows directly from the axioms of the PDI (Haider, 2010, 28–31; Haider, 2013, 106). Recall that in order for a constituent to be licensed in Haider's PDI, it needs to be in a minimal c-command relation and in a mutual c-command relation with a head or an extension of the head; additionally, a constituent needs to be in the canonical directionality domain of the head. Now consider the structure in (7) which is supposed to represent a structure with a VP-internal adverbial (a bracketed and slightly altered version of the graph-theoretic representation in Haider, 2010, 30).

(7) $[_{VP} \overrightarrow{v^0} [_{V'''} \textbf{ADV} [_{V''} XP [_{V'} \overrightarrow{V^0} YP]]]]$

In the structure in (7), YP is licensed according to Haider because (i) YP follows V^0, (ii) YP and V^0 are in a mutual c-command relation, and (iii) YP and V^0 minimally c-command each other because they are sister nodes. XP is not licensed, only two of the licensing conditions are met: (i) XP follows an extension of V^0, namely v^0; (ii) XP c-commands an extension of V^0 and an extension of V^0 c-commands XP such that there is a mutual c-command relation; however, Haider denies that there is *minimal* c-command relation between this XP and an extension of V^0 even though XP and V′ are sisters. The only consistent interpretation is that the c-command relation has to be "minimal, mutual, [and] directional" (Haider, 2010, 30) with regard to the same extended projection of V^0, that is: since XP only follows v^0 it has to be in a minimal c-command relation to v^0 which is present in (8), but not in (7), because there is no ADV in (8) that v^0 c-commands but that XP does not c-command. Only "[m]utuality is a chain effect" (Haider, 2010, 30), and so only the mutual c-command relation can be satisfied by way of just any extension of V^0. The only position for ADV can be atop VP.

(8) $[_{VP} \overrightarrow{v^0} [_{V''} XP [_{V'} \overrightarrow{V^0} YP]]]$

The complex shell-structure in (8), which has become the textbook analysis of the English ditransitive VP (e.g. Adger, 2003), does not arise in the German VP in (9) because every phrase is a sister of an extension of V^0 which entails mutual and minimal c-command; additionally, every phrase is in the canonical directionality domain of the respective projection of V^0. Therefore no movement is required in (9) and intervention cannot occur.

(9) $[_{V'} XP [_{V'} ADV [_{V'} YP \overleftarrow{v^0}]]]$

Note that in a movement-theory of scrambling ADV could also be a ZP that was moved from its base position. Again this provides no problems for the licensing of phrases in (9), but in a head-initial VP, it would lead to the structure in (7) according to Haider (2010, 31; 2013, 107). This the predicts the absence of VP-internal word order variation ('scrambling') in VO languages.

Haider should have been much more concise in the explanation of this core fact For example, the question is open why V^0 cannot move as many times as it would be necessary in order to license XP with an intervening adverb, as in (10). The answer could be that V^0 only moves in order to "theta identify" (Haider, 2010, 31) a phrase, but this would be mere stipulation.

(10) $[_{VP} V^0 [_{V'''} \textbf{ADV} [_{V'} V^0 [_{V'} XP [_{V'} V^0 YP]]]]]$

In fact Janke and Neeleman (2012) argue that shell-construction can serve as a last resort when a

configuration with an intervening adverbial would be created whenever an intervening category is the first element merged with the lexical verb, but they do not discuss why a structure in (10) could not be salvaged by the same means. Essentially, their theory also requires minimal and mutual c-command between certain arguments and V^0, but the reason they name is a *case-adjacency* requirement analagous to Stowell (1981). Neeleman (2015, 19) carries this theory forward but still explicitly states that the "selection of internal arguments requires c-command by the argument and m-command by the selecting head" and that case is assigned "either to the left (in OV languages) or to the right (in VO languages)". In other words, for an argument to be licensed, it needs to be in a mutual and minimal c-command relation to the selecting head and its needs to be in the head-specific directionality of the head, just like in Haider's PDI. The major difference is that Neeleman's (2015) principle applies only to internal arguments and only to the licensing of case, and not to any phrase in general. This way, non-arguments are exempt from this requirement which leads to slightly different structures than in Haider's theory. Nonetheless, these slightly different structures aim to explain the same data. This leads to the formulation of the minimal assumption in (11) that ought to explain the predicted differences between OV and VO languages.

(11)   In VO languages, any phrase merged to VP has to be in a mutual, minimal c-command relation to V^0 at some point. This triggers VP-shell formation.

In a more restricted version of (11), the requirement in (11) would apply only to internal arguments that require case. In OV languages, the restriction in (11) should simply not hold because the minimal, mutual c-command relation combined with the proper directionality is always given in relation to a projection of V such that there is no necessity for the verb to move. As a result, a head-initial VP should always be more complex than a head-final VP.

3.2 Germanic

The basic VO data with regard to adverbial placement are illustrated in (12) for English. All examples are constructed in parallel to the test sentences used in Udmurt but go back to Haider (2010, 2013).

(12)   a.   Olga **(often)** kissed Anna **(often)**.
         b.   *Olga kissed **often** Anna.

The adverb *often* can only be placed in front of the verb or after the direct object as in (12a), but the adverb cannot intervene between the verb and its complement as in (12b). Further restrictions hold in English ditransitive constructions as in (13).

(13)   a.   Sjala gave the children presents **on Tuesday**.
         b.   *Sjala gave the children **on Tuesday** presents.
         c.   *Sjala gave **on tuesday** the children presents.
         d.   *Sjala gave presents **on Tuesday** to the children.
         e.   *Sjala gave **on Tuesday** presents to the children.

The adverbial phrase *on Tuesday* can only be placed in the position following both objects (13a). Regardless of which ditransitive structure is used, the adverbial phrase can neither appear between the verb and its closest complement (13c,e), nor between the two objects (13b,d). Haider's explanation for this pattern was already shown in the introduction to this section. There it was also mentioned that variable word order in the VP is essentially the same phenomenon to Haider

(2010, 2013) and Neeleman (2015) because it also involves an intervening phrase. The rigidity of English word order is illustrated in (14) (from Haider, 2010, 13). The phrase that is not in its canonical position is in boldface.

(14)   a. *He showed **this problem** some students.
        b. *He showed **to some students** this problem.

Thus, the prediction would be that VO languages should not exhibit structures as in (15) where DO stands for indirect object, DO for direct object, and XP for any non-selected phrase that is not a secondary predicate, or an argument that is not in its base position (in a movement account of scrambling).

(15)   Unavailable structures in VO languages
        a.   ... [$_{VP}$ V$_i$ [$_{V'}$ XP [$_{V'}$ e_i DO]]]
        b.   ... [$_{VP}$ V$_i$ [$_{V'}$ XP [$_{V'}$ IO [$_{V'}$ XP [e_i DO]]]]]

Note that the structures in (15) explicitly state that the XP has to appear inside the VP domain. Both Haider (2014, 19–20) and Neeleman (2015, 3–4) discuss that "verb-object adjacency is real, although verification is not always straightforward". The reason is that the verb does not stay *in situ* in many languages which can result in structures as in (16).

(16)   [$_{FP}$ V$_i$ ... [$_{VP}$ **XP** [$_{VP}$ e_i [$_{V'}$ e_i DO]]]] $\mapsto$ V–XP–IO

In the structure in (16), XP is merged *atop* VP instead of *inside* VP as in *Olga often kissed Anna*. But in contrast to the English sentence, the verb has moved to a functional position above VP in (16), as it would happen the Germanic V2 languages or the Romance languages. The arrow in (16) indicates that the structure would be mapped onto the surface word order V–XP–DO. This means that not just any example of a V–XP–DO order in a VO language would count as counterevidence to intervention effects – it has to be shown that the V–XP–DO holds inside VP. Bother Haider and Neeleman propose how these effects can be tested.

Haider (2014, 20) suggests that "[i]t may help to check for causative verbs" because it leads to an ungrammatical sentence when an adverb occurs between a causative verb and "the dependent clausal constituent" in French. Neeleman (2015, 3–4) proposes two options. In Icelandic, compactness effects can be revealed by using an auxiliary, thereby blocking movement of the lexical verb (Neeleman, 2015, 3); more generally one could try to find structures in which the object-selecting verb does not move. The second option is to find evidence that superficially intervening phrases are not situated inside VP. As an example (Neeleman, 2015, 4) suggests that if there are two superficially intervening adverbs in French and other languages, then the order of these adverbs is rigid, equal to their scope, e.g., *often quickly* vs. **quickly often*. The latter is not an option, though, because rigid order equivalent to scope is also present in the OV language German as discussed in Haider (2013, 150–153).

Haider (2014, 20–21) identifies two further factors that have to be controlled for: *heavy-NP shift* and *extraposition*. Heavy-NP shift can be controlled for by not using phrases with too much phonological material, or by using phrases of different length. Extraposition is a problem because it leads to word order variation that is indiscernible from scrambling and that can hardly be prevented. Haider (ibid., 20) explicitly mentions languages in which the indirect object is marked "by a particle [...] rather than a specific case form" as languages in which "compactness cannot be reliably tested". This remark should be extended to the problem that languages might differ in whether the indirect object behaves more like an argument or more like an adverbial. For

example, Finnish grammars rarely speak of 'indirect objects' with regard to the equivalent of an indirect object in English because they are marked with what is mostly regarded as a semantic locative case (Sulkala & Karjalainen, 1992, 68).

The German examples in (17) show the lack of verb-object adjacency in an OV language. The example in (17c) involves a manner adverbial because some speakers of German might argue that *oft* ('often') in (17a,b) is not in its neutral position. The case of the noun phrases is marked at the determiner but it is shown at the noun in the gloss. Singular masculine noun phrases have been chosen because it is the only gender-number combination in which there is no syncretism in case marking.

(17)   a.   weil   der Hans   den Peter   **oft**   küsst.
               because the Hans:[NOM] the Peter:ACC often kisses
               'because Hans often kisses Peter.'
     b.   weil   der Hans   **oft**   den Peter   küsst.
               because the Hans:[NOM] often the Peter:ACC kisses
     c.   weil   der Hans   den Peter   **schnell** küsst.
               because the Hans:[NOM] the Peter:ACC fast   kisses
               'because Hans quickly kisses Peter.'
     d.   weil   der Hans   **schnell** den Peter   küsst.
               because the Hans:[NOM] fast   the Peter:ACC kisses

The direct object in (17a,c), as marked by the accusative case, is not adjacent to the verb but the sentence is still grammatical. Adverbs can also appear between the two arguments of a ditransitive verb as illustrated in (18).

(18)   a.   weil   der Hans   dem Peter   den Brief   **am Dienstag** gab.
               because the Hans:[NOM] the Peter:DAT the letter:ACC on tuesday   gave
               'because Hans gave Peter the letter on tuesday.'
     b.   weil   der Hans   dem Peter   **am Dienstag** den Brief   gab.
               because the Hans:[NOM] the Peter:DAT on tuesday   the letter:ACC gave
               'because Hans gave Peter the letter on tuesday.'

The sentence in (18a) arguably involves scrambling because the sentence does not have a VP-focus reading anymore; the focus is on the adverbial phrase instead. Sentences in which the order of arguments is changed (19b) or even mirrored (19c) are also grammatical. Full NPs have been used because pronouns tend to be fronted in general (Haider, 2010, 131–141).

(19)   a.   weil   der Professor   dem Studenten   den Brief   gab.
               because the professor:[NOM] the student:DAT the letter:ACC gave
               'because the professor gave the student the letter.'
     b.   weil   der Professor   den Brief   dem Studenten   gab.
               because the professor:[NOM] the letter:ACC the student:DAT gave
     c.   weil   den Brief   dem Studenten   der Professor   gab.
               because the letter:ACC the student:DAT the professor:[NOM] gave

Haider (2014, 21) discusses a single factor that may mask scrambling in OV languages (non-distinctness of arguments) but he does not offer a 'differential diagnosis' for whether adverbial intervention and scrambling are actually present in an OV language. This suggests that no further testing is needed to ensure a positive finding with regard to VP compactness once variable word order and adverbial intervention have been shown to hold *on the surface*. A reason for this could be that Haider (2014, 21) only considers extraposition as a further source of word order

variability, and extraposition can always be detected in OV languages because the extraposed constitituent will surface in postverbal position (ibid.). Hence a discussion of word order variation that involves VP-external positions is missing from Haider (2014). However, the possibility of movement to VP-external positions *preceding* VP has been overlooked.

Additional criteria for what kinds of word order variation qualify as scrambling to Haider can be found in Haider (2010, 142). Since there are a lot of publications presenting basic facts on scrambling it suffices to only name Haider at this point. The present study will focus on only a single A-movement characteristic of German scrambling with respect to *binding* and *scope* (Haider, 2010, 148–150). The relevant property was summed up by Haider as represented in (20). Note that (A-)scrambling also brings about scope ambiguities (Haider, 2010, 150) but these were not tested because they were regarded too difficult to elicit for the purposes of the present study.

(20)   "Scrambling of possible binders extends their respective binding domains."

(Haider, 2010, 148)

The property in (20) is illustrated in (21) in contrast to the $\overline{\text{A}}$-movements to sentence-initial position (21c) and internal topicalization (21d) (following Fanselow, 2001, 415; Haider, 2010, 149–150).

(21)   a.   Wahrscheinlich liebt [sein$_{*i/j}$ Sohn] [jeden Vater]$_i$.
              probably   loves his   son   every father:ACC
              'Probably, his son loves every father.' (**no bound reading**)
        b.   Wahrscheinlich liebt **[jeden Vater]**$_i$ [sein$_{i/j}$ Sohn].
              probably   loves every   father his   son
              'Probably, every father is loved by his son.' (**bound reading possible**)
        c.   ?**[Jeden Vater]**$_i$ liebt wahrscheinlich [sein$_{i/j}$ Sohn].
              every   father:ACC loves probably   his   son
              'Probably, his son loves every father.' (**no bound reading**)
        d.   Wahrscheinlich liebt **[JEDEN VATER]**$_i$ [sein$_{i/j}$ Sohn].
              probably   loves every   father his   son
              'Probably, his son loves every father.' (**no bound reading**)

The DP *sein Sohn* ('his son') in (21a) can only refer to the specific son of a specific person in the discourse universe, just as in the English translation. When the accusative DP *jeden Vater* ('every father') appears in front of *sein Sohn* in the post-V2 position (the Middlefield or *Mittelfeld*) as in (21b), then the bound reading *sein Sohn* is available, which is indicated by the translation of that sentence with a passive sentence that also allows for the bound reading. This indicates that the scope of the quantifier is extended beyond what would be the base position in a movement account of scrambling. The scope of the quantifier is not only dependent on (c-)command, but also on the kind of operation that made the quantifier end up in its surface position. So *jeden Vater* commands *sein Sohn* in (21c) but since the sentence initial position is derived via $\overline{\text{A}}$-movement the scope reconstructs in the base position such that *sein Sohn* cannot receive a bound reading. The example in (21d) represents the contrast to (21b) even more sharply: the word order in (21d) is the same as in (21b) but *sein Sohn* cannot receive a bound reading in (21d) because *jeden Vater* has undergone internal topicalization as indicated by a special intonation. The same facts would be observed for the binding relations between direct and indirect objects. Also see Fanselow and Lenertová (2011, 202) for a discussion of a case in which the scope in (21c) is extended by means of intermediate scrambling. For a more differentiated overview, further data, and analyses, see Fanselow (2012, section 4).

Ad Neeleman, just like Haider, also has a background as a developer of scrambling theories (e.g. Neeleman & van der Koot, 2008), but he applies the term scrambling much more loosely because A-scrambling applies only to adverbial intervention in Dutch. He states that there is an "implicational hierarchy" for A-scrambling that is represented in (22) (Neeleman, 2015, 5). XP stands for any phrase, S stands for subject, O stands for object, and ADV stands for adverbial.

(22)   Implicational Hierarchy of Scrambling after Neeleman (2015, 5)
             XP–S > XP–O > XP–ADV

The hierarchy in (22) is supposed to depict that when a language exhibits A-scrambling that makes an XP appear in front of the subject, it will also allow this for objects and adverbials. So there should be languages that allow only for adverbial intervention, but that do not permit scrambling of non-subjects across subjects (but see Neeleman & van der Koot, 2008, 291, where it is stated that one would not expect that scrambling is selective). This contrasts with Haider's proposal: compactness is a property of a phrase as a whole, only third factors would rule out scrambling across subjects or objects when scrambling across adverbials is allowed. So Haider's predictions for OV languages are summed up in (23). QP stands for a potential binder, and PRON stands for a potential bindee.

(23)   A-scrambling property of variable word order in OV languages
             a.   ... PRON$_{*i}$ ... QP$_i$ ...
             b.   ... QP$_i$ ... PRON$_{*i}$ ...

Now that the predictions for OV and for VO languages are set up, it will be investigated whether these predictions are borne out in Udmurt and Finnish.

3.3   Udmurt

The literature on Udmurt already contains information about adverbial placement. Vilkuna (1998, 203–204) states that the Finno-Ugric OV languages exhibit "[a] tendency to place manner adverbials immediately before the verb" (in contrast to the VO languages; ibid., 203) and that "the same tendency is strong in Udmurt" (ibid., 204). In Vilkuna's (ibid.) corpus almost all manner adverbs immediately preceded the verb, but according to judgements from a native speaker all positions except the postverbal position were licit as well. However, Vilkuna did not provide figures for how often manner adverbials *intervene* between the verb and its complement. She also reports that the objects of ditransitive verbs do not have to be adjacent (ibid., 202). So there is evidence for adverbial intervention in Udmurt according to Vilkuna (1998). Suihkonen (1995, 320) further supports this hypothesis by stating that "the position of adverbials can vary" and that "the favoured location of adverbials varies". He provides one example of a non-manner adverb intervening between a direct object and an indirect object (i.e. one of the structures that only VO languages should not allow for). Winkler (2011) only reports Vilkuna's (1998) findings on this topic.

The literature on Udmurt also contains information about free word order, and the literature review can already reveal similarities to scrambling in German. Suihkonen (1995, 313) states that "[t]he order of constituents may vary for textual reasons". Winkler (2011) only summarises the findings of Vilkuna (1998, 185*ff.*). She found both SXV and XSV orders in her corpus where X represents a complement of the verb (Vilkuna, 1998, 185*f.*). XSV orders occurred in presentational clauses and with focussed subjects (ibid., 189–190).Vilkuna also investigated the order of objects

in ditransitive clauses with '*give*' and concludes that "[t]he mutual order of the theme (patient) and the recipient, or theme and location, is free" (ibid., 201). So both the Udmurt grammars and Vilkuna (1998) indicate that there is word order variability in Udmurt, and that the preverbal position might be a focus position.

Orsolya Tánczos (2010) provides the first detailed study of free word order in Udmurt such that this study can serve as a starting point for further investigation[5]. Tánczos (2010) tested sentences containing a nominative subject, an accusative object, and an adverbial phrase. Several lexicalisations in various word orders were presented in the context of *wh*-questions that asked for one of the three noun phrases. This way she could corroborate the finding of an immediately preverbal focus position (ibid., 225). Additionally she found a sentence-final focus position to which we will come back in the conclusion to this subsection. More recent field work also showed that *in situ* focus is a possibility, realized only with the help of prosodic accent (Tánczos, 2015). She proposes a preliminary analysis that ought to capture the preverbal focus position by positing discourse-configurational projections for Topic and Focus atop VP akin to the analysis of Hungarian sentences (Tánczos, 2010, 226).

According to Tánczos (2010, 223), deviation from SOV order is only licit in certain discourse contexts. She shows that the object can only precede the subject when the subject is in focus (indicated by small capitals), as illustrated in (24).

(24)   C: Who saw the Terminator in the cinema?
          – Терминаторез   кинотеатрын Саша   учкиз.   OXSV
            Terminator:ACC cinema:IN   Sasha:[NOM] see:PST.3SG
            'Sasha saw the Terminator in the cinema.' (Tánczos, 2010, 224)

Tánczos (2010, 227) concedes that her analysis is particularly troubled by the data in (25) in which the adverbial *туннэ* ('yesterday') is in focus.

(25)   Та   книгаез Саша   туннэ басьтӥз.   OSXV
          DEM book:ACC Sasha:[NOM] today take:PST.3SG
          'Sasha fetched this book TODAY.' (Tánczos, 2010, 227)

The example in (25) is puzzling to Tánczos (2010) because she assumes that the object can only precede the subject when the subject is in focus, but the subject is not in focus in (25). Thus she concludes her paper with the generalisation that adverbial focus makes it possible for topical material to precede the subject, and that it is not possible to have topical material in front of subjects otherwise.

When one reinterprets the data in (24) and (25) in combination with the natural object focus in SOV sentences, one could also come to the conclusion that Udmurt employs A-scrambling. Since the focus has to be in preverbal position, the object cannot precede the subject in sentences with object focus. With subject focus, the object has to precede the subject because the subject has to occur directly preverbal. So in each case, the position of one of the phrases is fixed due to focus. Hence, the variability of two elements to one another can only be observed once a third element is in the fixed focus position. This is what can be observed in (25).

In fact, the information-structural pattern described by Tánczos (2010) is very similar to that in the Middlefield of Germanic OV languages. The phrases that are not in immediately preverbal position are *given* in relation to the directly preverbal phrase (Neeleman & van der Koot, 2008) and they are more *definite* (Fanselow, 2012). The same could be the case in (24),

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[5]Thanks to Julia Bácskai-Atkári for translating parts of this paper with me!

in which the specific movie precedes the NP that denotes just any cinema without referring to a particular one; the subject is not given at all in (24) such that it assumes the immediately preverbal position. Likewise it could be argued that the phrase with the demonstrative in (25) is more given than the proper name in a context in which (25) is felicitous; again, the focus cannot be given. This description also ties in with Vilkuna's (1998, 201) observation that the order of a direct and an indirect object in Udmurt is mostly determined by definiteness and length, even though they often "coincide" due to the pronominalisation of given NPs. Hence it can be concluded that word order variation in Udmurt shares the information-structural characteristics of A-scrambling in German. In the following discussion the data collected for the purpose of this study will be evaluated.

The literature review from above could establish that there is variable word order in Udmurt. However, only two examples have been provided in the discussion above. This leeway will be made up in this subsection.

The examples in (26)–(28) clearly show that adverbs of different height in terms of scope can appear in any position of the sentence. Manner adverbs have not been included because they were already discussed in Vilkuna (1998). Modal adverbs or particles could not be included because they obligatorily appear in sentence-final position (Svetlana Edygarova, p.c.); adverbs of this class include *лэся*, *дыр*, and *кадь*, which all roughly correspond to 'it seems, presumably'.

(26)   a.   Ҷана   Юберез   **ҷем** чупалляз.
            Tchana:[NOM] Juber:ACC often kiss:FREQ:PRS3SG
            'Tchana often kissed Hubert.'
       b.   Ҷана   **ҷем** Юберез   чупалляз.
            Tchana:[NOM] often Juber:ACC kiss:FREQ:PRS3SG
       c.   **Ҷем** Ҷана   Юберез   чупалляз.
            often Tchana:[NOM] Juber:ACC kiss:FREQ:PRS3SG

(27)   a.   Доми нылпиослы кузьымъёсты **пуксёнэ**   сётӥз.
            Domi children:DAT present:PL:ACC Tuesday:ILL give:PST.3SG
            'Domi probably gave presents to the children.'
       b.   Доми нылпиослы **пуксёнэ**   кузьымъёсты сётӥз.
            Domi children:DAT Tuesday:ILL present:PL:ACC give:PST.3SG
       c.   Доми **пуксёнэ**   нылпиослы кузьымъёсты сётӥз.
            Domi Tuesday:ILL children:DAT present:PL:ACC give:PST.3SG

(28)   a.   Доми нылпиослы кузьымъёсты **оло/пэ**   сётӥз.
            Domi children:DAT present:PL:ACC probably/EVD give:PST.3SG
            'Domi probably gave presents to the children.'
       b.   Доми нылпиослы **оло/пэ**   кузьымъёсты сётӥз.
            Domi children:DAT probably/EVD present:PL:ACC give:PST.3SG
       c.   Доми **оло/пэ**   нылпиослы кузьымъёсты сётӥз.
            Domi probably/EVD children:DAT present:PL:ACC give:PST.3SG

In (26a) the adverbial *ҷем* ('often') intervenes between the verb and its complement as predicted; it can also assume any other position of the sentence, as shown in (26b) and (26c), which is predicted if Udmurt exhibits A-scrambling. Ditransitive constructions do not establish further restrictions on adverbial placement, as illustrated in (27) and (28): an adverbial can appear between two objects as well, as in (27b) and (28b). Thus, there is no evidence that adverbial

intervention induces ungrammaticality in Udmurt. The following paragraphs will discuss the binding effects of variable word order in Udmurt.

In the discussion of the Germanic data in this section, it was established that word order variation can have various sources. The word order variation that Haider predicts to find in OV languages occurs within VP, and hence, it has to be of the A-scrambling type. The A-scrambling property to be tested here was given in (20) and concerns the scope-extending effect of A-scrambling.

The examples in (29) and (30) provide examples in which the reciprocal *ог-ог* is supposed to be bound by the plural NP *студентъёс* ('students'). All examples regarding scrambling involve directly preverbal focus; specifically, there is no special intonation with special information-structural interpretations, such as contrastivity, involved on any of the phrases that is not directly preverbal. Note that *ог-ог* bears the possessive suffix *-зы* which shows the same number and person specification (3PL) as the NP that is supposed to bind *ог-ог*. According to the dissertation of Anna Volkova (2014), possessive suffixes in Uralic languages can be bound. The Besermyan Udmurt possessive suffix has to be locally bound in some contexts (Volkova, 2014, 112), while in other contexts it is ambiguous between a discourse anaphor and a bound variable (ibid., 113). Semi-reflexive pronouns are also marked with a possessive suffix, and their binding behaviour mostly depends on the binding properties of the possessive suffix (ibid., 128). The possessive suffix itself behaves like a reflexive pronoun whenever it is supposed to receive a bound interpretation (ibid.). Hence it could be expected that only the possessive suffix is actually bound in every construction that involves binding of elements that are marked with a possessive suffix. Unfortunately, Volkova does not report whether word order has an influence on binding. Thus, the following data also further the data basis for the binding conditions of possessive suffixes.

(29)   a.   Студентъёс   ог-огзылы   кузьымъёс   сётйзы.
              student:PL.[NOM] each.other:3PL:DAT   present:PL.[NOM] give:PST:3PL
              'The students$_i$ gave presents to one another$_i$.'
        b.   Ог-огзылы   студентъёс   кузьымъёс   сётйзы.
              each.other:3PL:DAT student:PL.[NOM]   present:PL.[NOM] give:PST:3PL
        c.   Ог-огзылы   кузьымъёс   студентъёс   сётйзы.
              each.other:3PL:DAT present:PL.[NOM]   student:PL.[NOM] give:PST:3PL

The example in (29a) represents the neutral word order in ditransitive constructions. The direct object *кузьымъёс* ('presents') bears nominative instead of accusative case because inanimate objects only receive accusative case when they are definite (Winkler, 2011, 46), but a definite reading is barely plausible with a bound reciprocal in (29). The examples in (29b,c) show that scrambling across subjects is possible. The dative reciprocal *ог-огзылы* ('each other') receives a bound reading in (29b) (object focus) as well as in (29c) (subject focus) even though A-scrambling of a reciprocal across its binder "destroys" the binding relation in German (Haider, 2010, 149). A̅-movement, on the other hand, would lead to reconstruction at the trace position and could, hence, easily explain (29b) and (29c). This could count as evidence against an A-scrambling account. However, the properties of the possessive suffix are another factor that needs to be taken into account. Volkova (2014, 121) reports that the semi-reflexive in Besermyan Udmurt requires "a c-commanding antecedent, which is a subject of the clause, and must be locally bound". The c-command requirement was tested with possessor constructions (ibid., 119) but not with varying word orders. Consequently, the c-command requirement was identical to the subject requirement because the possessor of the subject cannot be the subject of the clause.

So there is the possibility that the reciprocal *ог-ог* or the possessive suffix *-зы* do not require c-command as well but are subject oriented.

The example in (30) shows that the overt semi-reflexive *ac* (an emphatic 3SG pronoun used as a reflexive) can also appear in front of its binder. However, the possessive suffix on the possessee has to be present nonetheless (Svetlana Edygarova, p.c.). There is no expression for 'almost' in Udmurt that could modify the quantifier. For the ablative case on the reflexive pronoun see Assmann, Edygarova, Georgi, Klein, and Weisser (2014).

(30) a. Котькуд атай   аслэсьтыз   пизэ   яратэ.
          every   father:[NOM] REFL:ABL:3SG son:ACC.3SG love:PRS.3SG
          'Every father$_i$ loves his son$_i$.'
      b. Аслэсьтыз   пизэ   котькуд атай   яратэ.
          REFL:ABL:3SG son:ACC.3SG every   father:[NOM] love:PRS.3SG

The absence of a contrast in (30) could indicate that the semi-reflexive is reconstructed in its base position. On the other hand, it still bound by the subject such that the subject orientation of the semi-reflexive could still mask the effect of word order. The examples in (31) test for the extension of the scope domain instead.

(31) a. Атай-з-э   пинал-ыз   яратэ.
          father-3SG-ACC child-NOM.3SG love:3SG
          'His child$_i$ loves every father$_i$.'
      b. Пинал-ыз   атай-з-э   яратэ.
          child-NOM.3SG father-3SG-ACC love:3SG

A singular NP like *атай* ('father') seems to be able to express the meaning 'every father', and the sentences in (31) occur to be the most natural way of expressing the intended meaning, because other lexicalisations using quantifiers and overt (reflexive) pronouns were rejected as ungrammatical. This also makes sense because the reading of a singular NP with an existential quantifier is also true when the proposition is true for the universal quantifier. Problematically, this could also mean that both NPs are interpreted as subject to universal quantification. Still, it does not matter in which order the binder and the bindee appear, since both (31a) and (31b) are grammatical. Interestingly, both the binder and the bindee are marked with a possessive suffix. This appears to be an overt marking of a covarying reading that is also present in the paraphrase of the translation in (31): 'For every father x, there is a son y (i.e., x = possessor of y), such that y loves the father of y (i.e., y = possessor of x)'. However, neither of the possessive suffixes requires its binder to precede the suffix. This is further evidence that structures involving possessive suffixes in Udmurt cannot be used to reliably test for the distinction of A and $\overline{\text{A}}$ positions.

One could note that the examples above all involve a sentence-initial position for the element that is supposed to establish or destroy a binding relation. This is not the case in the examples in (32) because the word order variation only occurs in the region below the sentence initial subject. Note that the potential subject bias is also not present in (32b) because the reciprocal is supposed to be bound by an accusative NP.

(32) a. Профессор   студентъёсты ог-огзылы   синучконын возьматъяз.
          professor:[NOM] student:PL:ACC each.other:3PL:DAT mirror:IN   show:PST:3SG
          'The professor showed the students$_i$ to each other$_i$ in the mirror.'
      b. Профессор   ог-огзылы   студентъёсты синучконын возьматъяз.
          professor:[NOM] each.other:3PL:DAT student:PL:ACC mirror:IN   show:PST:3SG

    c.   Профессор   студентъёсты   ог-огзылы   тодматӥз.
       professor:[NOM] student:PL:ACC each.other:3PL:DAT acquaint:CAUS:PST3SG
       'The professor showed the students$_i$ to each other$_i$ in the mirror.'

    d.   Профессор   ог-огзылы   студентъёсты тодматӥз.
       professor:[NOM] each.other:3PL:DAT student:PL:ACC acquaint:CAUS:PST3SG

Again, the bound reading of *ог-огзылы* does not disappear when it appears in front of its binder. This effect cannot be influenced by a potential extended scope domain of foci because the adverbial phrase *синучконын* ('in a/the mirror') is the focus in (32b). The effect cannot be attributed to a special status of the sentence-initial position as well. Furthermore, note that (32b) and (32d) would be grammatical with a bound reading in German only with an intonation which indicates contrastivity, but such a reading or intonation is not present in (32).

    There is only one example in which the reciprocal could not be bound in the position in front of its binder while it could be bound in the position following its binder. This is example is shown in (33).

(33)   a.   Соос   студентъёслы ог-огзэсты   возьматӥзы.
         3SG:PL student:PL:DAT each.other:3PL:ACC show:PST:3PL
         'They$_i$ showed the students$_j$ each other$_{i/j}$.'

    b.   Соос   ог-огзэсты   студентъёслы возьматӥзы.
         3SG:PL each.other:3PL:ACC student:PL:DAT show:PST:3PL
         'They$_i$ showed each other$_{i/*j}$ to the students$_j$.'

The sentence in (33a) is as ambiguous in Udmurt as it is in English. In contrast, the reciprocal cannot be coreferential with the dative NP *студентъёс* ('students') in (33b). The difference to the examples in (32) is clear. The subject NP in (32) is singular and, hence, it cannot be the binder of a reciprocal with a plural possessive suffix. In (33), on the other hand, the plural subject is at least a potential binder. At this point, it could be that the preference for interpreting the reciprocal as coreferential with the immediately preceding subject NP leads to the blocking of the binding option for the following dative NP. Consequently, it could be that performance factors rule out the reading in which the reciprocal is bound by the following dative NP. Therefore the example in (33b) cannot count as conclusive evidence in favour of A-scrambling effects.

The data from this section provided an impression of the variability of word order in Udmurt. There is ample evidence that there is adverbial intervention in Udmurt. It also seems as though the order of arguments and non-arguments is essentially 'free'. Both of these properties were predicted to hold in Udmurt if Udmurt is an OV language. In order to determine what the source of word-order variability in Udmurt is, one of Haider's (2010) criteria for A-scrambling has been tested in Udmurt: whether word-order variation has an effect on binding relations. Binding relations are established with the help of possessive suffixes (Volkova, 2014). However, word order turned out to have no influence on the binding of possessive suffixes and reciprocals marked with possessive suffixes. This is not conclusive evidence for the absence of A-scrambling because it is not clear under which conditions possessive suffixes can be bound, e.g., whether it suffices for the binder to be a clause mate. Furthermore, direct objects that are farther away from the verb than in neutral sentences do not carry a more salient intonation – just as in German, A-scrambled elements are less salient than the immediately preverbal element (in contrast to internal topicalisation). Furthermore the degree of word order freedom is expected if it is the result of A-scrambling because "[s]crambling may apply more than once in its domain" (Haider,

2010).

It has to be concluded that there is not enough evidence in order to decide whether word-order variability in Udmurt has A properties or $\overline{\text{A}}$ properties. Nonetheless, there is no restriction of ordering with respect to grammatical category of function, i.e., objects can precede subjects without degradation in acceptability, which is a strong indication for a non-compact VP.

Another interesting fact about the word-order variability in Udmurt is that the position of the focus is fixed while the ordering of the other elements is variable. According to Tánczos (2010), focus positions are immediately preverbal and sentence-final. According to Svetlana Edygarova (p.c.) this focus is also realized as a prosodic accent. Considering that verb movement might apply freely in Udmurt (see section 6.2), the preverbal position and the sentence-final position would be the same. Taken all these facts together, the theory of Fanselow and Lenertová (2011) seems to be an attractive solution to the analysis of word-order variability in Udmurt.

A core part of Fanselow & Lenértova's (2011) theory is that "[s]tructural accents are determined when phrases are merged" (ibid., 185), that, consequently, "phrases bearing structural accents must be linearised as soon as they are merged", that "verbs cannot participate in immediate linearisation" (ibid., 187), and that "[unaccented material] need not be serialized immediately" (ibid., 188) which "gives them some freedom of movement" (ibid., 188). In this vein, the sentence focus would be immediately linearised with respect to its immediately dominating node, e.g., V′, upon merger. The unaccented phrases can be ordered freely, which accounts for the fact that objects can precede subjects even when the subject is not the focus, i.e., the puzzle of Tánczos (2010). This approach works particularly well with a base-generation approach to scrambling because the unaccented phrases would be merged after the focused phrase has been merged. This way, one would not need to stipulate that, e.g., a focused subject is not linearised with respect to a following unaccented object such that the object can move away from the preverbal position, but the subject could be merged first. Since V^0 does not participate in immediate linearisation, as stated above, V^0 can move across the focused phrase. When that happens, the focused phrase assumes the sentence-final position, just like German verb particles are stranded in sentence-final position when the particle-hosting V^0 moves to V2 (see section 6.1). One of the biggest problems of Tánczos's (2010) analysis could be that the discourse-configurational projections on top of VP would be functional projections, but preverbal positions are transparent for extraction in Udmurt (see section 4.3). The analysis following Fanselow & Lenértova's (2011) does not need to posit such functional projections such that transparency is expected. This preliminary proposal for an analysis of Udmurt word-order variation concludes the discussion of scrambling in Udmurt. The following subsection will investigate word-order variability in Finnish.

3.4   Finnish

With recourse to Vilkuna's (1989) seminal work on Finnish word order, it often claimed that Finnish has a rather free word order, but Vilkuna does not discuss word order variation in the "V-field" at length such that her monograph cannot help in determining whether Finnish exhibits scrambling. But there are plenty of publications building on insights from Vilkuna (1989) which will be discussed in what follows.

Vilkuna (1998) provides a discussion of the distribution of manner adverbials in Finnish. She states that adverbs in general follow the verb in most cases, and that manner adverbials are likely to intervene between the verb and its complement (Vilkuna, 1998, 202–203); her example of adverbial intervention is shown in (34a). The adverb *nopeasti* ('quickly') can also appear

immediately preverbal and in the position following the accusative object.

(34) a. Mikko leipoi   **nopeasti** kakun.
          Mikko bake:PST.3SG quickly   cake:ACC
          'Mikko quickly baked a cake.' (Vilkuna, 1998, 203)
      b. Mikko leipoi   kakun   **nopeasti**.
          Mikko bake:PST.3SG cake:ACC quickly
          'Mikko baked a cake quickly.' (Vilkuna, 1998, 203)

Boef and Dal Pozzo (2012, 54) explicitly state that "scrambling in Finnish is non-existent when we take scrambling to be the alternation between an adverb and an object" of the kind that is seen in Dutch (but see the example in (34)). They do not name a reference or provide an explanation for that claim. On the contrary, they even provide an example of what looks like adverbial intervention on the surface, shown in (35). Note that my informants did not judge verb-final order to be grammatical at all, especially not in subordinate clauses.

(35) a. ... hän lukee **aina**   tuota samaa kirjaa .
              he   reads always that same book
          '... he always reads the same book.' (Boef & Dal Pozzo, 2012, 57)
      b. (*)... hän tuota samaa kirjaa **aina**   lukee.
              he   that same book always reads
          '... he always reads the same book.' (Boef & Dal Pozzo, 2012, 57)

Furthermore, Ferý, Skopeteas, and Hörnig (2010) state that Finnish "allow[s] for scrambling of the PP constituent over a higher argument" but unfortunately they only show examples of varying word order utilizing the left periphery of Finnish. The same is true for Arnhold and Ferý (2013).

Saara Huhmarniemi (2012) provides an example of a non-manner adverb that intervenes between the verb and the complement, shown in (36).

(36) Minä luin   **eilen**   kirjan.
      I.NOM read.PST.1SG yesterday book.ACC
      'I read a book yesterday.' Huhmarniemi (2012, 42)

According to Huhmarniemi's (2012, 42) analysis, the adverb *eilen* ('yesterday') is an adjunct to the whole *v*P, merged above the VP-internal subject position. Later in the derivation, the lexical verb moves to T as proposed in Holmberg, Nikanne, Oraviita, Reime, and Trosterud (1993). This results in a surface V–ADV–DO order.

V-movement is the exact problem discussed in the beginning of this section: adverbial intervention cannot be reliably tested when verb movement to a position outside VP is present. As could be seen above, adverbials seem to be able appear in any position. The example in (37c) shows that an adverb can also appear between the two objects of a ditransitive verb. The preverbal position is the least natural for *eilen* ('yesterday').

(37) a. ??Pekka   **eilen**   antoi miehelle kirjan.
           Pekka:[NOM] yesterday gave man:ALL book:ACC
           'I gave a/the man a/the book.'
      b. Pekka   antoi **eilen**   miehelle kirjan.
          Pekka:[NOM] gave yesterday man:ALL book:ACC
      c. Pekka   antoi miehelle **eilen**   kirjan.
          Pekka:[NOM] gave man:ALL yesterday book:ACC

The example in (37c) is more difficult to explain only in terms of VP-external merger and verb movement because then the allative marked indirect object *miehelle* ('man') would either need to move in front of the adverbial, which could be an instance of scrambling, or the indirect object itself behaves like an adverbial phrase. In fact, Sulkala and Karjalainen (1992) explicitly state that the term 'indirect object' is not used to refer to the goal with a verb like *give* because it bears what is regarded a semantic case, the allative ('external local case' in Holmberg & Nikanne, 1993, also in further articles of the same volume). Nikanne (1993) argues that NPs with semantic case marking are parts of PPs with a phonologically void P^0. If *miehelle* was an adjunct as well, the sentence in (37c) would have the structure in (38) which would not represent an instance of adverbial intervention. The structure in (38) would also be admitted by Neeleman's account of adverbial intervention because the 'indirect object' would not need to receive its case from the verb. The subject has been left out of the structure because it plays no role in the current discussion.

(38)   ... [$_{T'}$ antoi$_i$ [$_{VP}$ miehelle [$_{VP}$ eilen [$_{V'}$ e_i kirjan]]]]

One way to ensure whether adverbial intervention leads to ungrammaticality in Finnish would be to suppress verb movement (see section 3.1 above). The following examples represent structures with a tense auxiliary (39) and a negative auxiliary (40).

(39)   a.   Miinu on kirjoittanut **aina**   kirjoja.
              Miinu has written   always books
              'Miinu has always written books.'
         b.   Miinu on **aina**   kirjoittanut kirjoja.
              Miinu has always written   books
         c. ??Miinu **aina**   on kirjoittanut kirjoja.
              Miinu always has written   books

(40)   a.   Miinu ei   kirjoita **aina**   kirjoja.
              Miinu NEGV written always books
              'Miinu does not always write books.'
         b.   Miinu ei   **aina**   kirjoita kirjoja.
              Miinu NEGV always written books
         c. ??Miinu **aina**   ei   kirjoita kirjoja.
              Miinu always NEGV written books
         d.   Miinu ei   kirjoita kirjoja **aina**.
              Miinu NEGV written books always

The examples in (39a) and (40a) represent the canonical word order with object focus. This can be taken as evidence that the structure up to the lexical verb is not different in examples with an auxiliary, i.e., the verb still moves to T. This is also how such structures are analysed in the literature (for raising of connegative verbs: Mitchell, 2006; for raising of participles: Holmberg, 2000). When the adverb is not intervening on the surface, as in the (b) examples, the sentence receives a special information-structural interpretation. Again it leads to a barely acceptable sentence when the adverbial is in front of the finite verb as in (39c) and (40c). The word order in (40d) requires a special context in order to be felicitous. Even an infinite form that is not in the connegative form can be seperated from its complement as shown in (41).

(41)   Minä uskoin eilen   Pekan halunneen   maanantaina olla   syömässä **tänään**
       I   believed yesterday Pekka want.VA.PST monday   be.INF eat.INF   today
       leipää.
       bread
       'I believed yesterday that on monday Pekka would want to be eating the bread today.'
       (Brattico, 2012, 257)

In sum it could be said that the presence of an auxiliary does not influence the distribution of
adverbials. This is evidence that verb movement is not suppressed in (40) and (41) such that
these examples can still not count as instances of adverbial intervention.

Haider (2014) suggests that periphrastic causatives could render adverbial intervention vis-
ible. There is a periphrastic causative in Finnish (Sulkala & Karjalainen, 1992, 295). The
examples from Sulkala and Karjalainen (1992, 295) have been changed such that an adverbial
intervenes between the matrix verb and the embedded infinitive in (42). 3 native Finnish IRC
users have been asked for judgements.

(42)   a.   Pekka   antaa **taas** Aulikin   pestä   paitansa.
            Pekka:[NOM] gives again Aulikki:ACC wash:INF shirt:[ACC]:3SG
            lit. 'Pekka lets again Aulikki wash his shirt.'
       b.   Aulikki   pakottaa **valitettavasti** Harrin   lähtemään.
            Aulikki:[NOM] forces   sadly   Harri:ACC leave:INF-ILL
            lit. 'Aulikki forces sadly Harry to leave.'

The adverbials in (42) modify the matrix verb in the most intuitive reading which is evident
from the fact that the examples were not accepted with adverbials that lead to questionable
semantics, e.g., *nopeasti* ('quickly'). In contrast to Haider's (2014) example from French, the
intervening adverbial does not lead to ungrammaticality. However, Haider's suggestion was
merely a coincidence rather than a well-founded argument, such that the grammaticality of
(42a,b) cannot count as evidence against VP compactness.

The data on adverbial intervention in Finnish presented in this section are not conclusive. On
the surface, adverbs can intervene between the verb and its complement and between two objects
in a ditransitive construction, which is not predicted to occur in a VO language. However, it
is not clear whether the adverbial intervenes inside VP, or whether both adverbs and the goal
arguments of ditransitive verbs are adjuncts on top of VP. Consequently, the biggest caveat in
determining adverbial intervention effects was that verb movement to a position higher than VP
could not be suppressed. The rather free placement of adverbials that was shown above could
be regarded an instance of scrambling but it could also be extraposition. Further data regarding
VP-internal variable word order will be presented in what follows.

Vilkuna (1998, 202) states that the order of the objects in a ditransitive construction is free, as in
Udmurt, and her corpus analysis revealed that the order of recipient and theme was variable even
when the objects were of equal length, thus ruling out Heavy-NP shift. The first investigation of
the order of arguments in ditransitive constructions can be found in Vilkuna (1989, 65*ff.*). There
she already finds differences in the binding properties of different kinds of arguments (ibid., 68)
depending on their position. However, later studies discussed postfinite variable word order in
more detail. In fact, Elsi Kaiser (2000, 2002) analyses the variable order of direct object and
'indirect object' in terms of scrambling, which, thus, necessitates a more detailed treatment.

Kaiser (2002) first provides the examples in (43) in order to show that variable ordering is

possible in principle.

(43) a. Minä annoin miehelle kirjan.
          I.NOM gave   man:ALL book:ACC
          'I gave a/the man a/the book.' (Kaiser, 2002, 1)
      b. Minä annoin kirjan   miehelle.
          I.NOM gave   book:ACC man:ALL

The example in (43) shows, once again, that Finnish exhibits variable word order on the surface,
but it is, again, not clear whether the variable word order is a result of VP-internal reorderings.
Next, Kaiser (2002, 3) argues that the indirect object follows the direct object in base order on
behalf of the binding data with a reciprocal in (44).

(44) a. Minä esittelin Liisan ja Marin   **toisilleen**.
          I.NOM introduced Lisa:ACC and Mari:ACC each.other:ALL:3SG
          'I introduced Liisa and Mari$_i$ to each other$_i$.' (Kaiser, 2002, 3; boldface by AS)
      b. ?Minä esittelin   **toisilleen**   Liisan   ja Marin.
          I.NOM introduced each.other:ALL:3SG Lisa:ACC and Mari:ACC
      c. ?Minä esittelin   Liisalle ja Marille **toisensa**.
          I.NOM introduced Lisa:ALL and Mari:ALL each.other:ACC:3SG
      d. *Minä esittelin   **toisensa**   Liisalle ja Marille.
          I.NOM introduced each.other:ACC:3SG Lisa:ALL and Mari:ALL

The most well-formed example is the one in (44a) in which the allative reciprocal follows the
accusative object. When the allative reciprocal appears in front of the accusative object (44b)
it can still be bound (otherwise the sentence would be ungrammatical and non-sensical). The
relative well-formedness of (44b) can be interpreted as a sign of reconstruction, a property of
$\overline{\text{A}}$-movement (Kaiser, 2002, 3). When the reciprocal is the accusative object, as in (44c,d), it
can be bound by the allative object only when it follows the allative object (44c) but not when
it appears in front of the allative object (44d). The contrast between (44b) and (44d) indicates
that the reciprocal has moved in (44b) but not in (44d), because otherwise the reciprocal could
be reconstructed at its base position in (44d), just as in (44b) (Kaiser, 2002, 3). Assuming that
(44d) represents the base order for the derivation of (44c) it could be argued that the accusative
object has moved to the position preceding the reciprocal in (44c). Since this movement enabled
the accusative object to bind the reciprocal, it can be regarded an instance of A-movement
(ibid.). With the exception of (44b), all of the examples in (44) exhibit surface scope such that
(44b) is the only example that requires the assumption of movement with reconstruction at base
position. Also see Kaiser (2000, 113–115) for an analysis along these lines.

There are at least two other options that would explain the facts in (44). One such analysis
would take the precautions of Haider (2014) into account; then, it could be assumed that ac-
cusative objects can always bind into allative objects, and that the accusative object is subject
to *heavy-NP shift* or *extraposition* in (44b). Another analysis could work on the assumption that
the allative object is part of a PP that behaves like any other adverbial. Under this assumption,
the allative object could be merged either as the most deeply embedded element as the sister of
V^0, resulting in surface V–ACC–ALL order, or it could be adjoined to VP, resulting in surface
V–ALL–ACC order (due to verb movement). These two orders of merger account for (44a,b) and
(d) as base generated orders. The well-formed order in (44b) would, then, occur when the allative
reciprocal is merged as the sister of V^0 followed by $\overline{\text{A}}$-movement of the allative reciprocal such
that the reciprocal would reconstruct at its base position. Note that the reconstruction in (44b)

would not occur in German under A-scrambling. The biggest question that would arise under such an analysis is why (44d) would not be able to be derived in the same way: the accusative object should be able to be merged first and then be subjected to $\overline{\text{A}}$-movement such that it could be reconstructed at its base position. The answer could be that the direct object cannot be moved in the way an adverbial can; for example, it would have to move to a VP-external position because the allative reciprocal marks the left edge of VP in (44d) (under the assumptions of this analysis). These two options are meant to show that even with the binding facts at hand, it will still prove difficult to ascertain whether a language allows for scrambling in the sense of Haider (2010) because there are many ways in which to account for the data with only limited access to speaker intuitions, i.e., by not being a native speaker oneself.

There are further similarities between the variable order of Finnish ditransitive arguments and German scrambling. In general, the order of arguments often reflects the discourse status of the elements following the order 'old' before 'new' (Kaiser, 2002, 10–11) as in German. Kaiser (2000, 124) also suggests that the ordering might be tied to definiteness (also, as in German). Boef and Dal Pozzo (2012) also argues that the word order in ditransitive clauses is determined by the 'discourse anaphoricity' of the scrambled item, as in Dutch and German. The further discussion in Kaiser (2002) identifies scope requirements as a reason for variable word order (Kaiser, 2002, 10) just as it was identified for German by Fanselow (2012). Another interesting similarity is that scrambling of parts of idioms is possible in German (Fanselow, 2012) as well as in Finnish (Kaiser, 2002, 12).

In sum, the variable word order between the arguments of a ditransitive clause in Finnish has a lot in common with German scrambling. The main difference is that the proposed scrambling of the reciprocal reconstructs the reciprocal in its base position with respect to binding. A considerable difference to German in the general makeup of ditransitive clauses is that the 'indirect object' might have more in common with adverbials in Finnish whereas the indirect object in German patterns more with arguments.

Another criterion that Haider (2010) applies is that *any phrase* should be able to scramble. In one of the analysis above it was already suggested that direct object might not be able to scramble. Further evidence for this claim would be found if the object could not cross the subject in the post-finite-V field.

The literature provides data on OSV sentences in Finnish that cannot be regarded as instances of VP-internal scrambling because they involve the rich left periphery of Finnish main clauses. The left periphery is well-documented since Vilkuna's (1989) seminal work and his been subject to thorough investigation ever since then (see especially Kaiser, 2006, and references therein). Because of this rich left periphery, any example that shows OSV order without any further preverbal material has to be excluded as evidence for VP-internal scrambling in a V-final VP. This applies, for example, to all examples in Holmberg (2000). This is why only XVOS order could count as evidence for VP-internal scrambling in Finnish.

Vilkuna (1989, ch. 4) discusses postverbal subjects in various contexts. However, she does not provide an example of a XVOS order. Therefore two of her XVSO sentences, presented in (45), were recompiled into the XVOS sentences in (46) and native Finnish IRC users were asked for their judgements. The subject is in boldface in both sentences. The acceptability ratings represent the judgements of the IRC users.

(45)   a. ??Laatikosta   oli   löytänyt aina   **Anna** sakset.
             drawer:ELA   had found   always Anna   scissors
             'In the drawer, Anna had always found a pair of scissors.'

<div align="right">(following Vilkuna, 1989, 188)</div>

         b. ??Kaksi viikkoa sitten poltti   **suuttunut väkijoukko** poliisiaseman.
             two   weeks ago   burned furious   crowd   police-station:ACC
             'Two weeks ago, a furious crowd burned down a/the police station.'

<div align="right">(following Vilkuna, 1989, 188)</div>

(46)   a. ??Laatikosta   oli   löytänyt aina   sakset **Anna**.
             drawer:ELA   had found   always scissors Anna
             int. 'In the drawer, Anna had always found a pair of scissors.'

         b. ?*Kaksi viikkoa sitten poltti   poliisiaseman   **suuttunut väkijoukko**.
             two   weeks ago   burned police-station:ACC furious   crowd
             int. 'Two weeks ago, a furious crowd burned down a/the police station.'

4 native Finnish speakers of #reddit-suomi and #learn-finnish judged all of the sentences in (45) and (46) as very bad. To two speakers, (45a) and (46a) were so ungrammatical that they were not even semantically recoverable, whereas (45b) and (46b) were understandable to all of the speakers. Three speakers responded that (46a), in contrast to (45a), could only be used in a poetic context, but that it is still correct. Likewise, (46b) was judged to be worse than (46b), but both were judged as correct only insofar as they are still understandable. Still, there was one speaker who judged (45b) and (46b) to be grammatical but infrequent. Thus, there is preliminal evidence that postverbal subjects of transitive verbs are barely acceptable overall but that XVOS order is even worse than XVSO order. These judgements cannot serve as direct reflections of the grammaticality of the sentences though because the baseline sentences from Vilkuna (1989) were already judged as questionable.

If an example as in (46a) were ungrammatical, there would be strong evidence that there is no scrambling across the subject in Finnish because the adverbial *aina* ('always') would mark the left edge of VP according to the analysis above. This way, there would be a second factor that ensured that the variable order of subject and object occurred inside VP (next to situating the variation in the domain following the finite verb). However, due to the marginality of the XVSO sentence, further acceptability ratings are needed in order determine the grammaticality of XVOS orders.

There is surface variable word order in the postverbal domain of Finnish but it is not clear whether this variable word order involves intervening XPs between the verb and the direct object inside the VP. Therefore it cannot be determined whether Haider's predictions with regard to the unavailability of scrambling in VO languages are borne out in Finnish. As with the data on adverbial intervention, the biggest caveat in coming to a definite conclusion is the obligatory verb movement. Another problem is the grammatical status of non-direct-object arguments in Finnish: if they behave like any other adverbial, they could be merged as the first element of the verb without causing intervention effects, and they could be adjoined at the VP node as VP adjuncts, which would also circumvent intervention. However, an analysis in terms of actual VP-internal scrambling (Kaiser, 2000, 2002) can also not be ruled out since the judgements on XVOS sentences were not conclusive. Before drawing final conclusions from the scrambling data in Uralic in the final subsection, a special property of Finnish case assignment will be pointed out that might bear on Neeleman's (2015) theory of adverbial intervention.

According to Neeleman (2015), adverbial intervention is the reflex of a ban against non-

local case assignment that is only visible in the postverbal domain. However, Finnish has been argued to exhibit *long-distance case assignment* by Pauli Brattico (2012) and Anne Vainikka and Brattico (2014). They convincingly show that the case of the direct object is sometimes determined by a remote functional head that is higher in the structure. In Neeleman's (2015) theory, this option could open up the possibility for interveners in what would normally be the 'case assignment domain' of the direct object in Finnish: there is a mechanism that saves the derivation if the 'regular' means of case assignment fail.

3.5   Conclusion: VP properties in Udmurt and Finnish

Haider (2010, 2013) predicts that head-initial phrases are compact in every language, meaning that phrases cannot appear between the verb and its complement in the VP of VO languages, which also excludes phrases from appearing between two objects ('adverbial intervention'), and that, as a consequence, word order in head-initial phrases is rigid. These restrictions do not hold in head-final phrases such as the VP of an OV language, which is why they allow for intervening adverbials and VP-internal word-order variability ('scrambling'). Interestingly, Neeleman (2015) makes the very same prediction. Determining whether a VO language lacks scrambling and adverbial intervention is difficult due to a manifold of potential confounds.

The Udmurt data were in line with Haider's predictions. It was shown that adverbials can be placed anywhere in the sentence, also between a verb and a direct object and between the two objects of a ditransitive verb. Building on the first study of variable word order in Udmurt (Tánczos, 2010) it could be established that the word order variability in Udmurt is similar to German scrambling: the directly preverbal position is occupied by the focus, and the rest of the elements can be freely ordered with respect to one another. The data showed that scrambling applies to any phrase regardless of its grammatical function such that any of the 6 possible permutations of the set of three phrases S, O, and X yielded a grammatical sentence. However, the effects of word order variation on binding with possessive suffixes did not match with the German data because bindees received a bound interpretation regardless of word order and grammatical function. Still, those data do not rule out an A-scrambling analysis because there is not enough information on the binding properties of possessive suffixes in Udmurt yet. The biggest puzzle was presented by an example in which both the object binder (with universal quantificational force) and the subject bindee (with existential quantificational force) were marked by a possessive suffix and received a covarying reading without the presence of overt determiners or quantifiers, see (31). Taken together, the Udmurt data are in line with Haider's predictions but the exact nature of the variability cannot be determined yet.

Haider's predictions could not be falsified with regard to the Finnish data presented here. Adverbials can be placed in any postverbal position, also between the verb and its complement and between the two objects of a ditransitive construction. This would contradict Haider's predictions were it not for the fact that the lexical verb always moves to a position higher than VP. This way, adverbs could be merged at a position that does not constitute a case of VP-internal intervention but which results in surface VXO order nonetheless. Verb movement could not be suppressed in the data of this study and other criteria could also not be applied. Furthermore, postverbal elements were shown to exhibit considerable word order variability in general, and the variability of arguments of ditransitive verbs had even been analysed as an instance of scrambling (Kaiser, 2000, 2002). It was argued that what corresponds to the indirect object behaves akin to other adverbials. Hence, it also allows for adjunction to VP such that surface word order

variability does not imply adverbial-intervention configurations inside VP. It was concluded that only XVOS orders could provide clear evidence in favour of VP-internal scrambling but the grammaticality of such sentences was difficult to determine due to the marginality of XVSO sentences. In sum, the surface word orders clearly contradict Haider's predictions but especially the verb movement makes it almost impossible to draw conclusions about potential VP-internal adverbial interventions.

The discussion in this section showed that it is very difficult to assess the degree of word order variability and to determine its potential source and locus. For OV languages criteria for the left edge of VP should be worked out. For VO languages, it is necessary to find reliable solutions for determining VP-internal adverbial intervention in spite of verb movement. Furthermore, should the definition of VP-internal scrambling essentially rely on binding relations, the diversity of binding strategies across languages needs to taken into account.

4 Subjects

This section will discuss subject–object asymmetries across languages. As in section 3, some further theoretical background (section 4.1) has to precede the discussion of the OV/VO-differences between German and English (section 4.2). The observed differences will be, first, that there are constructions in which extraction from subjects is possible in German but not in English, i.e., the *subject condition*, and second, that interrogative subjects can remain *in situ* in questions involving multiple interrogative phrases in German while this is not possible in English, for short, a difference in *superiority effects*. Thereafter, sections 4.3 and 4.4 will test for these properties in Udmurt and Finnish. In the final subsection (4.5), the conclusion will be drawn that both Uralic languages are in line with Haider's prediction.

4.1 Haider's theory of functional subject positions

To date, researchers are still eager to account for the subject–object asymmetries in English. There are recent articles and manuscripts devoted to explaining the old data about the subject condition and complementizer-trace-effects in new terms (Epstein et al., 2013; Haegeman, Jiménez-Fernández, & Radford, 2014; Bošković, 2015). Since these studies mostly revolve around English data, it is of general interest to investigate whether the English subject–object asymmetries hold in other languages as well (cf. Stepanov, 2007).

Subject–object asymmetries in English follow "indirectly" from Haider's axioms because an "obligatory structural subject position" or "mandatory functional subject position" in English follows "indirectly" from Haider's notion of licensing (Haider, 2010, 35–36; Haider, 2013, 87–89). Recall that in order for a constituent to be licensed, it needs to be in an m-command relation with a head, and it needs to be in the canonical directionality domain of a head. How this "functional spec position" comes about, then, will be exemplified with the ditransitive VP in (47), following the explanation in Haider (2010, 35–36; 2013, 89).

(47) $[_{\text{VP}}$ S $[_{\text{V}'}$ $\overrightarrow{\text{V}^0}$ DO $]]$

In the structure in (47), S is not licensed: while S is in an m-command relation with the head V^0 via the extended projection V', S does not follow V. One option would be to move V^0 to a position preceding S such that S is in the canonical directionality domain, and this is what happens in a VSO language like Irish (Haider, 2013, 89). In English, however, another head is merged with respect to which S can be licensed. This functional head is called F^0 by Haider and its position is equivalent to T^0 or I^0 in standard generative descriptions. When F^0 merges, S is in the canonical directionality domain of F^0 since S follows F^0. This is shown in (48).

(48) $\overrightarrow{\text{F}^0}$ $[_{\text{VP}}$ S $[_{\text{V}'}$ $\overrightarrow{\text{V}^0}$ DO $]]$

In the structure in (48), S is still not licensed, this time for the opposite reason than in (47): while S follows F^0, S is not in an m-command relation to F. This m-command relation can be established by movement of S to the specifier of F, as shown in (49).

(49) $[_{\text{FP}}$ S$_i$ $[_{\text{F}'}$ $\overrightarrow{\text{F}^0}$ $[_{\text{VP}}$ e_i $[_{\text{V}'}$ $\overrightarrow{\text{V}^0}$ DO $]]]]$

In the structure in (49), S is finally licensed, not by V but by F: S stands in an m-command

relation to F by being the sister of F′, and S is in the canonical directionality domain of F because the trace or copy of S in the "VP-internal subject position" is c-commanded by "the functional head" (Haider, 2010, 36). In sum, the subject has to move in English due to the identification requirement, and the landing site of the subject is the specifier of a functional projection. In contrast to this the OV structure does not require any functional heads in order to identify the subject, which is shown in (50).

(50) $[_{\text{VP/V}'}$ S $[_{\text{V}'}$ DO $\overleftarrow{\text{V}^0}$]]

The canonical directionality of V is progressive, and so, S is licensed right upon merger: it is in an m-command relation with V via V′, and it is in the canonical directionality of V. Therefore, the subject can remain *in situ* in German, and hence there arises no mandatory structural subject position inside a functional specifier, e.g., SpecTP.

The proposed fundamental difference in clausal architecture is very unconventional since it runs counter to the idea of a universal EPP feature and the universality of a TP layer in general. Note that such a proposal had been proposed for Japanese as well (see Fukui, 1986, 205). Most generative analyses of German assume there to be a VP-external functional projection with a structural subject position that is merely optionally occupied by the subject (see the overview in Jurka, 2010, 40–45). Haider on the other hand denies the existence of a TP in German clause structure because the evidence for a TP in English is not there in German (Haider, 2010, 68–72).

The different clause structure of OV and VO languages interacts with other syntactic constraints. These interactions give rise to certain subject–object asymmetries in English that are absent in German. According to Haider, the direct consequence of a mandatory subject position is that it has to be overtly realized. The reason for this is that "a mandatory part of the structure [...] must be 'interpreted', that is, receive a status in the derivation. Leaving it radically empty [...] would be to ignore the structure" (Haider, 2010, 36–37). Sentences, that would be subjectless in German, need an *expletive* in the Germanic VO languages and "[T]he expletive is a way of syntactically interpreting the structure" (Haider, 2010, 37; Haider, 2013, 90). It is hard to tell what the notion of 'syntactic interpretability' actually means, but the prediction is this: "In a VO clause structure, the *subject position* must be lexicalised. In the absence of a subject argument, an expletive subject is mandatory (modulo pro-drop or topic-drop)" (Haider, 2010, 11; emphasis by Haider). With the addendum in parenthesis, Haider concedes that obligatory subject expletives cannot be diagnosed in pro-drop languages. This is also an exclusion criterion in Haider (2014, 12–13).

The two Uralic languages under discussion, Udmurt and Finnish, both exhibit subjectless sentences (for Udmurt: F. Gulyás and Speshilova (2014); for Finnish: Helasvuo and Vilkuna (2008), for occasional obligatory expletives see Holmberg and Nikanne (2002); for an overview for the Finno-Ugric languages: F. Gulyás (2011a)). However, both of them are at least partial pro-drop languages as well (for Udmurt: Winkler, 2011, 150*f.*; for Finnish: Holmberg (2005), Holmberg, Nayudu, and Sheehan (2009)). For this reason nothing can be concluded with respect to obligatory subject expletives in these languages according to Haider's criteria. Therefore this topic will not be discussed any further in this study.

Two prominent subject–object asymmetries of English that follow from the structural subject position are the *subject condition* and *superiority effects*. How these are brought about according to Haider will be discussed in the following section.

4.2 Germanic

There is a huge body of work that deals with the conditions under which a subject constitutes an island for extraction (for an overview, out of many, see Gallego and Uriagereka, 2007, 155–157). Many of these studies also sought to treat the ban on extraction from subjects as special cases of more general phenomena, e.g., a ban of extraction from moved elements also known as freezing Corver (to appear). Haider's treatment of the subject condition also rests on a more general assumption. The core assumption is that *extraction from constituents in specifiers of functional projections is not licit* — and, by assumption, subjects in English occupy the specifier of a functional projection (see above); consequently, extraction from subjects should not be possible in English. In fact, any preverbal phrase in a VO language should be opaque for this reason.

It should be treated as a surprising fact that extraction from preverbal arguments in English (i.e., subjects) is not possible in most cases, while preverbal arguments (i.e., all arguments) in German are transparent (where preverbal means preverbal in the VP). Only postverbal constituents are transparent for extraction in English. This well-known English subject–object asymmetry with regard to extraction is exemplified by (51). In all examples in (51) *what* is extracted from the infinitival clause *to read what*.

(51)   a.   **What**$_i$ does Peter promise **[to read** e_i**]** on vacation?
       b.   *__What__$_i$ does **[to read** e_i**]** on vacation annoy Peter?
       c.   *__What__$_i$ does **[to read** e_i**]** on vacation please Peter?

It is generally possible to move the interrogative phrase *what* out of the infinitival clause which is illustrated by (51a). The same is not possible when the infinitival clause is in the subject position as in (51b,c). This way the contrast between (51a) and (51b,c) illustrates that extraction from a phrase, that is possible when the phrase is in a postverbal position in English, is not possible when the same phrase is in the preverbal subject position.

According to Haider, the ban on extraction from subjects was held to be universal even though Haider showed very early that extraction from subjects is possible in German (Haider, 2010, ch 2.5). The examples in (52) replicate the data from Haider but are different in order to match with the Udmurt test sentences. The verb for the extraction from object in (52a) had to be chosen such that it is not a bridge verb.

(52)   a.   **Was**$_i$ verspricht Peter im   Urlaub **[**e_i **zu lesen]**?
            what promises   Peter in.the vacation   to read
            'What does Peter promise to read on vacation?'
       b.   **Was**$_i$ nervt   Peter   im   Urlaub **[**e_i **zu lesen]**?
            what annoys Peter:[ACC] in-the vacation   to read
            'What is the x such that it annoys Peter when Peter reads x on vacation?'
       c.   **Was**$_i$ gefällt Peter   im   Urlaub **[**e_i **zu lesen]**?
            what pleases Peter:[DAT] in-the vacation   to read
            'What is the x such that it pleases Peter when Peter reads x on vacation?'

A lot of counterevidence has been forwarded against Haider's claim of a missing subject condition showing that examples such as in (52) are exceptions rather than the rule (cf. Jurka, 2010, 122–127). This counterevidence could also be the reason why Haider's examples of extraction from subjects did not find resonance with the linguistic community (according to Haider, 2010, 79*ff.*), but Haider does not mention the rebuttals to his examples either. As a very recent example,

Jurka (2010) carried out several acceptability rating studies which ought to compare extraction from subjects to extraction from objects. The experiments involved different kinds of subjects in different kinds of constructions in several languages. In each of the experiments on German, extraction from subjects was much worse than extraction from objects. Jurka (2010) reaches the conclusion that there is a universal subject condition that cannot be reduced to a ban on extraction from moved phrases (*freezing*). With respect to the present study, the biggest problem in his experimental design is there was no baseline ungrammatical condition which would allow for the comparison of effect sizes, as in Häussler, Grant, Fanselow, and Frazier (2013). This would have allowed for the separation of general performance constraints from grammatical constraints and could have revealed whether a violation of the subject condition is more severe in English than in German. For the time being, it will be taken for granted that there is no subject condition in German as a working assumption despite the counterevidence.

Haider's explanation of the other prominent English subject–object asymmetry, the superiority effect, requires some further assumptions (Haider, 2010, 117; 2013, 141). First, According to Haider, interrogative phrases are potential operators which implies that they can potentially move to an operator position. They can only move *potentially* since in multiple *wh*-questions all but one interrogative phrase have to stay *in situ* in English. An operator that moves to its designated operator position is called an active operator. Second, every specifier of a functional projection is an operator position. This also applies to the specifier hosting the subject in English. Third and last, when a potential operator is in an operator position it necessarily becomes an active operator. So when the subject of an English clause is an interrogative phrase, it is a potential operator. This potential operator has to move to the structural subject position in order to be licensed. The structural subject position is an operator position such that the potential operator has to become an active operator, and an active operator has to move to its designated operator position. Consequently, a subject interrogative phrase can never remain *in situ* because it always becomes an active operator. A similar effect cannot occur in German due to the lack of a structural subject position. However, the additional assumptions are not trivial and cannot be considered the consensus of researchers working on this topic (Häussler & Fanselow, 2015).

The examples in (53) show the superiority effect for English in matrix and embedded clauses. The subject interrogative phrase is in boldface. Embedded clauses are added because it could be that superiority effects are obviated or concealed by a rich left periphery and associated movements into left peripheral positions in some languages. Embedding cannot ensure that the left periphery is inaccessible which is evident from the Scandinavian languages that show embedded V2, but it could help to diminish false negatives, in this case, a lack of superiority effects in the matrix clause of a VO language. Also note that the test sentences below allow for a pair-list answer. This is meant to control for the possibility of an *in situ* interrogative subject with an echo question reading. Again, the lexicalisations of the Germanic sentences are chosen such that they match the Udmurt sentences.

(53)   a.   Matrix interrogative
            (i)   **Who** gave who what?   S>DO>IO
            (ii)   *Who did **who** give what?   IO>S>DO
            (iii) *What did **who** give who?   DO>S>IO
       b.   Embedded interrogative

      (i)   Mary asks **who** came when?   S>ADV

      (ii) *Mary asks when **who** came?   ADV>S

The examples in (54) show the contrast to English: German does not exhibit a superiority effect.

(54)   a.   Matrix interrogative

        (i)   **Wer**   hat wem   was   gegeben?   S>IO>DO

              who.NOM has who.DAT what[.ACC] given

              'Who gave who what?'

        (ii) Wem   hat **wer**   was   gegeben?   IO>S>DO

              who.DAT has who.NOM what[.ACC] given

        (iii) Was   hat **wer**   wem   gegeben?   DO>S>IO

              what[.ACC] has who.NOM who.DAT given

    b.   Embedded interrogative

        (i)   Marie fragt, **wer** wann gekommen war?   S>ADV

              Mary asks   who when come   AUX

              'Mary asks who came when?'

        (ii) Marie fragt, wann **wer** gekommen war?   ADV>S

              Mary asks   when who come   AUX

The lack of superiority effects in German was called into question by an acceptability rating study by Featherston (2005), but replications of that study which controlled for animacy could reinterpret Featherston's (2005) findings as the result of processing difficulties (Fanselow, Schlesewsky, Vogel, & Weskott, 2011). A further, cross-linguistic acceptability rating study by Häussler et al. (2013) which involved extractions from relative clause islands as a baseline for ungrammaticality could even come to the conclusion that superiority effects in English occur due to a *grammatical* constraint while lowered acceptability for superiority violating sentences in German can be attributed to extragrammatical factors. Due to the evidence from these experimental studies it is safe to say that there is a categorial and not merely a gradient difference between English and German multiple *wh*-questions. In order to conclude the theoretical background on the structural subject position, the next paragraph will sum up the predictions with regard to the behaviour of subjects in OV and VO languages.

If every VO language requires there to be a structural, functional subject position, VO languages should not allow for extraction from preverbal positions and they should not allow for subject interrogative phrases to remain *in situ*. The predicted structures associated with extraction from subjects are represented in (55), and the predicted outcomes for multiple *wh*-questions are shown in (56). The prerequisite for testing extraction from subjects is that a language has a movement operation (Haider, 2014, 25), and the prerequisite for testing superiority effects is that there is obligatory fronting of interrogative phrases and that multiple *wh*-questions are licit (ibid., 23–24). M stands for any moved element. *Wh* stands for any interrogative phrase and wh_S stands for a subject interrogative phrase.

(55)   No extraction from preverbal phrases in VO; both conditions have to hold

      a. M_i ... V ... [$_{XP}$ ... e_i ...] ...

      b. *M_i ... [$_{XP}$ ... e_i ...] ... V ...

(56)   No *in situ* interrogative subjects; both conditions have to hold

      a. wh_S ... *wh* ...

      b. *wh ... wh_S ...

In OV languages the contrasts in (55) and (56) are predicted to not occur, and (55a) cannot even occur in strict OV languages. Thus, counterevidence to Haider's predictions would be constituted by the outcomes in (56) and (57). SP stands for a phrase that is the subject of the clause.

(57)   Counterevidence to extraction from subjects in OV; both conditions have to hold
    a. $M_i \ldots [_{XP} \ldots e_i \ldots] \ldots$
    b. *$M_i \ldots [_{SP} \ldots e_i \ldots] \ldots$

The following subsections will test these predictions in Udmurt and Finnish.

4.3   Udmurt

Udmurt does not exhibit obligatory fronting of interrogative phrases. In the corpus study by Vilkuna (1998, 207) 43% of interrogative phrases were in immediately preverbal position and another 38% were in preverbal position with intervening material. These counts did not take the base-position of the element into account, that is, it could be that most of the immediately preverbal *wh*-phrases are direct objects or adverbials, and that the preverbal non-verb-adjacent *wh*-phrases are subjects or indirect objects. In this case, these elements could be *in situ*. These counts show, however, that *wh*-phrases do not have to appear in sentence-initial position. Additionally, Winkler (2011, 146) states that there is no designated position for interrogative phrases, and Suihkonen (1995, 318) states that "[t]he neutral position of the question word is initial, but also the other orders are possible". Therefore it can be concluded that there is no *obligatory wh*-movement in Udmurt, but that fronting of an interrogative phrase is, in general, possible. Echo question readings for preverbal *wh*-phrases can be ruled out entirely because echo questions are formed by postverbal *wh*-elements (Suihkonen, 1995, 319; Winkler, 2011, 148).

Since there is no *obligatory wh*-movement in Udmurt, superiority effects are not expected to occur even if there was a structural subject position. However, *wh*-movement in Udmurt suffices to diagnose the transparency of subjects, which will be done in what follows.

As in the Germanic examples above, the subject condition is tested using infinitival clauses in subject- and object-experiencer clauses. The subject status of an infinitival clause is assumed when the experiencer shows a case other than nominative. The infinitival clauses also determine the inflection of the finite verb, but this is not visible in the test examples because both the infinitival clause and the experiencer are 3SG. In addition to merely employing interrogative pronouns, d-linked complex interrogative phrases have also been included. This serves two purposes. First, subject condition violations in English can be ameliorated by using d-linked *wh*-phrases (Goodall, 2014) such that potential subject condition effects in Udmurt could be ameliorated as well, and second, the Germanic examples used above can also be reanalysed as a split NP because infinitives can also be used as an attribute or argument in Germanic (as in *the possibility to read*). This is also the case in Udmurt (Winkler, 2011, 112), but this construal is not possible with the complex *wh*-phrases used below. They would rather require an attributive participle (cf. Winkler, 2011, 172). The examples in (58) serve as the baseline condition showing that extraction from infinitival clauses is possible in principle. Note that the experiencer of the clauses below bears nominative case (zero marking). It also has to be mentioned that there is no obligatory plural marking in Udmurt (Winkler, 2011, 36–39) but it seems that the syntactic context in the examples below only allows for a plural interpretation.

(58)   a.   **Мар**$_i$ отпускын Педор   [e_i **лыдӟыны**] яратэ?
             what holiday:IN Peter:[NOM]   read:INF   love:PRS.3SG
             'What does Peter like to read on holiday?'

        b.   [**Кудзэ   книгаез**]$_i$ отпускын Педор   [e_i **лыдӟыны**] яратэ?
             which:ACC book:ACC holiday:IN Peter:[NOM]   read:INF   love:PRS.3SG
             'Which books does Pedor like to read on vacation?'

The crucial test cases are presented in (59). In these examples the experiencer bears dative case
(*-лы*) such that it is probable that the infinitival clause is the subject of the clause.

(59)   a.   **Мар**$_i$ Педор-лы отпускын [e_i **лыдӟыны**] кельше?
             what Peter-DAT holiday:IN   read:INF   please:PRS3SG
             'What is the x such that it pleases Peter when Peter reads x on vacation?'

        b.   [**Кудзэ   книгаез**]$_i$ Педор-лы отпускын [e_i **лыдӟыны**] кельше?
             which:ACC book:ACC Peter-DAT holiday:IN   read:INF   please:PRS3SG
             'What is the x such that it pleases Peter when Peter reads x on vacation?'

If the infinitival clauses are considered subjects in (59), then those examples involve extraction
from a subject. This would constitute strong evidence that there is no subject condition in
Udmurt because the pattern in (56) is not instantiated. If the examples in (59) are not convincing
though, the examples in (60) show extraction from the subject of a predicative construction. The
infinitival clause was placed postverbally in order to ensure that the interrogative phrase did not
merely move to the front of the infinitival clause or that it stays *in situ* since the movement
would be string vacuous. The postverbal placement of the infinitival clause is possible due to
extraposition or due to the variability in the verb complex, which will be discussed in section
5.1.2. The position of the adverbial was varied in order to show that its position does not matter.

(60)   a.   **Мар**$_i$ меда   [e_i **лыдӟыны**] кышкыт?
             what probably   read:INF   dangerous
             lit. '*What to read is probably dangerous?'

        b.   **Кытчы**$_i$ меда   кышкыт [e_i **мыныны**]?
             where   probably dangerous   go:INF
             lit. '*Where to go is probably dangerous?'

The examples in (60) are another piece of evidence in favour of Haider's prediction that OV
languages should not exhibit the subject condition because those extractions are licit as well.
With the data at hand it can be concluded that subjects do not form an island for extraction in
Udmurt. Next up Udmurt will be tested for superiority effects.

The literature on Udmurt explicitly mentions questions with multiple interrogative phrases.
Suihkonen (1995, 318–319) states that "[i]f more than one element is questioned simultaneously,
the position of the respective word/phrase is not dependent on grammatical factors" and adduces
one example of a superiority violating multiple *wh*-question. Winkler (2011, 147) does not show a
superiority violating question but says that "the order of the question elements varies depending
on which element is focused: the designated position for that element is the sentence-initial
position" (translation by AS). Recall, however, that a non-rigid ordering is not unexpected since
there is no obligatory fronting of interrogative phrases in Udmurt. For this reason, the varying
word order might also be reduced to scrambling (see section 3.3).

   The sentences in (61) show that interrogative subjects need not be the highest interrogative
element in a sentence, regardless of whether the multiple *wh*-question is a matrix clause (61a),

a preverbal finite embedded clause (61b) or a postverbal finite embedded clause (61c). The complementizer is only optional in Udmurt. The interrogative subject is always in boldface in order to easily determine its non-clause-initial position.

(61)　a.　Matrix interrogative
　　　(i)　**Кин**　кин-лы　мар　сётӥз?　　　　　　S>IO>DO
　　　　　who.NOM who-DAT what[.ACC] give.PST.3SG
　　　　　'Who gave who what?'
　　　(ii)　Кин-лы　**кин**　мар　сётӥз?　　　　　IO>S>DO
　　　　　who-DAT who.NOM what[.ACC] give.PST.3SG
　　　(iii)　Мар　**кин**　кин-лы　сётӥз?　　　　　DO>S>IO
　　　　　what[.ACC] who.NOM who.DAT give.PST.3SG
　　　(iv)　Мар　кин-лы　**кин**　сётӥз?　　　　　DO>IO>S
　　　　　what[.ACC] who-DAT who.NOM give.PST.3SG
　　b.　Embedded interrogative, preverbal
　　　(i)　Ондӥ [**кин** ку　бертӥз　　(шуыса)] юаз.　　S>ADV
　　　　　Ondi who when come.PST.3SG COMP　ask.PST.3SG
　　　　　'Ondi asked who came when?'
　　　(ii)　Ондӥ [ку　**кин** бертӥз　　(шуыса)] юаз.　　ADV>S
　　　　　Ondi when who come.PST.3SG COMP　ask.PST.3SG
　　c.　Embedded interrogative, postverbal
　　　(i)　Ондӥ юаз　　[**кин** ку　бертӥз　　(шуыса)]. S>ADV
　　　　　Ondi ask.PST.3SG who　when come.PST.3SG COMP
　　　　　'Ondi asked who came when?'
　　　(ii)　Ондӥ юаз　　[ку　**кин** бертӥз　　(шуыса)]. ADV>S
　　　　　Ondi ask.PST.3SG when who come.PST.3SG COMP

Especially the examples in (61a) illustrate that word order in multiple *wh*-questions is very free. The meaning of the sentences is the same and they do not involve echo-question readings. Furthermore, the sentences with non-canonical order do not seem to be any less acceptable then the sentences with S–IO–DO–V order. Recall that Fanselow et al. (2011) found that superiority violations in German were degraded when both interrogative phrases were animate. Animacy does not seem to impact the acceptability in Udmurt, as shown in (62).

(62)　a.　Герей [**кин** кин-э　учкиз　　(шуыса)] тодэ.
　　　　　Gerej who　who-ACC see:PST.3SG COMP　　know:PRS.3SG
　　　　　'Gerej knows who saw who.'
　　b.　Герей [кин-э　**кин** учкиз　　(шуыса)] тодэ.
　　　　　Gerej who-ACC who see:PST.3SG COMP　　know:PRS.3SG

It seems that superiority violations in Udmurt do not lead to a decrease in acceptability in general, but only controlled acceptability rating studies could establish this as a fact. If they are generally as acceptable as the canonical order, the reason for this might relate to the absence of obligatory *wh*-movement.

It can be concluded that there are no superiority effects in Udmurt. However, it is not clear whether the reason for this absence is due to the lack of a structural subject position or due to the lack of obligatory fronting of interrogative phrases.

In sum, Udmurt does not show evidence for a structural subject position. The main evidence for this conclusion is the absence of the subject condition. The next subsection will investigate whether Finnish follows the predictions of Haider's proposal.

4.4 Finnish

There is obligatory fronting of interrogative phrases in Finnish (Vilkuna, 1989, 38; Huhmarniemi, 2012, 48). Therefore Finnish meets the prerequisites for testing for the subject condition, which required any movement operation, and for testing for superiority effects. In the following paragraphs the subject condition will be tested.

Saara Huhmarniemi has dealt extensively with $\overline{\text{A}}$-movement and specifically *wh*-movement in Finnish. Her works, both her dissertation (Huhmarniemi, 2012) and her summary of extraction islands in Finnish (Huhmarniemi, 2009), provide an ideal starting point for the investigation of the subject condition in Finnish.

Huhmarniemi (2009, 27) states that "extraction out of phrases that occupy a subject position is generally not available" and provides the contrast in (63), where the interrogative pronoun *mitä* ('what.PAR') is extracted from an object in (63a) and from a subject in (63b), thus matching the pattern in (55). The glosses and translations are equal those in Huhmarniemi (2009).

(63)   a. **Mitä**$_i$ Pekka sai [tilaisuuden tutkia e_i]?
        what Pekka got opportunity study
        'What Pekka got the opportunity to study?' (Huhmarniemi, 2009, 28)
    b. ***Mitä**$_i$ [tilaisuus   tutkia e_i] sattuu harvoin omalle kohdalle?
        what opportunity study   happens rarely to oneself

While (63) only shows the unavailability of extraction from subject DPs, (64) shows that the same holds for CPs as well. The example in (64b) shows both *minkä* ('what.ACC') and *mitä* ('what.PAR') because the Finnish equivalent of *buy* appears with a partitive object by default but Huhmarniemi chose to extract an accusative object. The different case has no impact on grammaticality though.

(64)   a. **Kenet**$_i$ Pekka luuli   [*(että) Merja oli tavannut e_i]?
        who.ACC Pekka thought that   Merja had met
        'Who did Pekka think Merja had met?' (Huhmarniemi, 2009, 29)
    b. ***Mikä/mitä**$_i$ [(se)   että Pekka osti e_i] harmitti Merjaa.
        what.ACC/PAR it.NOM that Pekka bought   annoyed Merja.PAR
        int. 'What is the x such that it annoys Merja when Pekka buys x?'
                                          (Huhmarniemi, 2009, 30)
    c. **Mitä**$_i$ Merja vihaa [että Pekka ostaa e_i]?
        what.PAR Merja dislike that Pekka buys
        'What does Merja hate that Pekka buys?' (IRC: #reddit-suomi)

The CP in (64a) is selected as a complement and it allows for the extraction of a direct object as long as the complementizer *että* ('that') is present. In contrast, the CP in (64b) is the subject of an object-experiencer verb (note that *Merja* appears with an additional *-a*) and extraction from this subject CP is not licit. The example in (64c) was constructed in parallel to (64b) in order to be able to show a near minimal pair: it involves a subject experiencer (note that there is no extra *-a* on *Merja*) and the object CP is the stimulus or theme. According to the judgements of 9 native Finnish IRC users on the channel #reddit-suomi, extraction is grammatical in (64c). These speakers also judged (64b) to be ungrammatical.

Huhmarniemi discusses subject islands in detail in section 4 (pages 69*ff.*) of her 2009 article. There she also discusses cases where subjects are merely weak islands, and she also discusses interesting examples of subjects in infinite clause in which the V2-like behaviour of Finnish

might be inhibited. Nevertheless, she concludes that, in the cases she tested, "extraction out of the subject position seems to be very limited" (Huhmarniemi, 2009, 73). This is a clear subject–object asymmetry with regard to extraction as it was predicted by Haider.

Additional data were collected because Haider predicts that is not the status of being a subject that causes the ungrammaticality in the cases above: it is the preverbal position which is, by assumption, necessarily a specifier of a functional projection in VO languages, but subjects in Finnish are not required to be in preverbal position (Vilkuna, 1989; *inter alia*). In fact infinitival subjects of object-experiencer verbs can appear only in postverbal position (65a,b), just as their object counterparts in subject-experiencer constructions (65c,d).

(65) a. Merja-a   harmitti **[tutkia   taloutta]**.
          Merja-PAR annoyed study.INF economy
          'To study economy annoyed Merja.'
      b. ***[Tutkia   taloutta]** harmitti Merjaa.
          study.INF economy   annoyed Merja-PAR
      c. Merja   vihaa   **[tutkia   taloutta]**.
          Merja:[NOM] disliked study.INF economy
          'Merja hates to study economy.'
      d. ***[Tutkia   taloutta]** vihaa   Merja.
          study.INF economy   disliked Merja:[NOM]

As one would expect extraction from the infinitival clauses in (65b,d) cannot be grammatical, as shown in (66), since the basic sentence is already ungrammatical.

(66) a. ***Mitä**$_i$ **[tutkia e_i]** harmitti Merjaa?
          what.PAR study.INF   annoyed Merja-PAR
          int. lit. 'What did to study annoy Merja?'
      b. ***Mitä**$_i$ **[tutkia e_i]** vihaa   Merja?
          what.PAR study.INF   disliked Merja:[NOM]
          int. 'What did Merja hate to study?'

In contrast to (66), extraction from the postverbal infinitival clauses is possible regardless of whether the infinitival clause is the subject (67a) or the object (67b) of the matrix clause.

(67) a. **Mitä**$_i$ Merja-a   harmitti **[tutkia e_i]**?
          what.PAR Merja-PAR annoyed study.INF
          lit. 'What did to study annoy Merja?'
      b. **Mitä**$_i$ Merja   vihaa   **[tutkia e_i]**?
          what.PAR Merja:[NOM] disliked study.INF
          'What did Merja hate to study?'

The contrast between (66) and (67) provides evidence that the syntactic function of the infinitival clause does not determine its status as an extraction island because extraction is possible from both an object (67b) and and a subject (67a). As predicted by Haider, it is the preverbal position that turns the subject into an island. Further evidence for this claim could be gathered from the example in (68b), which is a variation on (64b) (repeated in (68a)), and in which the object experiencer appears in the preverbal position and the finite subject CP appears postverbally.

(68) a. ***Mikä**$_i$ [(se)   että Pekka osti e_i] harmitti Merja-a.
          what.ACC it.NOM that Pekka bought   annoyed Merja-PAR
          int. 'What is the x such that it annoys Merja when Pekka buys x?'

(Huhmarniemi, 2009, 30)

b. %**Mikä**$_i$ Merja-a   harmitti [että Pekka osti e_i].
what.ACC Merja-PAR annoyed that Pekka bought
'What is the x such that it annoys Merja when Pekka buys x?'

(judgements: IRC: #reddit-suomi,#jollasuomi)

c. Merjaa   harmitti että Peter osti   tomaatteja?
Merja-PAR annoyed that Pekka bought tomatoes-PAR
'That Pekka bought tomatoes annoyed Merja.'

(judgements: IRC: #reddit-suomi,#jollasuomi)

The baseline in (68c) shows that postverbal placement of the subject CP is, in principle possible, as all of the 8 native speakers of Finnish from the IRC channels agreed. The native speakers also agreed that (68a) is ungrammatical. The speakers were at strife over the interesting case of an extraction from a postverbal subject in (68b), which is indicated by the percentage sign. Some speakers rejected the example entirely, while some speakers accepted the example but responded that it was very marked and that it would never actually be uttered. Thus, it is not entirely clear whether there is a grammatical constraint against extraction from preverbal positions in Finnish in general.

The data from this section have shown that there is a noticeable subject–object asymmetry with regard to extraction in Finnish. While there is variability in what kinds of subjects constitute extraction islands, the comparison to Udmurt makes it clear that subjects have a special status with regard to extraction in Finnish. Future research on Finnish should investigate whether preverbal positions are opaque in general. In what follows, superiority effects in Finnish will be discussed.

Saara Huhmarniemi has also worked on Finnish multiple *wh*-questions (Huhmarniemi & Vainikka, 2011). Huhmarniemi and Vainikka do not mention superiority effects themselves but speak more generally of an intervention, but their data show that there are superiority effects in Finnish.

Finnish employs at least three kinds of multiple *wh*-questions: questions with a single-pair answer are formed by simply using multiple *wh*-elements of which one stays in situ (69a) whereas questions with a pair-list answer are formed by marking one of the *wh*-elements with *-kin* (69b) (Huhmarniemi & Vainikka, 2011, 227–228). A third type involves echo questions in which one of the *wh*-elements is marked by a notable accent; as in English and German, such elements always stay *in situ* (69c).

(69)   a.   Kuka   seisoo **kenen** varpailla?
who.NOM stands whose toes.on
'Who stands on whose toes?' (single-pair, Huhmarniemi & Vainikka, 2011, 227)

b.   Mitä   **kuka-kin**   osti?   DO>S
what.PAR who.NOM-KIN bought
'What did each of whom buy?' (pair-list, Huhmarniemi & Vainikka, 2011, 229)

c.   Mitä   KUka   osti?   DO>S
what.PAR who.NOM bought
'What did WHO buy?' (echo question, Huhmarniemi & Vainikka, 2011, 229)

The examples in (69b,c) appear to be superiority violations, but Huhmarniemi and Vainikka (2011, 229) argue that the *wh*-elements in (69b) and (69c) are not *active*: *wh*-elements with echo question intonation always stay *in situ* and so do *-kin*-marked elements. Only the question in (69a) involves two active *wh*-elements as required for the testing of superiority effects. Huhmarniemi and Vainikka (2011, 228–229) take the superiority effect in (70a) as an indication for

the active state of the subject *wh*-element.

(70)   a. *Mitä   **kuka**   osti?   DO>S
          what.PAR who.NOM bought
          'What did who buy?' (single answer) (Huhmarniemi & Vainikka, 2011, 229)
       b. *Kenelle **kuka**   osti   kirjan?   ADV>S>DO
          who.ALL who.NOM bought book.ACC
          int. 'Who bought a book for whom?' (Huhmarniemi, 2012, 77)

The example in (70a) illustrates that a subject interrogative phrase, that does not remain *in situ* due to other reasons, cannot remain *in situ* in Finnish. This matches the predicted pattern in (56). Note, however, that Huhmarniemi and Vainikka (2011, 228–229) attribute this effect to an intervention effect because they state that crossing *wh*-movement is always degraded in Finnish. They do not provide the relevant examples though. The example in (70b) is taken from Huhmarniemi's dissertation and it shows that the ban is not merely a ban against crossing partitive objects since the fronted *wh*-element bears allative case. There is no need for testing embedded multiple *wh*-questions because these structures need only be tested in case superiority effects are obviated in matrix clauses. Thus, the data from Huhmarniemi and Vainikka (2011) provide strong evidence that there is a superiority effect in Finnish.

The prediction for Finnish as a VO language are borne out: preverbal phrases are opaque for extraction, and there is a superiority effect. Hence, there is evidence for a structural subject position in Finnish, or at least some *functional* projection atop VP which hosts preverbal material. Additionally, there is a complementizer-trace effect on the extraction of subjects (Huhmarniemi, 2009, 29).

4.5   Conclusion: Subjects in Udmurt vs. Finnish

In this section Haider's (2010, 2013) theory about the special status of subjects in VO languages was presented and tested against his predictions with data from Udmurt and Finnish. According to Haider's theory only VO language should exhibit a structural subject position. More generally every preverbal position in VO languages is supposed to be a specifier of a functional projection. He also assumes, first, that specifiers of functional projections are extraction islands and, second, that specifiers of functional projections are operator positions. As a consequence, extraction from preverbal positions should be possible in OV languages, but not in VO languages (*subject condition*), and interrogative subjects should be able to remain *in situ* in open questions with multiple interrogative phrases in OV languages, but not in VO languages (*superiority effects*). This prediction was made on the grounds of the observation that the subject condition and superiority effects, which have been attested in English at first, are absent from German.

    The survey in the Uralic languages uncovered the predicted difference: there is no evidence for a structural subject position in Udmurt, but there is in Finnish. The decisive point can only be the extraction from subjects because Udmurt does not exhibit obligatory fronting of interrogative phrases such that there is a another reason why subjects can remain *in situ* apart from the absence of a structural subject position. Fortunately both Finnish and Udmurt exhibit displacement of elements. The test material included subject- vs. object-experiencer constructions in which an infinite or finite clause functioned as the subject or the object as indicated by the case of the experiencer. The data for Finnish mostly stemmed from Saara Huhmarniemi (2009, 2012). In Udmurt extraction out of infinite subject clauses was as grammatical as extraction out of infinite

object clauses, regardless of whether the clause was pre- or postverbal. In contrast, extraction from a preverbal finite subject CP in Finnish lead to ungrammaticality whereas postverbal finite object CPs were transparent. Since Finnish allows for more word order variation than English, extraction from postverbal subjects could also be tested. If the finite subject CP appeared in postverbal position, the extraction was more acceptable. Postverbal infinite clauses were fully transparent regardless of whether they functioned as a subject or an object. Much more data with different kinds of subjects and different positions for the subject in the sentence will have to be collected in order to be able the fully understand the conditions under which subjects constitute an extraction island (*cf.* Huhmarniemi, 2009, 69), but the preliminary data strongly suggest that Haider's prediction is borne out and that there is a position-dependent subject–object asymmetry with regard to transparency in Finnish.

As expected, Udmurt did not show any sign of superiority effects. But as predicted, Finnish did not allow for *in situ* subjects in multiple *wh*-questions. This fact could be established based on Huhmarniemi and Vainikka (2011).

Haider's third observation associated with subjects – the obligatoriness of subject expletives – was not tested because both Udmurt and Finnish are partial-pro-drop languages, which excludes them from testing. However, the literature documents many examples of subjectless impersonal sentences, including subjectless passive-likes of intransitive verbs, in both Udmurt (F. Gulyás & Speshilova, 2014) and Finnish (Helasvuo & Vilkuna, 2008). Still, Finnish employs expletives at least in some contexts (Holmberg & Nikanne, 2002), while an expletive could not be identified for Udmurt (F. Gulyás, 2011a, and p.c.).

Additionally, Finnish even shows *that*-trace-effects, i.e., for those speakers of Finnish that accept long-distance movement in principle, subjects of finite embedded clause cannot be extracted (Huhmarniemi, 2009, 29).

All in all, Haider's predictions with regard to subjects can be said to be borne out in the Uralic languages under investigation. One of three criteria could be reliably tested in Udmurt and Udmurt behaved as predicted. Two of three criteria could be tested in Finnish and they turned out as predicted as well. If it is true that specifiers of functional projections do not allow for extraction, it can be concluded that preverbal positions in Udmurt are not specifiers of functional projections. These conclusions have to be taken with the proviso that Haider's proposal for testing for subject islands might be flawed (Jurka, 2010).

Aside from Haider's theory, these data bear implications for sketching a grammar of Udmurt. Obligatory overt movement of the subject to SpecTP seems to be assumed by default for any language. An analysis of Udmurt clause structure, and maybe any other OV language, should not include this movement as the default until the evidence that speaks for a structural subject position in English has been shown for Udmurt as well.

5   V⁰-Aux complexes

This section will inspect the properties of constructions which involve a series of morphosyntactically interdependent verbs. In English, such constructions involve, among others, auxiliary verbs, quasi-auxiliary verbs, and at least one lexical verb. The hierarchically higher verbs in these constructions will be abbreviated by AUX while the lexical verb will be referred to by V^0 or just V. The series of verbs itself could be referred to as the AUX–V complex, but it will be coined the V-complex in order to include as many structures consisting of morphosyntactically interdependent verbs as possible. Following Wurmbrand (to appear, 1, fn. 1), "the different verbal elements" will be labelled "with numbers representing the hierarchical (i.e., deep structure or selectional) order of the elements. In particular, ascending numbers will be used such that the structurally highest verb [...] is assigned 1, the next 2, etc.". Also following Wurmbrand (to appear), the English 1–2–3 order (had_1 to $have_2$ to $write_3$) will be called the *ascending* order while the inverse order, 3–2–1, will be called the *descending* order.

The discussion of V-complexes in Haider (2010) can almost be considered the heart of that monograph. Yet a very interesting difference between English and German regarding the availability of partial VP fronting can only be found at the end of the last chapter in appendix 7.7.1 (Haider, 2010, 344–347). This difference regarding partial VP fronting will be discussed in section 5.1. Afterwards, more general facts regarding the word-order inside the V-complex will be discussed in section 5.2. That section will first discuss canonical word order inside the V-complex, then the availability of word-order variation, and finally "the hallmark of all verb cluster constructions" (Haider, 2010, 314), the compactness of the V-complex. But first it will have to be determined which elements constitute V-complexes in Udmurt because there is no summarising discussion of this topic yet. For Finnish, consult, for example, Vilkuna (1989, ch. 5).

All of the following information stems from Winkler (2011). Winkler (2011, 92*f.*) shows that there is a fossilized past form from a verb equivalent to *to be* in Udmurt: *вал*. This word is used as an existential, as a copula, and as an auxiliary in analytical tenses (ibid., 92), and it always expresses a past-meaning in these constructions. This multifunctionality indicates that *вал* is a function word that qualifies as an auxiliary. Another potential function word is the regularly inflecting verb *луыны* ('be, become'), which is also multifunctional in that it can be used as an existential, as a translative verb, as a modal verb with existential modal force (ibid.), and as an auxiliary expressing the tense of the non-inflecting verb *кулэ* ('need') (ibid., 144). This word leads us to the modal verbs in Udmurt (ibid., 143–145).

The non-inflecting word *кулэ* ('need') bears a fossilised PRS.3SG inflection and selects for either a *-ны*-infinitive (the most verbal infinitive) or a noun in nominative case (Winkler, 2011, 143–145). All of the following verbs only inflect for 3SG but for the different tenses (ibid.). The equivalent of the subject in English clauses in all of these constructions bears dative case, or genitive case when a nominalised participle is selected (ibid.). The verb *яра* ('be allowed to') only selects for a *-ны*-infinitive. The verb *потэ* ('want' but lit. 'go.out:3SG') selects for a nominalised participle (ibid.) and comes close to a quasi-auxiliary because it is still used as a lexical verb with the meaning 'go out' and loses its modal meaning in its infinitive form *потыны* (Svetlana Edygarova, p.c.). Finally, the function verb *луыны* from above can also select a nominalised participle in order to convey the meaning 'can' (Winkler, 2011, 145). Contrary to what Winkler (2011, 144) states, *луыны* can only select a *-ны*-infinitive in an impersonal or

generic interpretation (Svetlana Edygarova, p.c.). The discussion in Udmurt below will focus on selected *-ны*-infinitives. Apart from the modal verbs mentioned above, all control verbs select infinitival complements with the *-ны*-infinitive, and Udmurt seems to be as "control-happy" Stiebels (2007, 46) as German in that non-control verbs can easily take infinitival complements as well. Winkler (2011, 111) describes this usage as the adverbial usage of a *-ны*-infinitive. Note that a final clause reading of the infinitive can only be obtained with an additional complementizer, e.g., *вылысь* ('in order to') (Winkler, 2011, 171*f.*).

A final property to be mentioned is the inflection in the analytical tense forms. In contrast to the Germanic languages and Finnish, the Udmurt tense auxiliary *вал* does not inflect and cannot inflect, and the dependent verb is fully inflected for person, number, and tense (Winkler, 2011, 98).

This brief overview could show that there are verbs that select for other verbs, and that some of these verbs can be described as auxiliaries and quasi-auxiliaries. Next up Haider's predictions regarding partial predicate fronting will be investigated.

5.1   Partial predicate fronting

5.1.1   Germanic

Haider's (2010, 346) account of the availability of partial predicate fronting is very attractive because it can be boiled down to the structural makeup of the VP. Consider the following ditransitive structures, where (71) represents the English shell structure and (71b) shows a head-final German VP according to Haider (2010, 2013).

(71)
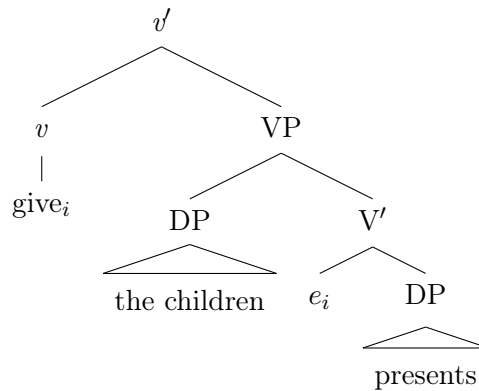
(72)
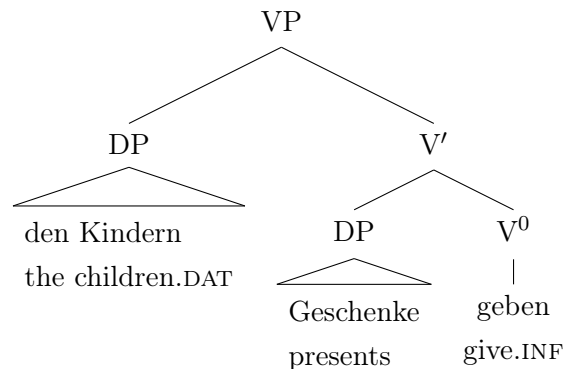
The English VP in (71) and the German VP in (72) differ in which elements constitute a proper

subconstituent of VP, i.e., "a minimally complete subtree" (Haider, 2010, 346): in (71), "any constituent that contains the verb, necessarily contains the subtrees c-commanded by the verb" (ibid.) whereas in (72) "there are well formed subtrees that contain just the verb, or the verb and an argument, excluding another, higher argument" (ibid.). Hence, the "foot" of the VP, V^0, is always a proper subconstituent of the VP.

The only further assumption has to be that displacement can only apply to constituents. In the English structure in (71), the foot contains only the trace or copy of the verb such that the fronting of the foot would be string vacuous. Furthermore, there is no constituent in (71) that contains only the phonetically overt verb and the direct object. Likewise, there is no minimally complete subtree that contains only the verb and the indirect object. The only available option is displacement of the vP/VP as a whole. This is shown in (73).

(73)   Eddie wanted to show the document to the police. . .   (Haider, 2010, 346)
    a.   . . . and [$_{XP}$ shown the document to the police] he has indeed.
    b.   *. . . and [$_{XP}$ shown] he has [the document] [to the police] indeed.
    c.   *. . . and [$_{XP}$ shown the document] he has [to the police] indeed.
    d.   *. . . and [$_{XP}$ shown to the police] he has [the document] indeed.

In contrast to the English VP in (71), the German VP in (72) does not employ a shell structure such that the base position of the verb and sequence of direct object and verb also form minimally complete subtrees. Additionally, scrambling allows the sequence of indirect object and verb to form a constituent in both a movement account ([DO$_i$ **[IO [** e_i **V]]]**) and a base-generation account of scrambling ([DO **[IO V]]**). This is Haider's account of why the German equivalents to (73) in (74) are grammatical.

(74)   a.   [$_{XP}$Die Dokumente der   Polizei gezeigt] hat er.
            the.$_{ACC}$ documents the.$_{DAT}$ police shown has he
            'He has shown the documents to the police.'
    b.   [$_{XP}$Der Polizei gezeigt] hat er die   Dokumente.
            the.$_{ACC}$ police shown   has he the.$_{DAT}$ documents
    c.   [$_{XP}$Die Dokumente gezeigt] hat er der   Polizei.
            the.$_{ACC}$ documents shown   has he the.$_{DAT}$ police
    d.   [$_{XP}$Gezeigt] hat er {die   Dokumente der   Polizei} / {der   Polizei die
            shown   has he the.$_{ACC}$ documents the.$_{DAT}$ police   / the.$_{DAT}$ police the.$_{ACC}$
            Dokumente}.
            documents

The more popular analysis of partial predicate fronting is probably still the remnant VP-movement analysis which was first put forward by Thiersch (1985) and Den Besten and Webelhuth (1987) and reinstantiated by Müller (1998) (according to Fanselow (2002); Haider (2010) attributes it to Den Besten and Webelhuth (1990), possibly because it was the first *published* source). This analysis states that the arguments that are not to be fronted are evacuated from VP (e.g., by scrambling). Afterwards, the whole VP is fronted, but since some of its elements have moved out, only parts of the original VP surface in sentence-initial position. According to Fanselow (2002), the first proponents of this theory have explained the cross-linguistic difference in the availability of partial predicate fronting by the availability of scrambling because this operation could have enabled the arguments to evacuate. However, the reader is referred to the pressing evidence against the validity of the remnant VP-movement analysis in Fanselow (1993, 2002) and Haider (2010).

Partial predicate fronting is particularly interesting in Haider's account because it relates the VP base order to the availability of certain movement operations. Most movements are considered to take place in syntax proper. So if Haider's analysis was right, there is evidence that word order would have to be represented in syntax proper.

The minimal assumptions that lead to the differences between English and German with respect to partial predicate fronting are summed up in (75).

(75)   i.   VO languages have VO base order and VP-shell formation. OV languages have OV base order and no VP-shell formation.
       ii.   Movement can only apply to minimally complete subtrees.

For this account of partial predicate fronting, it is irrelevant whether auxiliaries select VPs as their complements or whether they form a complex verbal head. That topic will be discussed in section 5.2.2 below. The configurations that are predicted to be ungrammatical in VO languages are shown in (76). The same configurations should be grammatical in OV languages. V^0 has to be a ditransitive verb.

(76)   Unavailable structures in VO languages / available structure in OV languages
       a.   [V^0] ... AUX ... [IO/DO]
       b.   [V^0 DO] ... AUX ... [IO]
       c.   [V^0 IO] ... AUX ... [DO]

The following subsections will investigate whether Haider's predictions in (76) are borne out in Udmurt and Finnish.

5.1.2   Udmurt

Vilkuna (1998, 218) already mentions an example of what she calls 'extraction' (ibid., 217) but what could also be analysed as an instance of partial predicate fronting because the infinitive is not adjacent to the accusative object and because the infinitive is marked by the scalar additive particle *но* ('and, also, even') in (77).

(77)   **Медъя-ны** но   малпаз   вал мукет пӧйшуръёсты.
       hire-INF   also think:PST:3SG AUX other animal:PL:ACC
       'He [a rabbit in a folktale] even thought of employing other animals.'

                                                                          (Vilkuna, 1998, 218)

The example in (77) is not conclusive because *медяяны* ('to hire') could also be in its base position while the accusative NP *мукет пӧйшуръёсты* ('other animals') is displaced to sentence-final position. Therefore, an overt nominative pronoun *co* ('s/he/it') was included that separates the selecting verb from the infinite verb, as in (78).

(78)   a.   **Медъя-ны** но   со   малпаз   вал мукет пӧйшуръёсты.
            hire-INF   also 3SG:[NOM] think:PST:3SG AUX other animal:PL:ACC
            'S/he even thought of employing other animals.'
       b.   **Мукет пӧйшуръёсты медъя-ны** но   со   малпаз   вал.
            other   animal:PL:ACC   hire-INF   also 3SG:[NOM] think:PST:3SG AUX

Both examples in (78) were judged to be grammatical, which is initial evidence for the availability of partial predicate fronting. However, strong evidence can only be gathered with a ditransitive verb, as in (79).

(79)   a.   Доми **нылпиослы кузьымъёсты сёты-ны** мед-э.
           Domi:[NOM] children:DAT gift:PL:ACC give-INF intend:PRS.3SG
           'Domi intends to give presents to the children.'

      b.   **Нылпиослы кузьымъёсты сётыны** Доми медэ.   IO DO V⁰…
           children:DAT gift:PL:ACC give:INF Domi:[NOM] intend:PRS.3SG

      c.   **Сётыны** Доми нылпиослы кузьымъёсты медэ.   V⁰…
           give:INF Domi:[NOM] children:DAT gift:PL:ACC intend:PRS.3SG

      d.   **Кузьымъёсты сётыны** Доми нылпиослы медэ.   DO V⁰…
           gift:PL:ACC give:INF Domi:[NOM] children:DAT intend:PRS.3SG

      e.   **Нылпиослы сётыны** Доми кузьымъёсты медэ.   IO V⁰…
           children:DAT give:INF Domi:[NOM] gift:PL:ACC intend:PRS.3SG

      f.   **Кузьымъёсты сётыны** Доми медэ нылпиослы. DO V⁰…
           gift:PL:ACC give:INF Domi:[NOM] intend:PRS.3SG children:DAT

The sentence in (79a) represents the canonical order S–IO–DO–V⁰–Aux. In (79b), the infinite verb *сётыны* ('to give') is in the sentence-initial position with both of its arguments, and this sequence is followed by the subject *Доми* (a proper name). This would represent an instance of VP-fronting in English. The first piece of strong evidence for partial predicate fronting comes from the example in (79c): here the infinite verb is separated from its arguments by the subject. In (79d), *сётыны* ('to give') is fronted together with only one of its arguments, the accusative NP *кузьымъёсты* ('presents'), while the dative NP *нылпиослы* ('children') is situated behind the subject. The last piece of crucial evidence stems from (79e) in which the infinite verb is fronted with the dative NP only, leaving the accusative NP behind. The example in (79f) merely serves to clarify that additional material inbetween the fronted partial predicate and the remaining argument does not lead to ungrammaticality either.

    The examples in (79c–f) represent clear cases of partial predicate fronting. Without further ado it can be concluded that Haider's prediction is borne out for Udmurt. Therefore, the VO language Finnish will be examined next.

5.1.3   Finnish

In the section on subjects (section 4.4) it has already been mentioned that preverbal infinitives are not acceptable in Finnish. More specifically, this applies to the 'first infinitive', the A-infinitive, which could be considered the infinitive form with the most verbal behaviour because it does not obligatorily bear case-markers (Sulkala & Karjalainen, 1992, 323); the more nominal infinitive forms, such as the MINEN-infinitive, *can* appear in preverbal position, as shown in (80). Sulkala and Karjalainen (1992, 325) treat the MINEN-infinitive as homophonous to MINEN as a nominalising derivational suffix. In this respect, note that the complement of the MINEN-infinitive in (80b) precedes the verb and bears genetive case.

(80)   a.   *[**Tutki-a taloutta**] harmitti Merjaa.
           study-A-INF economy:PAR annoyed Merja:PAR
           int. 'It annoyed Merja to study economy.'

      b.   [**Talouden tutki-minen**] harmitti Merjaa.
           economy:GEN study-MINEN-INF annoyed Merja:PAR
           'The study of economy annoyed Merja.'

Data equivalent to the contrast in (80) have already been presented in Vilkuna (1989, 134) with intransitive infinitives. The contrast in (80) could already represent a ban against VP fronting

in general, as suggested by Vilkuna (1989, 26). However, Vilkuna (1989) also presents plenty of grammatical examples which exhibit a clause-initial infinite verb, and there are even examples of infinite transitive verbs that stranded its complement, some of which are shown in (81) of which (b–d) are attested examples. The examples show fronted infinitives in both the position immediately preceding the finite verb as in (81b,c,d) and in the 'Kontrast'-position in front of the subject as in (81a).

(81)   a. **Pudottaa** se voi   *ne*   löydettyään sopivan uhrin.
             drop:INF   it can:3SG 3PL:[ACC] find:PTCP   suitable victim
             lit. 'Drop, it can them after finding a suitable victim.' (Vilkuna, 1989, 99)

       b. **Jätää**   on   pitänyt *suurin osa.*
             leave:INF MP-has had-to biggest-part
             lit. '(To) leave, s/he/one has been forced the bulk.' (Vilkuna, 1989, 135)

       c. **Pakaasta** voi   *kaikkia marjoja*   ja monia   vihanneksia, […]
             freeze:INF MP-can all:PAR berries:PAR and many:PAR vegetables:PAR
             lit. 'Freeze, one/you can all kinds of berries and vegetables.' (Vilkuna, 1989, 136)

       d. Puolassa **jonottaa** voi   *mitä tahansa.*
             Poland:IN queue:INF MP-can anything
             lit. 'In Poland (contrastive), queue, you can for anything.' (Vilkuna, 1989, 137)

Note that there is no overt subject in (81b–d) which could mean that the verb is actually in the pre-subject position. Further evidence for this claim is that Vilkuna (1989, 135) states that the preverbal infinitive in (81b) is only possible with a contrastive interpretation. Furthermore, she says that a fronted infinitive "is only favoured with non-finites that do not have complements or […] have an old-repeated complement in the V-field [= the region behind the finite verb]" (ibid., 99). This seems to indicate that partial predicate fronting is a possibility in Finnish. However, Vilkuna does not present examples in which more than one infinite form is fronted or in which one of the complements is fronted together with an infinitive form. She even states with respect fronting of infinitives that "only single verbs" can appear in the pre-subject or pre-'Topic' position in (81a) (ibid., 197). An explanation for the frontings in (81) will be provided after the discussion of further data.

    Partial predicate fronting with a ditransitive verb, as it was observed in German and Udmurt, does not lead to grammatical examples in Finnish, as shown in (82) with an A-infinitive and in (83) with a participle.

(82)   a. Merja haluaa **antaa lapsille**   **lahjat**.
             Merja want:3SG give:INF child:PL.ALL present:PL.[ACC]
             'Merjaa wants to give presents to (the) children.'

       b. *****Antaa lapsille   lahjat**   Merja haluaa.
             give:INF child:PL.ALL present:PL.[ACC] Merja want:3SG

       c. *****Antaa** Merja haluaa   lapsille   lahjat.
             give:INF Merja want:3SG child:PL.ALL present:PL.[ACC]

       d. *****Antaa lahjat**   Merja haluaa   lapsille.
             give:INF present:PL.[ACC] Merja want:3SG child:PL.ALL

       e. *****Antaa lapsille**   Merja haluaa   lahjat.
             give:INF child:PL.ALL Merja want:3SG present:PL.[ACC]

(83)   a. Merja on   **antanut lapsille**   **lahjat**.
             Merja be:3SG give:PTCP child:PL.ALL present:PL.[ACC]
             'Merjaa has given presents to (the) children.'

  b. *__Antanut lapsille lahjat__ Merja on.
   give:PTCP child:PL.ALL present:PL.[ACC] Merja be:3SG

  c. *__Antanut__ Merja on lapsille lahjat.
   give:PTCP Merja be:3SG child:PL.ALL present:PL.[ACC]

  d. *__Antanut lahjat__ Merja on lapsille.
   give:PTCP present:PL.[ACC] Merja be:3SG child:PL.ALL

  e. *__Antanut lapsille__ Merja on lahjat.
   give:PTCP child:PL.ALL Merja be:3SG present:PL.[ACC]

In (82) and (83), the fronting targeted the position in front of the canonical subject position, called the 'K'-position (Vilkuna, 1989, 37*f.*), in order to make the examples similar to the grammatical examples of English VP-fronting. The examples in (82b) and (83b) show that not even full VP-fronting leads to a grammatical example. The examples with a single fronted infinitive in (82c) and (83c) are also not grammatical. Note that this does not follow from a semantically ill-formed interpretation in which there is no alternative to 'giving' because an obvious alternative would be 'selling'. The even more crucial examples of frontings together with only one of the objects in (82d,e) and (83d,e) are also not grammatical. It could be argued that the ungrammaticality is due to fronting to the 'K'-position, but partial predicate fronting to the position in front of the finite verb is also not possible, which is shown in (84).

(84) a. Merja haluaa __antaa lapsille lahjat__.
    Merja want:3SG give:INF child:PL.ALL present:PL.[ACC]
    'Merjaa wants to give presents to (the) children.'

  b. *__Antaa lapsille lahjat__ haluaa Merja.
    give:INF child:PL.ALL present:PL.[ACC] want:3SG Merja

  c. *__Antaa__ haluaa Merja lapsille lahjat.
    give:INF want:3SG Merja child:PL.ALL present:PL.[ACC]

  d. *__Antaa lahjat__ haluaa Merja lapsille.
    give:INF present:PL.[ACC] want:3SG Merja child:PL.ALL

  e. *__Antaa lapsille__ haluaa Merja lahjat.
    give:INF child:PL.ALL want:3SG Merja present:PL.[ACC]

The newly collected data strengthen the impression that fronted infinitives are a very restricted phenomenon in Finnish: fronting of only an infinitive form was not accepted by my informants, and not even the equivalent of full-VP fronting was accepted. This could be connected to the analysis according to which even non-finite verbs have to move to a position outside VP, as it was suggested in section 3.4 where it is argued that the verbal root has to move to a higher functional projection that hosts, in this case, the participle suffix. This would mean that fronting of an infinite verb form in Finnish is fronting of a constituent larger than VP and that this imposes further restrictions on predicate fronting in general.

  The examples of fronted transitive verbs that strand their complement from Vilkuna (1989) can be argued to be instances of actual remnant VP-fronting, or remnant FP-fronting if verbs raise obligatorily. As already mentioned, Vilkuna (1989) states that the complement of an infinitive as in (81a) can only be stranded when the complement is given. Interestingly, "old" direct objects can appear in the immediately preverbal position leading to a verb-final surface word order (Vilkuna, 1989, 121). If it is assumed that 'old' direct objects appear in the position in front of the verb via movement to a position above the phrase that hosts the infinite verb (counter Holmberg, 2000), there is a constituent that contains nothing but the finite verb. This emptied constituent can now be fronted. This analysis can explain why the stranded direct

object has to be "old". Clearly, this analysis mimes remnant VP movement, but the difference
is that the object would leave VP/FP without subsequent verb fronting as well. In other words,
there is a remnant constituent because the object has moved, but the object has not moved *in
order to* derive a remnant constituent. For a similar analysis of sentence-initial object-stranding
participles in Swedish, see Trinh (2009). Of course, it could also be that surface OV orders with
an 'old' direct object have a base generated OV order with a head-final VP. However, such an
analysis begs the question as to why partial predicate fronting is so restricted in Finnish, i.e.,
optional OV base order in Finnish would overgenerate.

By way of the analysis sketched above, the conflicting data can be resolved with the conclusion
that partial predicate fronting of the German and Udmurt type is not available in Finnish. There
is evidence for an equivalent of actual remnant VP fronting where the nature of the phrase that
contains the partial predicate is not clear. It is also not clear, then, why an equivalent of English
VP-fronting is not possible in Finnish. An explanation could be that the V-complex has more
cluster-like properties in Finnish than the English V-complex (cf. Vilkuna, 1989, ch. 5), but
this explanation would contradict the fact that there is verb clustering in German (see section
5.2) and that German allows for partial predicate fronting. As such, these restrictions require
further scrutiny in future research. Before moving on to the discussion of the word order in the
V-complex, a conclusion regarding partial predicate fronting in both Uralic languages will be
drawn.

5.1.4   Conclusion: Partial predicate fronting in Udmurt and Finnish

In this subsection, it was shown that German allows for the fronting of a non-intransitive infinite
verb form with and without its arguments, and that the same is not possible in English. This
difference can be explained on grounds of Haider (2010) for purely structural reasons. The only
theoretical commitment would lie in the assumption that a verb-final VP has a different structure
than a verb-initial VP: only verb-final VPs contain proper subconstituents that contain only the
verb, or the verb and only one of its arguments. Thus, only OV languages should allow for partial
predicate fronting, VO languages should only allow for full VP fronting. Due to the simplicity
of the explanation behind this prediction, it is particularly interesting.

The prediction for OV languages is borne out for Udmurt: a ditransitive infinite verb can be
fronted alone, together with the direct object, together with the indirect object, and together
with both objects, just as in German. Hence, there is no doubt that Udmurt allows for partial
predicate fronting.

The prediction for VO languages is borne out for Finnish as well: a ditransitive infinitive
verb cannot be fronted alone, or with only one of its arguments. In contrast to English, not
even full VP-fronting is possible. There are examples of Finnish sentences in Vilkuna (1989)
that exhibit a surface structure that looks like partial predicate fronting in German and Udmurt,
but these examples lent themselves an analysis in terms of actual remnant 'VP' fronting due
to their restricted distribution. Hence, examples of sentence-initial infinite verbs in Finnish can
be considered an exception to an otherwise systematic absence of fronted partial predicates.
However, the unavailability of VP fronting could hint towards a general ban against fronting
of infinitives, a confounding factor that Haider (2014) did not anticipate. Nonetheless, partial
predicate fronting is not available such that Finnish as a VO language is in line with Haider's
predictions.

In sum, there is a clear difference between Udmurt and Finnish with regard to partial pred-

icate fronting. Only the OV language allows for partial predicate fronting. The discussion in this subsection did not touch on the issue of the selecting verb on purpose even though a selecting verb is a necessary condition for partial predicate fronting. The following subsections will examine the relations between the selecting verb and the selected verb in detail.

5.2   Order between dependent verbs in V^0-AUX complexes

5.2.1   Germanic

The verb selects its direct object, and this complement either precedes the verb (OV) or it follows the verb (VO). The direct object can be understood as a "morpho-syntactically dependent" element, and therefore it could be expected that every morphosyntactically dependent element is selected in the same direction as the direct object; hence, it could be expected that a morphosyntactically dependent verb precedes its selecting verb in OV languages and that it follows its selecting verb in VO languages (Haider, 2014, 16*f.*). The Germanic data basis for this prediction is presented in (85) for English and in (86) for German.

(85)   The people [had]$_1$ [to have]$_2$ [to work]$_3$.   1–2–3

(86)   dass die Menschen [arbeiten]$_3$ [müssen]$_2$ [werden]$_1$.   3–2–1
         that the people   work:INF   need:INF will:3PL
         'That the people will have to work a lot.'

In the English example in (85), the finite verb *had* precedes both of the infinite verbs, and the infinite modal *to have* precedes the infinite lexical verb *to work*. The mirror image can be seen in the German sentence in (86): the finite AUX *werden* ('become') is the final verb in the V-complex, the infinite modal *müssen* ('must') precedes the finite verb, and the infinite lexical verb *arbeiten* ('work') precedes both AUX.

In contrast to Haider (2014), Haider (2013, ch. 4.6) discusses the order of selecting and selected verbs under the aspect of word order variability instead: the order within the V-complex is predicted to be rigid in every VO language, whereas the possibility for variation is given in every OV language. The rigidity of the English V-complex is illustrated in (87), and the variability of the German V-complex is shown in (87).

(87)   a.   The people [had]$_1$ [to have]$_2$ [to work]$_3$.   1–2–3
         b. *The people [to work]$_3$ [to have]$_2$ [had]$_1$.   *3–2–1
         c. *The people [to have]$_2$ [to work]$_3$ [had]$_1$.   *2–3–1
         d. *The people [had]$_1$ [to work]$_3$ [to have]$_2$.   *1–3–2
         e. *The people [to work]$_3$ [had]$_1$ [to have]$_2$.   *3–1–2
         f. *The people [to have]$_2$ [had]$_1$ [to work]$_3$.   *2–1–3

(88)   a.   dass die Menschen [arbeiten]$_3$ [müssen]$_2$ [werden]$_1$.   3–2–1
              that the people   work:INF   need:INF will:3PL
              'That the people will have to work a lot.'
         b. *dass die Menschen [werden]$_1$ [müssen]$_2$ [arbeiten]$_3$.   *1–2–3
         c. *dass die Menschen [müssen]$_2$ [arbeiten]$_3$ [werden]$_1$.   *2–3–1
         d.   dass die Menschen [werden]$_1$ [arbeiten]$_3$ [müssen]$_2$.   1–3–2
         e.   dass die Menschen [arbeiten]$_3$ [werden]$_1$ [müssen]$_2$.   3–1–2
         f. *dass die Menschen [müssen]$_2$ [werden]$_1$ [arbeiten]$_3$.   *2–1–3

Any permutation of the 123 order in (87) is clearly ungrammatical. In contrast, at least (88d)

and (e) are grammatical in addition to the 321 order in German.

The word order variation hinted at in (88) has been subject to thorough empirical and theoretical investigation (Wurmbrand, to appear). For German, Bader, Schmid, and Häussler (2009) and Bader and Schmid (2009) conducted several grammaticality judgement experiments on V-complexes with three to four verbs and with different types of dependencies and tenses. Their findings corroborate the existence of word order variation in German V-complexes. But there are also between-language differences. Notably, Barbiers (2005) investigated 267 Dutch dialects for their grammatical word orders in three-verb V-complexes and found that each dialect has its own set of possible permutations. However, the 231 order (88c) and the 213 order (88f) were ungrammatical in every dialect.

Since Haider (2003), the possible word order variation in OV languages is attributed to *verb clustering* in combination with mobile verbs. The latter prerequisite was assumed because the East Asian OV languages do not exhibit word order variation in the V-complex and they lack obligatory verb movement (Haider, 2013, 91). The verb-clustering prerequisite, however, has another corollary illustrated in (89) in contrast to (90): the German V-complex is *compact* in that it does not allow for non-verbal material between the verbs (Haider, 2010, 17–18). Note that Haider (2014) does not attribute the compactness to verb clustering.

(89)   The new law **certainly** may **possibly** have **indeed** been **badly** formulated.
                                        (Quirk et al., 1985, as cited in Haider, 2010, 17)

(90)   a.   dass das neue Gesetz **wohl   wirklich schlecht** formuliert worden sein mag
              that the new law   possibly indeed   badly   formulated been   have may
              'that presumably the new law indeed may have been badly formulated'
                                                                            (Haider, 2010, 17)
        b.   *dass das neue Gesetz schlecht formuliert **wohl wirklich** worden sein mag.
        c.   *dass das neue Gesetz schlecht formuliert worden **wohl wirklich** sein mag.
        d.   *dass das neue Gesetz schlecht formuliert worden sein **wohl wirklich** mag.

In (89), an adverbial can appear between any of the verbs. In the German baseline example in (90a), all adverbials are in front of the V-complex leading to a grammatical sentence. Whenever an adverbial intervenes between the verbs of the V-complex, as in (90b–d), the example is ungrammatical. Haider (2010, 314*f.*) draws attention to the fact that adverbials can normally intervene between verbs and their complements in German (also see section 3.1). Therefore, the selection of verbal complements has to exhibit other properties than simply a selectional relation.

Haider's (2010, 34) explanation of the grammaticality of (89) is straightforward: every auxiliary selects a *phrasal* complement, e.g., a VP, and an adverbial can attach to each of the selected phrases, as represented in (91).

(91)   [VP1 **certainly** [VP1 may [VP2 **possibly** [VP2 have ...

According to Haider, the ungrammaticality of intervening adverbials in (90) follows if there are no phrasal boundaries between the verbs of a V-complex as in (92). Thus, Haider (2003; 2010, 34 and ch. 7) assumes that adjacent verbs form a complex verbal V⁰ head, similar to his analysis of complex predicates (also see section 6.1). This particular analysis is not the consensus however; see Wurmbrand (to appear) for a range of different analyses.

(92)   [VP ... [V⁰ [V⁰ [V⁰ formuliert worden] sein] mag]] (following Haider, 2003, example (49))

The unavailability of intervening positions for adverbials is "the hallmark of all verb cluster constructions" (Haider, 2010, 314), but Haider identifies fifteen further properties that distinguish clustering constructions from non-clustering ones in German (ibid., 311–313). This implies that OV languages should allow for phrasal embedding as well, which constitutes a confounding factor. Therefore, OV languages exhibit surface structures with intervening non-verbal material between verbs under certain conditions. Next to clausal embedding, Haider (2014, 23) names *non-canonical order* as a further condition. This covers the basic data to be investigated according to Haider. Before going on to the Uralic languages, the predictions are summed up in (93) for VO languages and in (94) for OV languages.

(93)   a.   Grammatical structures in VO
             i.   Aux1–Aux2–Aux3–V^0
             ii.   Aux1–XP–Aux2–YP–Aux3–ZP–V^0
        b.   Ungrammatical structures in VO
             i.   Any permutation of Aux1–Aux2–Aux3–V^0

(94)   a.   Permissible structures in OV
             i.   V^0–Aux3–Aux2–Aux1
             ii.   Any permutation of V^0–Aux3–Aux2–Aux1
        b.   Ungrammatical structures in VO
             ii.   V^0–XP–Aux3–YP–Aux2–ZP–Aux1

The predictions in (93) and (94) rest on the assumptions in (95).

(95)   i.   Morphosyntactically dependent elements of verbs are selected in the same direction regardless of their category.
        ii.   A selected verb following the selecting verb is part of a phrase.
        iii. A selected verb preceding the selecting verb is a head, thus forming a verb cluster.

5.2.2   Udmurt

There is no in-depth discussion of the V-complex in Udmurt yet, but the existing literature can provide a first impression of the word order in the Udmurt V-complex. Vilkuna (1998, 211–216) contains an overview over word order with negation verbs (NegV) and Aux in the Uralic languages. She states that the NegV "precedes the main verb in all the languages" (ibid., 211) but that "tense auxiliaries [...] follow the main verb in the SOV languages" (ibid., 212). The examples in Suihkonen (1995, 308–309) show the same. Vilkuna (1998) goes on to say that the V-complex is "typically strictly organized" because interveners between the verbs of the V-complex are not allowed in Nenets, Mari, and Udmurt, with the exception of "small particles" that can be placed between NegV and V^0 in Udmurt (ibid., 212). Winkler (2011, 107) also states NegV precedes the main verb immediately in most cases. The NegV is even able to separate a verb from an incorporated object (Winkler, 2011, 125) and from a verb particle (ibid., 128). Furthermore, in all of Winkler's (2011) examples of analytical tenses (e.g., p. 99–101), the lexical verb immediately precedes the Aux. He does not even gloss the Aux as a separate word. In his examples of modal constructions that involve quasi-Aux that select infinite verb forms (ibid., 143–145), the infinite verb precedes the quasi-Aux in all but one example. In sum, it can already be concluded that a selected verb precedes its selecting verb in Udmurt. There is also some information about intervening non-verbal material in the V-complex, but there is no information about word order variation. The NegV should not be used for generalizations on

auxiliaries because Haider (2014, 7) speculates that negation precedes the "canonical position of the finite verb" in every language for semantic reasons.

The canonical order with two types of verb-selecting verbs is represented by the examples in (96). The selecting verb is in italics and the selected verb is in boldface.

(96)   a.   Анаез   весь   озьы **ветл-о-з**   *вал.*   2–1
            mother-3SG always so   walk-PST-3SG AUX.PST
            'Her/his mother always used to walk this way.' (Winkler, 2011, 99)
       b.   Солы   трос **ужа-ны** *кулэ.*   2–1
            3SG:DAT much work-INF need
            'S/he has to work much.' (Winkler, 2011, 144)

The examples in (96) show that the lexical verb precedes the (quasi-)AUX. The order between a tense auxiliary and its directly dependent verb cannot be changed, which is illustrated in (97) for the purely functional verb *луыны* ('to be'), and in (98) for the other purely functional verb *вал* ('was'). Note that these sentences involve the invariable verb form *кулэ* ('need') which bears a fossilised 3SG present tense inflection, and which requires the 'agent' to appear in dative case (Winkler, 2011, 144). Tense is expressed analytically instead.

(97)   a.   Фёкла тодэ, адямиослы   трос ужа-ны **кулэ** *лу-и-з*   (шуыса). 3–2–1
            Fekla   knows people:PL:DAT much work-INF need AUX-PST-3SG COMP
            'Fekla knows that the people had have to work a lot.'
       b.   *Адямиослы   трос ужа-ны *лу-и-з*   **кулэ**.   3–1–2
            people:PL:DAT much work-INF AUX-PST-3SG need
       c.   *Адямиослы   трос **кулэ** ужа-ны *лу-и-з*.   2–3–1
            people:PL:DAT much need work-INF AUX-PST-3SG
       d.   *Адямиослы   трос *лу-и-з*   **кулэ** ужа-ны.   1–2–3
            people:PL:DAT much AUX-PST-3SG need work-INF

(98)   a.   Фёкла тодэ, колхозникъёслы   трос ужа-ны ветлы-ны **кулэ** *вал.*
            Fekla   knows, kolchose-farmer:PL:DAT much work-INF go-INF   need AUX.PST
            'Fekla knows, that the kolchose farmers had to have to go work a lot.' 4–3–2–1
       b.   *Колхозникъёслы   трос ужа-ны ветлы-ны *вал*   **кулэ**.   4–3–1–2
            kolchose-farmer:PL:DAT much work-INF go-INF   AUX.PST need

The examples in (97a) and (98a) show the canonical order which is in line with Haider's predictions in (94ai). Moreover, the tense AUX cannot precede the directly dependent verb *кулэ* ('need'), as shown in (97b,d) and (98b), and it cannot be separated from *кулэ* by another verb of the V-complex (97c). Additionally, the other verb-selecting verbs, the modal quasi-AUX *кулэ* and the lexical verb *ветлыны* ('go') also select their dependent verbs to the left in canonical order, as in (97a) and (98a).

The order in the Udmurt V-complex is generally very free, only tense AUX as in (97) and (98) obligatorily follow their dependent verb. This word order variability is shown in (99). Note that the verb *потыны* can be used as both a lexical verb with the meaning 'go out' and as a quasi-AUX akin to 'want'. As in English, the modal verbs cannot be used in their infinitive form (*want to may*) such that *потыны* can only receive its lexical meaning. This could not be foreseen in the item construction, where it was intended to embed multiple modal verbs. However, since *потыны* can embed another infinitive in its lexical meaning as well, the test items still provide the required information.

(99)   a.   Евдокия вераз дышетскисьёслы кыре   шока-ны   поты-ны   кулэ
              Eva   says student:PL:DAT   out:ILL breathe-INF go.out-INF need
              лу-и-з.
              AUX-PST-3SG
              'Eva says that the students had to have to go out to breathe outside.'

        b.   шоканы   потыны   [кулэ луиз]   4–3–[2–1]
              breathe-INF go.out-INF need AUX-PST-3SG

        c.   потыны шоканы [кулэ луиз]   3–4–[2–1]
        d.   [кулэ луиз] шоканы потыны   [2–1]–4–3
        e.   [кулэ луиз] потыны шоканы   [2–1]–3–4
        f.   потыны [кулэ луиз] шоканы   3–[2–1]–4
        g.   шоканы [кулэ луиз] потыны   4–[2–1]–3

In the examples in (99), the verbs *кулэ* and *луиз* seem to form a word-like unit. This could be
taken as a sign of obligatory clustering. The 3SG past tense auxiliary *луиз* is very unlikely to be
an inflectional ending because it is an independent word in other contexts (see introduction to
section 5). Furthermore, it could be separated from the dependent verb by an adverbial for Anna
Semenova (see below). The examples (99c–g) show that any permutation of the four elements is
possible as long as *кулэ* and *луиз* remain in their order. Even the orders that are unattested in
the Germanic OV languages, 213 and 231 (Barbiers, 2005), are grammatical in Udmurt, here as
3[21]4 and 34[21], of which 3421 even represents an order that violates the restricted version of
the Final-over-Final Constraint (Biberauer, Holmberg & Roberts, 2014, 197*ff.*). The examples in
(100) show that this word order variability does not depend on the specific lexical items in (99).

(100)   a.   Фёкла тодэ,   колхозникъёслы   трос ужа-ны ветлы-ны [кулэ вал].
              Fekla knows, kolchose-farmer:PL:DAT much work-INF go-INF   need AUX.PST
              'Fekla knows, that the kolchose farmers had to have to go work a lot.'

        b.   трос ужа-ны ветлы-ны [кулэ вал]   4–3–[2–1]
              much work-INF go-INF   need AUX.PST

        c.   ветлыны трос ужаны [кулэ вал]   3–4–[2–1]
        d.   [кулэ вал] трос ужаны ветлыны   [2–1]–4–3
        e.   [кулэ вал] ветлыны трос ужаны   [2–1]–3–4
        f.   ветлыны [кулэ вал] трос ужаны   3–[2–1]–4
        g.   трос ужаны [кулэ вал] ветлыны   4–[2–1]–3

The sentences in (99) and (100) match the prediction in (94aii). A last note on word order
variability shall be that the order within a selected nominalised participle, in contrast to a series
of *-ны*-infinitives, is strict, but that the position of the participle with regard to its selecting
word is still variable, as shown in (101).

(101)   a.   [Пиналъёслэн гуртэ   **берт-эм-зы   пот-эм-зы**]   кулэ лу-и-з
              child:PL:GEN   home:ILL come-PTCP-3PL want-PTCP-3PL need AUX-PST-3SG
              lit. 'The wanting to go home of the children was needed.' ('The children were
              needed to want to go home.')

        b.   кулэ лу-и-з   [пиналъёслэн гуртэ   **берт-эм-зы   пот-эм-зы**]
              need AUX-PST-3SG child:PL:GEN   home:ILL come-PTCP-3PL want-PTCP-3PL

        c.   *[Пиналъёслэн гуртэ   **пот-эм-зы   берт-эм-зы**]   кулэ лу-и-з
              child:PL:GEN   home:ILL want-PTCP-3PL come-PTCP-3PL need AUX-PST-3SG

        d.   *кулэ лу-и-з   [пиналъёслэн гуртэ   **пот-эм-зы   берт-эм-зы**]
              need AUX-PST-3SG child:PL:GEN   home:ILL come-PTCP-3PL want-PTCP-3PL

The whole nominalisation [*пиналъёслэн гуртэ бертэмзы потэмзы*] (roughly 'wanting to go

home of the children') can appear in its canonical position preceding its selecting verb, as in (101a), or it can follow its selecting verb, as in (101b). However, the order of verbs *within* the participle cannot be changed: *потэмзы* ('their wanting') is in the participle form in order to express requirement/demand instead of necessity in connection with *кулэ* (Winkler, 2011, 145). *Потэмзы*, from *потыны* ('go out, want'), selects the nominalized participle *гуртэ бертэмзы* ('coming home'). Hence it could be argued that the form of *потыны* selects *гуртэ бертэмзы* and is nominalized afterwards. Thereby the parts of this complex nominal become opaque for the syntactic operations that derive word-order variability in the V-complex. This is important to note because it shows that word-order is not just generally 'free', but that it is particularly free with respect to the verbs of the V-complex.

There is one remaining prediction with regard to the V-complex of Udmurt: adverbials should not be able to intervene between the verbs of the V-complex in obligatorily clustering constructions. It could already be seen above that tense Aux obligatorily follow their dependent verb and that they seem to form a word-like unit with their dependent verb. Furthermore, the example in (97c), repeated in (102a), showed that no verb may intervene between a tense Aux and its dependent verb. However, (102b) was grammatical to Anna Semenova while Svetlana Edygarova reported that the tense Aux can never be separated from its dependent verb.

(102)   a. *Адямиослы   трос кулэ **ужаны** луиз.
           people:PL:DAT much need work:INF AUX:PST:3SG
           int. 'The people had to work a lot.'
        b. %**Фёкла** тодэ,   колхозникъёслы   трос ужаны   ветлыны кулэ **ялан**
           Fekla   knows, kolchose-farmer:PL:DAT much work-INF go-INF   need always
           вал.
           AUX.PST
           'Fekla knows that the kolchose farmers always had to have to go work a lot.'

The informants also diverged in their judgements regarding the control-verb sequences in (103).

(103)   a. Со **туэ**   дышетыны кутскыны турттэ.
           3SG next.year teach:INF   start:INF try:PRS.3SG
           'She tries to start teaching next year.'
        b. %Со дышетыны **туэ**   кутскыны турттэ.
           3SG teach:INF   next.year start:INF   try:PRS.3SG
        c. ?Со дышетыны кутскыны **туэ**   турттэ.
           3SG teach:INF   start:INF   next.year try:PRS.3SG
        d. ?Со дышетыны кутскыны турттэ   **туэ**.
           3SG teach:INF   start:INF   try:PRS.3SG next.year
        e. Дышетыны со **туэ**   кутскыны турттэ   .
           teach:INF   3SG next.year start:INF   try:PRS.3SG

The preverbal placement of the adverbial in (103a) represents the canonical order. The examples in (103c) and (d) are marked but grammatical. The point of divergence is the sentence in (103b), which was judged as ungrammatical by Svetlana Edygarova but as acceptable by Anna Semenova. In contrast, partial VP-fronting of the most deeply embedded infinitive, as in (103e), makes the example grammatical, which is evidence that the ungrammaticality of (103b) is due to an adverbial intervening in a verb cluster.

   Those two points of divergence indicate that these two speakers systematically allow or disallow adverbials in certain positions. However, both speakers accept intervening adverbials

in most constructions, as shown in (104) to (106).

(104)   a.   Фёкла тодэ, колхозникъёслы трос ужаны **ялан** ветлыны кулэ
             Fekla knows, kolchose-farmer:PL:DAT much work-INF always go-INF need
             вал.
             AUX.PST
             'Fekla knows that the kolchose farmers always had to have to go work a lot.'

    b.   Фёкла тодэ, колхозникъёслы трос ужаны ветлыны **ялан** кулэ
             Fekla knows, kolchose-farmer:PL:DAT much work-INF go-INF always need
             вал.
             AUX.PST

(105)   a.   Аркашлы **ялан** эктыны ветлыны яра.
             Arkadi:DAT always dance:INF go:INF may/like:PRS.3SG
             'Arkadi can always go dance.'

    b.   Аркашлы эктыны **ялан** ветлыны яра.
             Arkadi:DAT dance:INF always go:INF may/like:PRS.3SG

    c.   Аркашлы эктыны ветлыны **ялан** яра.
             Arkadi:DAT dance:INF go:INF always may/like:PRS.3SG

    d.   Аркашлы эктыны ветлыны яра **ялан**.
             Arkadi:DAT dance:INF go:INF may/like:PRS.3SG always

(106)   a.   Мынам **кызьы ке но** тыныд юрттэме луоз.
             1SG.GEN somehow ADD 2SG.DAT help:PTCP:1SG AUX:FUT:3SG
             'I will be able to help you somehow.' (following Winkler, 2011, 144)

    b.   Мынам **кызьы ке но** луоз тыныд юрттэме.
             1SG.GEN somehow ADD AUX:FUT:3SG 2SG.DAT help:PTCP:1SG

    c.   Мынам тыныд юрттэме **кызьы ке но** луоз.
             1SG.GEN 2SG.DAT help:PTCP:1SG somehow ADD AUX:FUT:3SG

    d.   Мынам кызьы ке но юрттэме **тыныд** луоз.
             1SG.GEN somehow ADD help:PTCP:1SG 2SG.DAT AUX:FUT:3SG

If there is obligatory verb-clustering in Udmurt, it seems to be restricted to specific constructions or lexical items. It could also be the case that VP-embedding is almost always an alternative to the clustering construction in Udmurt – Haider's (2003) theory even allows for this kind of flexibility and Salzmann (2013, 69–70) claims that Haider's theory overgenerates due to this flexibility. Optional VP-selection would not overgenerate for Udmurt, though, i.e., constructions in which adverbials are not allowed to intervene in the Udmurt V-complex are the exception rather than the rule.

    It would also be possible to account for all the examples above by way of partial VP-fronting: whenever an adverbial intervenes, the cluster-triggering subtree is string-vacuously preposed to a higher position. This analysis is not tenable because it would not explain why example (103a) cannot be rescued via string-vacuous partial VP fronting even though partial VP-fronting is a possibility as shown by example (103e).

    The examples in (106) are of particular interest because Haider (2013, 132) wants to explain "why [[V O] Aux] orders do not exist" without reference to the Final-over-Final Constraint. Haider's (2013, 133) answer is that the analysis is misguided because if structures like [[V O] Aux] actually existed, O–V–XP–Aux orders would have to exist as well. This prediction is borne out for Udmurt: it exhibits both O–V–Aux in (106a) and O–V–XP–Aux in (106c); additionally, it even exhibits V–O–Aux in (106d).

However, the data in (106) can be debunked as counterevidence because they involve a nominalised participle, i.e., the literal translation of (106a) is equivalent to 'my helping you will be'. Since all of the other test sentences involved intransitive lexical verbs, future research will have to determine whether the word-order freedom in the Udmurt V-complex extends to V–O–Aux orders. Nonetheless, the rest of the data on adverbial intervention also represent counterexamples to Haider's predictions and to the Final-over-Final Constraint. After concluding the discussion of word order inside the Udmurt V-complex, the Finnish V-complex will be inspected.

Two out of three predictions regarding the auxiliary-verb complex in Udmurt as an OV language are borne out. First, the canonical position of morphosyntactically dependent verbs is the position preceding the selecting verb. The only exception is posed by the Udmurt negative verbs since they obligatorily precede their directly dependent verb, but this exception can be attributed to a tendency for negation to precede the verb complex in general (Haider, 2014, 7). Second, the order of verbs inside the Udmurt verb complex is strict for tense auxiliaries but variable for quasi-auxiliaries (modals), control verbs, and their dependent verbs. The word-order variability is higher than in the Germanic OV languages as reported by, e.g., Barbiers (2005) and Bader et al. (2009) because the 213 and 231 orders are both grammatical in Udmurt, in fact, all 6 possible permutations of three verbs in a verb complex are grammatical. Third, adverbials can intervene between the verbs of a verb complex in Udmurt much more freely than in the Germanic OV languages. One informant always allowed intervening adverbials, while the other informant did not allow them in specific contexts. These constructions do not only contradict Haider's predictions but they violate the Final-over-Final Constraint as well. Further research is required to elucidate this phenomenon. From a methodological point of view, it would be helpful to develop means to determine obligatorily coherent verb complexes other than checking for intervention effects for every verb–verb combination. From a theoretical point of view, at least two explanations can account for the absence of intervention effects. First, it could be that Udmurt freely allows for the optional selection of a VP instead of forming a verb cluster, in line with Haider (2003, 2010). Second, it could be that adverbial intervention is a PF-phenomenon, as argued for by Wurmbrand (2007) and Salzmann (2013). If adverbial intervention is ungrammatical for reasons of phonological phrasing, then it could be expected that adverbials are allowed inside the verb complex if the language has prosodic properties that are sufficiently different from those of the Germanic OV languages. Considering that Udmurt has consistently word-final stress, the prosodic properties of Udmurt might be sufficiently different from the trochaic Germanic OV languages in order to have different phonological constraints on the phrasing of verb clusters.

5.2.3   Finnish

The word order in the Finnish V-complex has been discussed in Vilkuna (1989, ch. 5) and in Holmberg (2000). Vilkuna (1989, 208) calls the Finnish V-complex a "verb chain" and states that "[t]he essential structure of a verb-chain is right-branching" (ibid., 210) where 'right-branching' is used as in Dryer (1992) to indicate that the dependent verb follows the selecting verb. In other words, the verbs follow the predicted pattern for VO languages. The relevant negative data were not listed in the literature such that declarative sentences from Holmberg (2000) were recompiled to the sentences in (107) and presented to IRC users of which 9 responded.

(107)   a.   Jussi **olisi**   **kirjoittanut** romaanin.   1–2–O
                Jussi would.have written   novel
                'Jussi would have written a novel.' (after Holmberg, 2000)
        b.   *Jussi **kirjoittanut olisi**   romaanin.   *2–1–O
                Jussi written   would.have novel
        c.   *Jussi romaanin **kirjoittanut olisi**.   *O–2–1
                Jussi novel   written   would.have
        d.   *Jussi **kirjoittanut** romaanin **olisi**.   *2–O–1
                Jussi written   novel   would.have

All of the 9 IRC users consistently ruled out the orders in (107b–d) as ungrammatical sentences, additionally stating that only Yoda from the Star Wars series would speak that way. As an exception to Vilkuna's (1989) 'right-branching' rule, "only a [verbal complement] without a [verbal complement] of its own can precede its head" (Vilkuna, 1989, 214), i.e., the most deeply embedded verb is positioned freely. This rule includes structures with a fronted infinitive (see section 5.1.3) but also variations *within* the V-complex. Hence, apart from the **1234** pattern, **1243**, **1423**, and **4123** are licit as well, as shown in (108).

(108)   a.   näyttää haluavan   yrittää **pelata**   1–2–3–**4**
                seems   want:NOMPTCP try:INF play:INF
                'seems to want to try to play' (Vilkuna, 1989, 215)
        b.   näyttää haluavan **pelata** yrittää   1–2–**4**–3
        c.   näyttää **pelata** haluavan yrittää   1–**4**–2–3
        d.   **pelata** näyttää haluavan yrittää   **4**–1–2–3

All of these orders are information-structurally marked in that the preposed verb receives a contrastive interpretation (Vilkuna, 1989, 214). The order of the verb-selecting verbs cannot be changed, as shown in (109).

(109)   a.   *pelata   yrittää haluavan näyttää   *4–3–2–1
                play:INF try:INF seems   want:NOMPTCP
                int. 'seems to want to try to play' (Vilkuna, 1989, 215)
        b.   *haluavan   näyttää pelata   yrittää   *2–1–4–3
                want:NOMPTCP seems   play:INF try:INF

In sum, the data are in line with Haider's predictions because the canonical order is the descending Aux-V order in (108a) and the ascending V–Aux order in (109a) is ungrammatical. Nonetheless, the descending order is not rigid because the most deeply embedded verb can be positioned freely via what resembles internal topicalisation in the Germanic OV languages. The data from Holmberg (2000) introduce even more variability, which will be discussed in the following paragraphs.

According to Holmberg (2000), sentence-initial focus does not only allow for OV order in Finnish as discussed in Vilkuna (1989), but it also allows for variability in the order of verbs inside the V-complex. This is shown for a two-verb V-complex in (110) and for a three-verb V-complex in (111).

(110)   a.   Milloin Jussi **olisi**   **kirjoittanut** romaanin?   1–2–O
                when   Jussi would.have written   a novel
                'When would Jussi have written a novel?' (Holmberg, 2000, 128)
        b.   Milloin Jussi **kirjoittanut olisi**   romaanin?   2–1–O
                when   Jussi written   would.have a novel

    c.   Milloin Jussi romaanin **kirjoittanut olisi**?   O–2–1
         when   Jussi a novel   written   would.have

    d. *Milloin Jussi **kirjoittanut** romaanin **olisi**?   *2–O–1
         when   Jussi written   a novel   would.have

(111)   a.   Milloin Jussi **olisi**   **ehtinyt kirjoittaa** romaanin? 1–2–3–O
         when   Jussi would.have had.time write   novel
         'When would Jussi have had time to write a novel?' (Holmberg, 2000, 129)

    b.   Milloin Jussi romaanin **kirjoittaa ehtinyt olisi**?   O–3–2–1
         when   Jussi novel   write   had.time would.have

    c.   Milloin Jussi romaanin **kirjoittaa olisi**   **ehtinyt**? O–3–1–2
         when   Jussi novel   write   would.have had.time

In the sentences in (110) and (111) the question word *milloin* ('when') acts as the sentence-initial focus. With this focus present, the order of the verbs and the object is free, which is illustrated by (110b,c) and (111b,c). The sentence in (110d) represents a V–O–Aux order, i.e., an order in violation of the Final-over-Final Constraint (Holmberg, 2000, 128*f.*). These data suggest that OV-like 'free' word order is present whenever the object is able to precede the verb. Interestingly, the grammaticality of intervening adverbs between verbs of the V-complex is dependent on the order of verbs inside the V-complex, as shown in (112) and (113), where (112b) and (113b) present two of Holmberg's prime examples of evidence for the Final-over-Final Constraint.

(112)   a.   Milloin Jussi olisi   (**sinun**   **mukaan**) kirjoittanut (**sinun**   **mukaan**)
         when   Jussi would.have according to you   written   according to you
         romaanin?
         a novel
         'When would Jussi, according to you, have written a novel?' (Holmberg, 2000, 140)

    b.   Milloin Jussi romaanin (**sinun**   **mukaan**) kirjoittanut (***sinun**   **mukaan**)
         when   Jussi a novel   according to you   written   according to you
         olisi?
         would.have

(113)   a.   Milloin Jussi romaanin *kirjoittaa olisi*   (siinä   tapauksessa) *ehtinyt*?
         when   Jussi novel   write   would.have in.that case   had.time
         'When would Jussi have had time to write a novel?' (Holmberg, 2000, 130)

    b.   Milloin Jussi romaanin *kirjoittaa ehtinyt* (*siinä tapauksessa) *olisi*?
         when   Jussi novel   write   had.time in.that case   would.have

In (112a) and (113a), two verbs are in the canonical descending 12 order, and an adverbial can intervene between these two verbs, just as in English. In contrast, an adverbial cannot intervene when the verbs are in an ascending 21 order, as in (112b) and (113b). This contrast suggests that an instantiation of the VO pattern results in the availability of adverbial positions between selecting verbs, whereas an instantiation of the OV pattern results in compactness of the V-complex (Holmberg, 2000). In fact, this is what Haider predicts to be the case for type-3 languages: "[b]oth an Aux–V order and an V–Aux order is admitted", and "[v]erbal clustering is optionally available" depending on the "choice of the head-final option" (Haider, 2013, 132). This would mean that Finnish would turn into a type-3 language whenever a sentence exhibits a sentence-initial focus.

    The data are even more complex than presented above because there seems to be between-speaker variability. First note that none of the articles that cite Holmberg (2000) (according

to *Google Scholar*, accessed 21.09.2015) comment on the data regarding word order variability in the V-complex and the (un-)availability of intervening adverbs. Second, Vilkuna (1989) does not report such word-order variability for the Finnish V-complex even though her investigation is specifically concerned with both OV orders in presence of sentence-initial focus and the order inside the V-complex. Furthermore, the native Finnish speaker informants of the present study judged Holmberg's examples of non-descending orders as ungrammatical, again by making reference to Yoda (but independently from the other informants). Hence, it could be that free word-order inside the V-complex is a feature of some dialects of Finnish or that it is a feature of Holmberg's idiolect. Holmberg's Finnish would be a type-3 language according to Haider, while the Finnish of the informants of the present study is in line with Haider's predictions for a VO language because they only allow for rigid Aux–V order. In what follows, adverbial intervention will be discussed with respect to canonical Aux-V order in Finnish.

It was already mentioned above that Vilkuna (1989) found that the direct object of a verb of the V-complex can appear in any position inside the V-complex. This is illustrated in (114) by a sentence with sentence-initial focus.

(114)   En minä ole (**näissä** / **tennistä**) aikonut (**näissä** / **tennistä**) ruveta
         not I   have these-IN   tennis-PAR intended these-IN   tennis-PAR start:INF
         (**näissä** / **tennistä**) pelaamaan.
         these-IN   tennis-PAR play:INF:ILL
         'I have not intended to start playing tennis in these.' (Vilkuna, 1989, 2000)

In the sentence in (114), one or both of the nominals *näissä* ('in these') and *tennistä* ('tennis') can appear in any position between the verbs of the V-complex (Vilkuna, 1989, 200). Unfortunately, Vilkuna (1989) only reports cases of verb-intervening material that also involve sentence-initial focus or marked OV order. The newly collected data in (115) show canonical sentences instead.

(115)   a.   Miinu ei   **aina** kirjoita   kirjoja.
              Miinu NEGV always write.CONNEG books
              'Miinu does not always write books.'
         b.   Miinu on **aina** kirjoittanut kirjoja.
              Miinu has always written   books
              'Miinu has always written books.'

The adverb *aina* is in its canonical position in both sentences of (115), just as in the English translation. These examples illustrate that adverbials can also intervene between verbs of a V-complex without marked information-structural properties. Consequently, Haider's prediction regarding the compactness of the V-complex of a VO language in (93b) is borne out for Finnish. After concluding the section on the Finnish V-complex, a general conclusion regarding word order inside the V-complex will be drawn.

The Finnish of Vilkuna (1989) and the informants of the present study is in line with all three of Haider's predictions. Clearly, the selected verb follows the selecting verb in canonical order, and this order is rigid in most cases. The exception to this rigidity is that the most deeply embedded verb can be preposed to any position inside the V-complex. Since this operation yields a contrastive interpretation of the verb, this word order variation is not the same as the one observed in the Germanic OV languages and Udmurt where reordering has no noticeable interpretational effects. Finally, the Finnish V-complex is not compact in that various elements

can intervene between the verbs of the V-complex. In the data from Holmberg (2000), adverbials cannot intervene in the V-complex when the verbs are ordered in an ascending OV fashion. This would suggest that Finnish is a type-3 language. According to the judgements collected for the present study, Holmberg's examples of ascending V-complex are ungrammatical. Consequently, Haider's predictions are borne out for both the rigid VO-like Finnish, and the more variable type-3-like Finnish of Anders Holmberg.

5.2.4   Conclusion: The verb complex in Udmurt and Finnish

This section investigated the word order regularities of complexes that consist of verb-selecting verbs and their respective morphosyntactically dependent verbs (V-complex). The main tenet of expected differences between OV and VO languages was that morphosyntactically dependent elements always appear in the same direction of their depending head. Under this assumption, morphosyntactically dependent verbs are expected to surface in the same direction of the selecting verb as objects do. Furthermore, when a verb selects a dependent verb to its right, the selecting verb selects a phrasal constituent containing the selected verb, e.g., a VP, such that there is a phrasal boundary between the selecting verb and the selected verb. This provides room for adjuncts, and as a result, non-verbal material is predicted to be able to intervene between the verbs of a V-complex in VO languages. In contrast, verbs in an ascending V-complex are predicted to form a verb cluster, a complex word-level unit without intervening phrase boundaries, and, consequently, no positions available for intervening non-verbal material. Therefore intervention of non-verbal material in an ascending V-complex is predicted to lead to ungrammaticality. This clustering property is also predicted to allow for word-order variability with respect to the order of the verbs inside the V-complex.

Udmurt fulfils two of the three criteria put forward for OV languages. In canonical order, selected verbs precede the selecting verb as it is the case for objects. Tense auxiliaries even follow their dependent verb obligatorily. All other verbs that stand in a selectional relation can be arranged in every logically possible order. An exception to this word-order freedom are verbs of a V-complex as part of a nominalised participle, which can only occur in the canonical order. As a contradiction to Haider's predictions, the sequence of canonically ordered verbs can be separated by adverbials. The two informants for this study diverged in their judgements in that one speaker allowed for intervening adverbials in any position and construction while the other speaker judged intervening adverbials as ungrammatical in some positions. According to Haider, these intervening adverbials would would not even be allowed in type-III languages because an ascending V-complex should never allow for stacked VPs. Such structures would also violate Holmberg's Final-over-Final Constraint. There was even evidence for a V–O–Aux order but the relevant example involved a nominalised participle, thus posing a potentially permissible structure to the restricted Final-over-Final Constraint (Biberauer, Holmberg & Roberts, 2014, 197*ff.*). A future investigation should aim to determine whether Udmurt allows for V–O–Aux surface strings that instantiate [V–O]–Aux structures with verbal infinitives.

The availability of intervening non-verbal material in Udmurt might also indicate a false premise. As known from the German local vs. long passive constructions, a German V-complex can be formed by both clustering and clausal/phrasal embedding, the latter allowing for intervening material (Haider, 2010, 334). Given Haider's own observation, there is the possibility that there are languages where clustering is generally merely facultative. This could to be the case for the Udmurt of Anna Semenova. On the other hand, there are languages like German

in which some sequences of verbs cluster obligatorily. This seems to be the case for the Udmurt of Svetlana Edygarova. Since Haider (2010), in principle, allows for an OV V-complex structure with phrasal embedding, there should be no reason to assume that every OV language exhibits obligatorily clustering V-complexes. In terms of the recent theory of Keine and Bhatt (to appear), this would amount to an optional selection of vP (non-clustering) or VP (clustering). Because of this theoretical possibility, a detailed study of the Udmurt V-complex would be necessary in order to determine whether other verb cluster properties are absent in the presence of intervening non-verbal material.

Finnish is completely in line with Haider's predictions when considering the Finnish represented by Maria Vilkuna (1989) and by the judgements of the Finnish native speakers of the present study. In the canonical order of verbs in the V-complex, the selected verb follows the selecting verb. This order is rigid. An exception to this rigidity is posed by the most deeply embedded infinitive, which can be preposed to any position inside the sequence of verbs in the Finnish V-complex. These reorderings require an accent on the preposed verb and have the effect of imposing a contrastive interpretation on the preposed verb, unlike the information-structurally neutral V-complex reorderings in German and Udmurt. As such, the mobility of the most deeply embedded infinitive can rather be compared to VP fronting. Hence it can be argued, that there is no word-order variability inside the Finnish V-complex. Holmberg's (2000) data strictly contradict this claim. These data show that any order of verbs in the V-complex is possible in the presence of a sentence-initial focus. However, non-descending V-complexes have been rejected by both the linguistically trained informants of the present study, Susanna and Lauri Tavi, and the random, linguistically-untrained native speakers of Finnish from the internet. This suggests that some varieties of Finnish behave like type-3 languages in certain contexts while other varieties are strict VO languages. The informants of the present study also judged adverbials between the verbs of the V-complex to be licit. Thus, all three criteria for the V-complex of a VO language are met by the Finnish of the informants of this study.

Penultimately, a note has to be made on another prediction by Haider (2013, 207–2010; 2014, 28f.; a rework of Haider, 2001) that has not been mentioned yet: only OV languages should allow for nominalisations that consist of at least three verbs; VO languages can exhibit at most verb-verb nominalisations and quasi-nominalisations of VPs via selection of the VP as the complement of a determiner (Haider, 2013, 208). Of course, this prediction is true for English and German (Haider, 2013, 208). According to Haider (2013, 209), this prediction follows straightforwardly from the clustering property of ascending V-complexs with the additional assumption that only word-level units can undergo word-formation processes. The complex V^0 head can be nominalised. In contrast, a series of stacked VPs, as in English, cannot be nominalised due to its phrasal status.

Upon investigating V-complex nominalisations, it became clear that it would take too much space to discuss the morphological facts tied to this problem. For example, Udmurt has at least nine infinite verb forms (Winkler, 2013, 111) and Finnish has at least six to eight infinite verb forms Sulkala and Karjalainen (1992, 322), and each of these forms exhibits varying degrees of nominality in both languages, e.g., with respect to the ability to bear nominal case marking or possessive suffixes. Furthermore, Finnish has a rich inventory of derivational suffixes and it allows for recursive noun-noun compounding (Karlsson, 1999, 242). For these reasons, recursive compounding of nominalised verb forms can always appear such that this option would have to be excluded for every potential example of a V-complex nominalisation. In fact, recursive noun-

noun compounding could be the source of German V–V–V nominalisations as well. Summing up, the exploration of V-complex nominalisations would require an extensive discussion that cannot be provided at this point.

In conclusion, complexes of verb-selecting verbs show substantial differences between Udmurt and Finnish. These differences are almost the same as between German and English. However, the freedom of word order inside the Udmurt V-complex is unparalleled in the Germanic OV languages.

6   Resultative phrases and verb particles

Resultative phrases and verb particles exhibit peculiar distributional properties when compared to their adverbial cognates. Haider (2013, ch. 7) summarizes the relevant facts by stating that these "elements of the third kind" (Haider, 2013, 173) appear postverbally in VO languages and allow for some positional variability, whereas these elements appear immediately preverbal in OV languages with the VP-final position as the only other option. In what follows resultative phrases and verb particles as a class will be abbreviated with ETK ("element(s) of the third kind"). The property which makes ETK a natural class, apart from their distributional properties, is that these elements are non-depictive and non-referential.

6.1   Germanic

The basic VO data for ETK are shown in (116) for a particle verb, in (117) for an adjective with a resultative interpretation, and in (118) for a PP with a resultative interpretation. The examples in (119) show that the non-resultative adverbial PP *in distress* cannot immediately follow the verb, in contrast to the resultative PP in (118). This contrast ought to illustrate the distributional differences that Haider shows between adverbial phrases and phrases selected as a secondary predicate.

(116)   a.   They cut **down** the tree.
         b.   They cut the tree **down**. (Haider, 2013, 176)

(117)   a.   The joggers ran **thin** the pavement.
         b.   The joggers ran the pavement **thin**. (Haider, 2013, 175)

(118)   a.   They cut **to pieces** the meat.
         b.   They cut the meat **to pieces**. (Haider, 2013, 182)

(119)   a.   *The president cut **in distress** the budget.
         b.   The president cut the budget **in distress**. (Haider, 2013, 176)

The negative part of Haider's argument is that ETK do not surface in preverbal position in VO languages. This part of the data is not backed up with data probably because it is too obvious that such surface orders are ungrammatical in English, as shown in (120). Not even topicalisations or contrastive frontings as in (121) are grammatical in English. Note however that there are notable exceptions like 'UP the sun goes in the east' (Craig Sailor, p.c.).

(120)   a.   *They **down** cut the tree.
         b.   *The joggers **thin** ran the pavement.
         c.   *They **to pieces** cut the meat.
         d.   *John *off* sent the stockholders a schedule.

(121)   a.   (and/but) *DOWN they cut the tree.
         b.   (and/but) *THIN the joggers ran the pavement.
         c.   (and/but) *TO PIECES they cut the meat.
         d.   (and/but) *OFF John sent the stockholders a schedule.

Another crucial information is the phenomenon of particle stranding with ditransitive verbs in English (Haider, 2013, 56) illustrated in (122). The word *stranding* already implies the notion

that it is only the verb that moves whereas the particle remains immobile at its base position. The immediately postverbal position of the particle in ditransitive constructions is, then, the result of pied-piping (Neeleman, 2015, 27).

(122)   John sent the stockholders **off** a schedule. (Neeleman, 2015, 27)

In sum, Haider's prototypical VO pattern in the data in (116)–(122) follows from the three assumptions for VO languages in (123). An account in terms of the assumptions in (123) is attractive because they are not controversial. How these assumptions interact to account for the data is explained below.

(123)   i.   The base position of an ETK is immediately subsequent to the base position of the selecting verb in English.
         ii.   There is only leftward movement.
         iii. ETK on their own are immobile.

All of the assumptions in (123) together ensure that an ETK can never surface preverbally: it is merged postverbally (123i) and cannot move to the left (123iii), and since the verb cannot move to the right (123ii) across the ETK, an ETK cannot appear in front of the verb. Since preverbal positioning is impossible it follows that an ETK has to surface postverbally. The possibility of non-adjacent positioning of an ETK also follows: when the selecting verb moves to the left (123ii), an ETK can only either remain *in situ* (123iii) or it can be pied-piped along with the verb (Neeleman, 2015, 27). With the additional assumption that ditransitive constructions in English require the formation of a VP-shell, it follows that an ETK in an ditransitive construction canonically assumes a position between IO and DO since this is the base position of an ETK (123i), and there is no possibility for an ETK to move either left or right (123ii and iii).

The assumptions (123i) and (iii) are merely less theory-dependently formulated results from Haider's (1997; 2013, ch. 7) analysis of ETK in connection with assumptions in Neeleman (2015) instead of Haider's own explanation. (123i) follows from the analysis according to which ETK are selected as a predicate by the verb and, thus, have to follow canonical directionality. (123iii) follows from the complex predicate analysis of ETK in which ETK form a complex head with the selecting verb, a "syntactic cluster" (Haider, 2013, 179); ETK cannot move out of the complex head because they are no phrases: "resultative PPs" have to be lexicalised heads that "form an idiomatic, complex lexical entry with the verb" (Haider, 2013, 176, fn. 4).

The German OV pattern briefly described in the beginning of this section also follows straightforwardly from the three assumptions in (123) once the necessary amendment of (123i) with regard to directionality is made, as in (124).

(124)   i.   The base position of an ETK is immediately precedent to the base position of the selecting verb in German.
         ii.   There is only leftward movement.
         iii. ETK on their own are immobile.

The immobility of ETK is exemplified in (125a) as the unavailability of extraposition of the ETK *darauf* ('there on') in contrast to the nonresultative use of the adverb *darauf*, even though Haider (2010) does not assume extraposition to be the result of movement.

(125)   a. *dass ein Stein fiel **darauf**
            that a   stone fell there.on
            int. 'that a stone fell unto it'
        b. wenn jemand   gewettet hätte **darauf**
            if   someone bet   had   there.on
            'if someone had bet on it' (Haider, 2014)

The data in (125) also illustrate the main distributional difference between OV and VO: ETK never occur in postverbal position in German, hence, they should not occur postverbally in any other OV language. The only exception is when movement of the verb strands the ETK in clause-final position. Note, however, that some speakers of German judge (125a) and (b) to be equally ungrammatical.

The other aspect of the immobility of particles concerns the data in (126) and (127). (126) shows that particles cannot be fronted in V2 sentences [6] and (127) shows that they do not undergo scrambling in Standard German. The controversy surrounding these data will be discussed after the presentation of Haider's data below.

(126)   a. ***Mit** hat Hans mir   folgendes geteilt.
            PRT has Hans I.DAT following share.PTCP
            int. 'John told me the following.' (Zifonun, 1999, 212)
        b. ***Ein** schläft Josef   nicht.
            PRT sleeps Joseph not
            int. 'Joseph does not fall asleep.' (Eisenberg, 2006, 316)

(127)   a. dass man vielleicht das Fleisch **in   Stücke** schnitt
            that one perhaps   the meat   into pieces   cut
            'that one probably cut the meat into pieces' (Haider, 2013, 183)
        b. *dass man vielleicht **in   Stücke** das Fleisch schnitt
            that one perhaps   into pieces   the meat   cut
            int. 'that one probably cut the meat into pieces' (Haider, 2013, 183)
        c. *Hans hat **mit** mir   folgendes geteilt.
            Hans has PRT I.DAT following shared
            int. 'John told me the following.' (Zifonun, 1999, 212)
        d. *Hans hat mir   folgendes **mit** gern   geteilt.
            Hans has I.DAT following PRT with.pleasure shared
            int. 'John told me the following with pleasure.' (Zifonun, 1999, 212)
        e. *weil   Karl **ein** jetzt schläft.
            because Karl PRT now sleeps
            int. 'because Karl falls asleep now.' (Eisenberg, 2006, 315)

The data in (126) and (127) show that ETK cannot occur in preverbal non-adjacent position. This pattern can be explained by assuming that ETK are immobile (124iii) and that they are merged in verb-adjacent position (124i), such that they cannot appear in preverbal non-adjacent position via movement; under the assumption that the verb cannot move to the right (124ii), such a position is also not derivable via movement of the verb.

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[6]Müller (2002, 264) provides an overview of articles in which the observation of the unavailability of particle fronting was made. However, most references cited there only show the unavailability of complex frontings as in (i).

(i)   *die Annette **an**   sollte man   lieber nicht mehr rufen
      the Annette PRTshould one   rather not   more call
      int. 'One rather shouldn't call Annette anymore.' (Fanselow, 1993, 69)

According to Haider (2013), the only other position that ETK may occur in is at the end of a clause, as in (128).

(128)   a.   Er trank die Flasche gestern   **leer**.
              he drank the bottle   yesterday empty
              'He emptied the bottle via drinking yesterday.' (adapted from Haider, 2013, 187)
    b.   Er rief   die Kanzlerin gestern   **an**.
              he called the chancelor yesterday PRT
              'He called the chancelor yesterday.'
    c.   (*)Er rief   die Kanzlerin **an**   gestern.
              he   called the chancelor PRT yesterday
              'He called the chancelor yesterday.'

The examples in (128) are matrix clauses that involve only a single, finite verb in contrast to (127). Due to German's V2-property, this single verb moves into the V2-position. The clause-final placement of the ETK can be explained by assuming that the ETK is stranded in its base position. Since this base position is adjacent to the verb (124i), and since the base position of the verb is at the end of the clause in German due to the OV-property, it follows that ETK appear in clause-final position when the verb moves to the left. The apparent counterexample in (128c) is grammatical only under those readings in which the adverbial *gestern* ('yesterday') is either right-dislocated, extraposed, or added as an afterthought. If it is an afterthought or a right dislocation, the adverbial can be analysed as part of another clause (de Vries, 2009). If it is an extraposition, it is probably at the right edge of VP, but there is ample evidence that this construction does not involve movement (Haider, 2010, 203–235) such that the assumptions in (124) are not violated.

In order to sharpen the contrast between the VO and OV pattern, (129) shows that the canonical English ETK pattern with a ditransitive particle verb is ungrammatical in German. The reasoning from the preceding paragraph also applies to this example.

(129)   *Rita schenkte dem   Freund **aus** den   Wein.
         Rita presented the.DAT friend   PRT the.ACC wine
         int. 'Rita poured the friends out the wine.'

In sum, the same set of assumptions that accounts for the distribution of ETK in English also accounts for the distribution of ETK in German. However, there is evidence from the existing literature and from informal collection of data that Haider's claim is empirically false. These data will be presented in what follows such that it can be determined which structures are to be considered counterevidence against the claim that OV languages differ systematically from VO languages based on German as a model. It will be concluded that Haider's proposal has to be ameliorated such that his exclusion of intonationally marked orders is taken into consideration.

In contrast to the clear-cut English data above, the empirical claims about the immobility of ETK in German are controversial. Fronting of particles as in (126) was thought to be grammatical under conditions that might relate to the semantic content of the particle and information structural properties (Müller, 2002, 275–280). More recently, Heine, Jacobs, and Külpmann (2010) found out that these explanations fall short on many attested examples of fronted verb particles. In fact, it seems to be more important that the selecting verb is in the finite V2-position (Heine et al., 2010, 50–52). The findings of this corpus study are corroborated by evidence from an acceptability rating experiment by Falk and Öhl (2010) in which fronted particles were judged

significantly worse than fronted modal adverbials in sentences with a finite auxiliary in second position (Falk & Öhl, 2010, 46). Building on Heine et al.'s (2010, 52f.) explanation in terms of locally well-formed parses of such constructions, Öhl (2011, 119ff.) proposes that fronted verb particles are acceptable due to grammaticality illusions (referring to Haider, 2011), i.e., fronted particles are *ungrammatical* but *acceptable* as the result of reanalysis of the particle as the head of a phrase (which explains why particles are easily modifiable in fronted position) or as locally well-formed parses. This analysis can be easily extended to account for fronted resultative PPs because they can be reanalysed as having a phrasal status very easily as well. In defence of Haider's proposal it will be assumed that ETK fronting to clause-initial position does not constitute counterevidence to Haider's proposal.

The judgement that scrambling of verb particles as in (127d) and (127d) leads to ungrammaticality is corroborated by Falk & Öhl's (2010) experiments, because they found that such sentences were judged much worse than sentences with a scrambled modal adverbial (Falk & Öhl, 2010, 46). Only those verb particles were accepted in a non-adjacent preverbal position that could be easily reanalysed as verb-modifying adverbial phrases, such as *still* ('calm') and *ruhig* ('quiet') (ibid.). In contrast to these data, Müller (2002, 297) notes that there are attested examples of Southeast-Thuringian (Werner, 1994, 356; from the region around Sonneberg) that allow for separation of the verb and its particle, shown in (130). There is also another German dialect of East-Franconian origin for which similar examples are attested: Erzgebirgian (Böttger, 1904, 66; from the village of Thum) shown in (131).

(130)   a.   die   ham ... **auf** zu arwettn   ghört   (Southeast-Thuringian)
             they have   PRT to work.INF hear.PTCP
             'They have stopped working.'
        b.   ham sa   groud **aa** mit assn   gfanga
             have they just   PRT with eat.INF catch.PRT
             'Did they just start to eat?' (S. Müller, 2002, 297; as a citation of Werner (1994))

(131)   a.   r   hoot **àa** ze làchn   gefange   (Erzgebirgian)
             he has   PRT to laugh.INF catch.PTCP
             'He began to laugh.'
        b.   r   sàat, se   soltn **auf** mit singe   häärn
             he said they should PRT with sing.INF hear.INF
             'He said, they should stop singing.' (Böttger, 1904, 66)
        c.   *Er sagt, sie   sollten **auf** mit der Sonne stehen.
             he said they should PRT with the sun   stand
             int. 'He said, they should get up with sun.'

These examples lose their strength as a counterargument once it is considered, first, that the intervening elements contain elements of verbal nature and that the infinitive with *mit* ('with') is realized with *zu* ('to') in Standard German; second, that the preferred linearisation of verb-auxiliary complexes in these variants is AUX–V (Werner, 1994, 355; Böttger, 1904, 66); third, that Dutch, which also exhibits the unmarked AUX–V order, allows for variable placement of the particle within the verb cluster (Bader et al., 2009); and fourth, that contemporary speakers of Erzgebirgian, Vogtlandian, and Upper-Franconian accept (131a,b) without noticing the non-adjacent placement but reject (131c), with a non-verbal PP, as sharply ungrammatical. Consequently the particle can be interpreted as part of the verb cluster such that the apparent counterevidence from these dialectal data can be debunked.

The preverbal non-adjacent position of resultative phrases in (127b) can be grammatical to Haider (2010, 143–145) under "focus fronting" in contrastive topic constructions, i.e., with a rise-fall contour; the same phenomenon is called "internal topicalization" in Haider (2013, 182). Even elements that cannot scramble can move this way (Haider, 2010, 143–145) and the intonation is a "sign of reconstruction" (Haider, 2013, 183). The argument seems to be that any kind of element can be displaced with this intonation such that sentences with such an intonation cannot be regarded as proper evidence.

Another restriction is that the resultative PPs have to be "lexicalized, that is, they form an idiomatic, complex lexical entry with the verb: *cut to pieces* vs. *cut to twelve pieces*" (Haider, 2013, 176, fn. 4), because only then the resultative PP can have the V^0 status. This way, even more potential counterevidence would be dismissed. Problematically, idioms can be modified without losing their meaning (Horvath & Siloni, 2009), parts of idioms can assume the sentence-initial position in German (Fanselow & Lenertová, 2011), and PP parts of idioms can scramble (Fanselow, 2012). Therefore no special properties of resultative PPs with respect to their distribution would follow from their 'lexicalized' status. Finally there is also evidence for unstressed non-adjacent resultative phrases in the German of some speakers which would constitute direct counterevidence to Haider's claim.

Some German speakers allow non-adjacent positioning of resultative phrases when the directly preverbal material is in contrastive focus (instead of receiving the falling tone in a contrastive topic construction). From the judgements available to me, only resultative phrases but not particles can appear in non-adjacent preverbal position as shown in (132). The data are based on informal questioning of Germans of which some judged (132a) to be fully ungrammatical whereas others judged (132a) fully grammatical and acceptable with a flat intonation on the resultative phrase. This divergence is expressed by the percentage sign %. Note that all speakers judged (132a) as a marked option nonetheless. None of my informants judged (132b) to be grammatical. Since a subset of speakers of an OV language accept non-adjacent, preverbal ETK, such configurations are expected to surface in other OV languages as well.

(132)   a. %dass man vielleicht in   Stücke [das FLEISCH] geschnitten hat
            that one perhaps into pieces the meat   cut.PTCP   has
            'that one probably cut the meat into pieces' (Haider, 2013, 183)
         b. *dass die Katze **ein** auf dem Sofa   geschlafen ist
            that the cat   PRT on the   couch sleep.PTCP is
            int. 'that the cat fell asleep on the couch'

In sum, the two orders in (133) should be absent from OV languages according to Haider, where X and Y are any non-empty strings of non-verbal, non-parenthetical, non-clausal elements, where all of the elements belong to the same clause (hence no dislocations allowed), and where there is no specific intonation for ETK. These restrictions reflect the various examples from above in which the surface string contradicts (133). Finally one might add the restriction that (133) holds only for neutral or canonical orders, since (133a) is permitted with a specific intonation for Y for some speakers of German.

(133)   *Unavailable orders in OV languages*
         a.   X–ETK–Y–V
         b.   (X)–V–ETK–Y

Having discussed what would constitute counterevidence against Haider's proposal in the light

of what constitutes merely apparent counterevidence, the next subsection will show that Udmurt does not exclude the structures in (133).

6.2 Udmurt

On first glance Udmurt behaves just like in German in that what looks like verb particles and resultatives (134) and other non-depictive secondary predicates (135) precede the selecting verb in canonical order. Winkler (2011, 128) explicitly mentions "particle verbs" as "collocations of verbs and adverbs whose meaning is often more than merely the sum of the meaning of each word by itself" (translation by AS). In all of Winkler's examples, the particle precedes the infinite verb. Most of the examples below were constructed on the basis of examples from Winkler (2011).

(134)   a.   Кыкез нылпи **яна** потйз.
           two   child   PRT go.out:PST.3SG
           'Two children leave home.'

         b.   Коӵышлы **умме** усьыны кулэ.
           cat:DAT   PRT   sleep:INF must
           'The cat has to fall asleep.'

         c.   Уля няньзэ   **шори** кариз.
           Ulja bread:3SG:ACC in.two make:PST.3SG
           'Uljana broke her bread in two.'

(135)   a.   Солы   **ньыльдон арес** луиз.
           3SG:DAT fourty   years AUX:PST.3SG
           'S/he became forty years old.'

         b.   Та   шурмес   **Кам** шуиллям.
           DEM river:1PL:ACC Kam call:2PST.PL.PTCP
           'Our river is called Kam.'

         c.   Гур **пӧсь** луиз.
           oven hot   AUX:PST.3SG
           'The oven became hot.'

The following examples in (136) show that all of the boldfaced ETK-like elements in (134) and (135) can also appear postverbally with no change in meaning. Since Haider's definition of ETK relies on a semantic notion of none-depictiveness that is reflected in syntax, it can be assumed that the syntactical status of the boldfaced elements as an ETK in (136) is not different from their preverbal counterparts in (134) and (135).

(136)   a.   Кыкез нылпи потйз   **яна**.
           two   child   go.out:PST.3SG seperate
           'Two children leave home.'

         b.   Коӵышлы усьыны **умме** кулэ.
           cat:DAT   sleep:INF PRT   must
           'The cat has to fall asleep.'

         c.   Уля няньзэ   кариз   **шори**.
           Ulja bread:ACC.3SG make:PST.3SG in.two
           'Uljana broke her bread in two.'

         d.   Уля   кариз   няньзэ   **шори**.
           Uljana make:PST.3SG bread:ACC.3SG in.two
           'Uljana broke her bread in two.'

         e.   Солы   луиз   **ньыльдон арес**.
           3SG:DAT AUX:PST:3SG fourty   years
           'S/he became forty years old.'

f. Гур луиз **пöсь**.
oven AUX:PST:3SG hot
'The oven became hot.'

g. Та шурмес шуиллям **Кам**.
DEM river:1PL:ACC call:2PST.PL.PTCP Kam
'Our river is called Kam.'

The examples in (136) would not count as counterevidence to Haider's claim because all of the ETK are in clause-final position (with the exception of (136b)). It should be noted that there is no obligatory verb-movement phenomenon (e.g. Germanic V2) involved in the Udmurt sentences in (136). So if the examples in (136) are to be analysed according to the assumptions in (124) one would have to theorise that verbs move optionally in Udmurt. In the case of (136d) there would even be two optional movements. But even this amendment would not suffice to explain the postverbal ETK placements in (137), where (137a) serves as a baseline condition.

(137) a. Атае нянез **шори** кариз.
father bread:ACC in.two make:PST.3SG
'The/a father broke the bread in two.'

b. Кариз-а атае **шори** нянез?
make:PST.3SG-ICL father in.two bread:ACC
'Did the/a father break the bread in two?'

c. Кариз-а **шори** атае нянез?
make:PST.3SG-ICL in.two father bread:ACC

The polarity questions in (137) are constructed using the interrogative clitic –a. This clitic is attached to the element in focus and allows, but not forces, the element to be fronted (Suihkonen, 1995, 317). Hence the initial positioning of the verb in (137b) and (c) is still optional. Crucially, the deverbal resultative adverb *шори* ('in two') is in postverbal, non-sentence-final position. On the surface, this appears to be the (X)–V–ETK–Y from (133b) which is not supposed to occur in OV languages if the assumptions in (124) were to be true.

The example in (137b) can be disregarded if the object *нянез* ('the bread') is analysed as an extraposition or right-dislocation. The verb could then simply have moved to clause-initial position stranding *шори* in clause-final position. It is, however, difficult to apply such an analysis to (137c) because it would involve the extraposition of both the object and the subject *атае* ('father'). These elements can neither be analysed as right dislocations with covert clause-internal pronouns because the order in (137c) was regarded as very natural. Another analysis in line with (124) would involve optional movement of the verb that pied-pipes *шори* until the order [[*шори кариза*] [*атае* [*нянез*]]] is created; from there, the verb moves to sentence initial position stranding the resultative phrase in postverbal position. A similar analysis could, then, also account for the strong counterevidence to Haider's proposal in (138) where (138a) represents the canonical order and small capitals indicate sentence focus.

(138) a. Коӵыш жытазе пыддэ **нюнь** карылоз.
cat evening.IN foot.PL:2SG warm make:FUT.3SG
'The cat will warm your feet this evening.'

b. Коӵыш карылоз жытазе пыддэ **нюнь**.
cat make:FUT.3SG evening.IN foot.PL:2SG warm

c. Коӵыш карылоз жытазе **нюнь** пыддэ.
cat make:FUT.3SG evening.IN warm foot.PL:2SG

d. Коӵыш карылоз **нюнь** жытазе пыддэ.
cat make:FUT.3SG warm evening.IN foot.PL:2SG

The postverbal, non-clause-final ETK in (138) could be analysed as the result of iterated leftward movement of the verb. But in addition to what was sketched above, it would also be necessary to allow verbs to optionally pied-pipe or strand secondary predicates with any movement the verb undergoes. This way the verb *карылоз* ('will make') would strand the ETK *нюнь* ('warm') right away in (138b), but after its first movement in (138c) and after its second movement in (138d). In (138d), the verb would have to move one further time just in order to strand the ETK in postverbal position. As an alternative, verb movements could be combined with extrapositions and/or right dislocations. This alternative, however, is hardly tenable due to the fact that the sentence final object *пыддэ* ('your feet') bears the nuclear stress of the sentence in (138c) and (d), and that is more likely that the sentence-final stress comes about by verb movement (see section 3.3).

Needless to say, unrestricted optional leftward head movement combined with optional pied-piping is a mechanism that can easily derive almost any word order. It would also overgenerate because, for example, negation auxiliaries never appear postverbally (Winkler, 2011, 107) and clause-initial verb placement is licit only in very restricted contexts (Vilkuna, 1998, 193). On top of that, this mechanism could still not account for the variable placement of ETK in preverbal position as shown in (139) and (140) where small capitals indicate sentence focus.

(139)   a.   Атае   нянез   **ШОРИ** кариз.
             father bread:ACC in.two   make:PST.3SG
             'The/a father broke the bread in two.'
        b.   Атае   **шори** НЯНЕЗ   кариз.
             father in.two bread:ACC make:PST.3SG
        c.   **Шори** атае   НЯНЕЗ   кариз.
             in.two   father bread:ACC make:PST.3SG

(140)   a.   Коӵыш жытазе   пыддэ   **НЮНЬ** карылоз.
             cat   evening.IN foot.PL:2SG warm   make:FUT.3SG
             'The cat will warm your feet this evening.'
        b.   Коӵыш жытазе   **нюнь** ПЫДДЭ   карылоз.
             cat   evening.IN warm foot.PL:2SG make:FUT.3SG
        c.   Коӵыш **нюнь** жытазе   ПЫДДЭ   карылоз.
             cat   warm evening.IN foot.PL:2SG make:FUT.3SG
        d.   **Нюнь** коӵыш жытазе   ПЫДДЭ   карылоз.
             warm cat   evening.IN foot.PL:2SG make:FUT.3SG

The examples in (139) and (140) show that an ETK can be placed in preverbal non-adjacent position, i.e., these structures represent the structure in (133a) X–ETK–Y–V which was not supposed to occur in OV languages. This order cannot be analysed as the result of leftward verb movement in accordance to (124). Either, one would have to give up the assumption that ETK are immobile, thus allowing *шори* and *нюнь* to move to the left; or one would have to give up the assumption that there is only leftward movement, thus allowing all the other material to move to the right of the ETK. The latter option has been abandoned by most proponents of the generative enterprise in the wake of Kayne (1994). The former option would obviate Haider's predictions because, then, ETK would not be different from any other phrase in terms of their syntax.

The above analysis of postverbal ETK placement in Udmurt tried to defend Haider's account in light of the apparent counterevidence. Such analyses bear the risk of immunising Haider's theory against counterevidence altogether. Haider himself anticipated counterevidence from German and tried to immunise his theory by excluding all the cases in which preverbal non-adjacent ETK are accompanied by a marked intonation contour. However, the counterevidence from Udmurt cannot be excluded with the help of this restriction.

Thoughts on marked and unmarked intonations lead to another option of defining what counts as counterevidence that Neeleman (2015) pursued. His theory on systematic differences between OV and VO languages seeks to capture only "neutral word order" which "are the only orders permitted in out-of-the-blue contexts" (Neeleman, 2015, 2). When this neutral-order restriction is applied to ETK-positioning in Udmurt, Haider's theory makes the right predictions as shown at the beginning of this subsection. This restriction is not without its problems, though. A recourse to 'the neutral order' would result in reducing Haider's prediction to a mere word-order correlation. Furthermore, this approach cannot be applied to all of Haider's criteria because some of them test for structures such as partial VP-fronting which cannot be uttered out-of-the-blue in the standards of comparison, German and English. A possible amendment could, then, be to change the immobility assumption into a prerequisite: the Germanic OV and VO patterns show only in those languages in which ETK are immobile due to their status as part of a complex predicate. Such a prerequisite would imply that languages differ in the way resultative phrases are construed. The conclusion could then be that ETK have a different syntactic structure in Udmurt than in German.

Haider (2014) notes that the Romance languages do not allow for resultative constructions in which an otherwise NP-modifying phrase is used as a secondary predicate such as in *walk thin* or *swim under the bridge*. He asks the question whether there are also OV languages without such "resultative construals" (Haider, 2014, 28). In the Finno-Ugric languages, directional vs. stative adverbials are marked with different cases. Therefore only adjectival resultative constructions will be taken into consideration. The example in (141) illustrates that this construal is not available in Udmurt.

(141)   *Пӧйшурась пӧйшурез **кулэм** ыбылиз.
        hunter[:NOM] animal:ACC dead   shoot:PST:3SG
        int. 'The hunter shot the animal dead.'

The intended meaning of such an example can only be phrased by using converbial constructions with gerunds, as in (142).

(142)   a.   Пӧйшурась [пӧйшурез **ыбы-са**] вийиз.
             hunter[:NOM] animal:ACC shoot-GER kill:PST:3SG
             lit. 'The hunter killed the animal shooting.'
        b.   Со [пыдэпононэз пӧсьты-тозь]   ветлӥз.
             3SG shoe:PL.3SG   wear.out-GER.TERM walk:PST:3SG
             'She walked her shoes worn out.' (lit. 'She walked until her shoes wore out.')
        c.   Со [кииз висьы-тозь]   ужаз.
             3SG arm:3SG be.sick-GER.TERM work:PST:3SG
             'She worked her arm sore.' (lit. 'She worked until her arms were sore.')

There is further evidence that the converbs in (142) do not involve secondary predication. In the examples in (143), the converb is not adjacent to the direct object, and this leads to

ungrammaticality. This is expected if the converb selects the argument by itself and projects a phrase of its own instead of forming a constituent with the matrix verb and then selecting the argument. It could be argued that the examples in (143) are ungrammatical because they involve postverbal secondary predicates. However, the examples in (144) show that postverbal placement of the converbial phrase as a whole is not ungrammatical. This is further evidence that the matrix verb and the gerund do not form a complex constituent that selects the direct object. Instead, the direct object is selected by the gerund, and this converbial phrase modifies the matrix verb.

(143)   a. *Со **пыдэпононэз** ветлӥз   **пӧсьты-тозь**.
            3SG shoe:PL.3SG   walk:PST:3SG wear.out-GER.TERM
        b. Со ветлӥз   **пыдэпононэз пӧсьты-тозь**.
            3SG walk:PST:3SG shoe:PL.3SG   wear.out-GER.TERM
            'She walked until her shoes wore out.'

(144)   a. *Со **кыз**   ужаз   **висьы-тозь**.
            3SG arm-3SG work:PST.3SG be.sick-GER.TERM
        b. Со ужаз   **кыз**   **висьы-тозь**.
            3SG work:PST.3SG arm-3SG be.sick-GER.TERM
            'She worked until her arms were sore.'

Udmurt is an OV language without the "resultative construal". This answers Haider's question, whether there are OV languages without this construal.

6.3   Finnish

If Finnish was an VO language and if the assumptions about the behaviour of ETK in VO languages were right, then ETK should never occur in preverbal position. The class of ETK in Finnish as well as their syntactic properties can be determined drawing on the existing literature.

The pivotal point of this subsection will be the dissertation of Leena Kolehmainen (2005). She provides the first comprehensive study of particle verbs in Finnish (ch. 5, 162–213). She also reviews the findings on resultative constructions in Finnish (ch. 11.1, 308–313), part of which builds on her own research (Kolehmainen, 2004). Additionally, it is a convenient coincidence for the present study that Kolehmainen undertakes a comparison between Finnish and German. This way it can be established right from the beginning that resultative constructions (Kolehmainen, 2005, 308–309) and particle verbs, as seen in the Germanic family, exist in Finnish as well (ibid., 167–169). Just like in German, many of the verb particles exhibit commonalities with resultative phrases, too (ibid., 324–326). In what follows, Kolehmainen's corpus data have been complemented by native speaker judgements.

Finnish verb particles do not behave in the expected way: they can appear in preverbal position and have variable placement in general. Kolehmainen (2005, ch. 5.5.5, 193–196) discusses the syntactic distribution of particle verbs with respect to the claims about ETK placement in the Germanic languages discussed in the beginning of this section. She concludes "that it is difficult to draw conclusions based on Finnish word order that would allow for the assertion of a special status of verb particles or their distinction from other expressions" (Kolehmainen, 2005, 196).

First of all, "Finnish verb particles seem to be able to occupy any position" (Kolehmainen, 2005, 194). The examples in (145) attest the English-like behaviour in which the verb particle

appears in postverbal but not necessarily verb-adjacent position.

(145)   a.   Yhdysvaltojenkin tv-kulttuuri käy **läpi** perinpohjaista muutosta.
           USA:GEN   TV-culture goes PRT profound:PAR change:PAR
           'The TV culture of the USA is also going through a profound change.'

                                                         (Kolehmainen, 2005, 194)

    b.   Julia jätti voileipänsä **kesken** ja [...]
           Julia let.PST sandwich:ACC:3SG PRT and und
           'Julia left her sandwich behind and ....' (Kolehmainen, 2005, 195)

There are examples of preverbal verb particles that involve contrastive fronting to sentence-initial position (Kolehmainen, 2005, 195) or to the position immediately following the complementizer in embedded clauses (ibid., 196). These examples are not shown here because Haider excludes contrastive fronting as evidence for German, and there is no doubt that those examples involve contrastive fronting. However, the directly preverbal position is available as well, as shown in (146).

(146)   a.   Ei   lehti   mielellään aloittamaansa   **kesken**
           NEGV.3SG newspaper willingly started.things:PAR:3SG PRT
           heitä,   [...]
           throw.CONNEG
           'The newspaper doesn't like to leave already started things undone ...'

                                                          (Kolehmainen, 2005, 195)

    b.   Ei   lehti   mielellään aloittamaansa   heitä
           NEGV.3SG newspaper willingly started.things:PAR:3SG throw.CONNEG
           kesken, [...]
           PRT

    c. %Jussi **pieneksi** leikkasi lihaa.
          Jussi pieces:TRANSL cut:PST.3SG meat:PAR
          'Jussi cut some meat into pieces.'

    d. %Merja **kipeiksi** työskenteli kätensä.
          Merja sore:TRANSL work:PST.3SG arm:PL:3SG
          'Merja worked her arms sore.'

    e. %Merja **ohuiksi** käveli kenkänsä.
          Merja thin:TRANSL walk:PST.3SG shoe:PL:3SG
          'Merja walked her shoes thin.'

The example in (146a) could be disregarded as relevant evidence due to the fact that the NEGV–S–O–V^0 order in (146) is called "noncanonical negation" by Kaiser (2004, 329), indicating that it is a contextually restricted option. It requires the negated proposition to be "old information due to the discourse context" (Kaiser, 2004, 330). Furthermore, it allows word orders which are not possible otherwise such as SOV order with a contrastive object (ibid., 334) or OSV order with a contrastive subject (ibid., 335). Consequently the preverbal particles could be the result of contrastive fronting, but the context, given in Kolehmainen (2005, 1995), does not lend such a reading. According to native speaker judgements, however, *kesken* ('inbetween'), or for some speakers *pois* ('off'), receives more prosodic emphasis in (146a) than in (146b), which might lead Haider to reject (146a) as counterevidence to his proposal because the ETK does not receive flat intonation. Additionally, the speakers judged (146a) to be marginal, and there were remarks, that such an example could only occur in written language. Thus it is sensible to conclude that (146a) cannot count as evidence against Haider's proposal.

    The examples in (146c,d,e) show directly preverbal resultative phrases. The percentage sign

indicates that (146b) would not occur in official language and that some speakers rejected the example. The word order is clearly marked in these examples and require stress on the resultative phrase. So while the examples in (146) might be less acceptable on average, they are not unavailable. But yet again, they do not involve flat intonation.

It can be concluded that ETK do not have to follow the verb in Finnish. Extending the conclusion by Kolehmainen (2005, 196), it can be said that the distribution of ETK in Finnish is just as free as when the same elements are not selected as secondary predicates. With the help of contrastive fronting, ETK can be moved to any preverbal position, and the same is true for any other category. The strongest piece of counterevidence would be posed by the example in (145a) were it not for the fact that the example is degraded and difficult to analyse.

However, if Neeleman's neutral-word-order restriction is applied, as discussed in the conclusion to the previous subsection, Finnish would behave in English-like fashion. While preverbal ETK-placement is a *possibility*, almost all corpus examples cited in Kolehmainen (2005) outside of paragraphs discussing the syntax of verb particles exhibit postverbal ETK-placement. This is essentially true for all infinite dictionary-style examples of particle verb constructions.

6.4   Conclusion: Elements of the third kind in Udmurt and Finnish

This section discussed Haider's (2013) predictions on the distribution of resultative phrases and verb particles, united under the umbrella term 'elements of the third kind' (ETK). In English, ETK obligatorily appear in postverbal position and have variable placement, including positions non-adjacent to the selecting verb. In German on the other hand, ETK appear in the immediately preverbal position and never surface in non-verb-adjacent position unless they have been stranded in clause-final position due to V2-movement. The English pattern was predicted to hold for Finnish and the German pattern was predicted to hold for Udmurt. In order to investigate these properties, several confounding factors found in German had to be discussed first such that merely apparent counterexamples to Haider's prediction could be identified. The most crucial factor is the absence of a marked intonation. However, there seemed to be much variability between speakers of German and between different lexical items. This variability makes it probable that a high amount of variability would also be observed cross-linguistically.

Haider's predictions for OV languages were not borne out for Udmurt when the predictions are assumed to account for *possible* structures in general. Resultative phrases and verb-particle-like elements can be positioned freely in Udmurt, just as any other phrase. Concretely this means that ETK can appear in any preverbal position and in any postverbal position, both adjacent and non-adjacent to the verb. Nonetheless, ETK immediately precede the verb in canonical order. This divergence from German can be explained. It could be assumed that constructions involving ETK are cross-linguistically diverse and need not form a complex predicate with the 'selecting' verb in every language. This option would warrant an analysis of Udmurt as an OV language, but it is connected to giving up Haider's cross-linguistic prediction. As a consequence, Haider's predictions regarding ETK do not hold for Udmurt, but this due to a false premise in Haider's assumptions.

Haider's predictions for VO languages were also not borne out for Finnish when considering every possible structure. The present study could build on the comprehensive work by Kolehmainen (2005) where it was already concluded "that it is difficult to draw conclusions based on Finnish word order that would allow for the assertion of a special status of verb parti-

cles or their distinction from other expressions" (Kolehmainen, 2005, 196). More specifically, ETK can appear in any postverbal position, as predicted, but also in any preverbal position. ETK can only assume preverbal positions with additional prosodic accent. In contrast to German, where most phrases can scramble without a special intonation but in which preposed ETK require a specific intonation, preposing of other phrases also requires additional stress. Therefore it can be concluded that ETK do not behave different from other phrases with regard to their distribution. Again, this conclusion could either just mean that Finnish is not a prototypical VO language, or it could mean that ETK do not form a complex predicate with the 'selecting' verb in every language such that the premise of Haider's prediction is violated. The latter option is even more favourable in the light of Udmurt, where such a conclusion is also tenable.

Haider's predictions on the distribution of resultative phrases and verb particles are not borne out because the ETK of Udmurt and Finnish cannot be distinguished from other categories on behalf of their distribution. It could be the case that these Uralic languages do not employ secondary predication in the same way as the Germanic languages. This would mean that Haider's premise is wrong. It could also be argued that Haider's predictions are borne out because ETK immediately precede the verb in Udmurt in canonical word order and because they immediately follow the verb in Finnish in canonical word order. With this additional prerequisite, Haider's prediction would be boiled down to a mere word-order correlation and it would not distinguish, e.g., manner adverbs from ETK. The only meaningful prerequisite to be made is that a language family has to exhibit ETK constructions of the Germanic kind, and then OV and VO languages of that family should show the pattern observed between German and English. However, this would lead to an immunisation of the theory again because any counterevidence could just be debunked by reference to that restriction.

The general conclusion from the discussion above is that there is counterevidence to Haider's prediction for both languages. This counterevidence suggests that Haider's prediction is grounded on a false premise regarding the structure of ETK constructions. Therefore, this criterion could be dropped from the list of predictions of OV/VO differences.

7 General conclusion

The aim of this section is to bring the conclusions from sections 3 to 6 together in order to draw final conclusions about Haider's predictions on Udmurt as an OV language and Finnish as a VO language.

Table 1 on page 80 summarizes the findings from the empirical investigations of this study and the conclusions drawn from them. The cells in very light grey represent cases in which a clear conclusion could not be drawn. The cells in dark grey represent cases in which it was concluded that the data contradict Haider's claims. The cells in light grey represent cases in which it was concluded that Haider's predictions are borne out. As a further indicator of conformity, two cells were merged when two languages behaved in largely the same way regarding a certain property. German and English in table 1 are the baseline for the expected outcome which is why they are necessarily shaded in standard light grey. If there are deviations from Haider's clear cut presentation of the data in his works, this was discussed in the relevant section.

7.1 Udmurt as an OV language

The shading of the cells for Udmurt in table 1 shows that the data were in line with Haider's predictions for six out of nine criteria. Out of the three non-according criteria, only two constitute counterevidence.

In the one case in which no conclusion could be drawn—regarding superiority—Udmurt allows for the relevant construction but the data cannot be interpreted as favouring evidence because Haider links the presence of superiority effects to obligatory fronting of interrogatives, and Udmurt merely exhibits optional fronting of interrogatives.

The conclusion regarding the **compactness of the verb complex** as a reflex of obligatory clustering could be disputed. Out of the two Udmurt informants, only one speaker judged all instances of intervening adverbials to be grammatical. The other speaker judged intervening adverbials to be ungrammatical in two contexts: between a tense auxiliary and its selected verb, and between a control verb and its selected verb. It could be argued that there is obligatory clustering for the latter speaker in those contexts, which would be in line with Haider's predictions. Hence, the other conclusion to be drawn could be that the domains for obligatory clustering for all speakers of Udmurt have not been discovered yet, and that further data are required for a definite conclusion. Nonetheless, even if there were obligatorily clustering constructions for all Udmurt speakers, there would still be three-verb and four-verb verb complexes in ascending order without clustering for some speakers, which is something that Haider does not predict. This implies that the investigation of further verb-cluster properties in the Udmurt verb complex could yield interesting insights into the possible structures of verb complexes across languages. This future research would have to include embedded transitive and ditransitive verbs, especially with the Final-over-Final constraint in view.

The conclusion regarding the **position of resultative phrases and verb particles** cannot be disputed for Udmurt. These elements can be placed anywhere in the sentence without any special intonation. However, this does not necessarily contradict Haider's theory regarding a different structural makeup of OV and VO languages. An additional assumption in Haider's theory is that resultative phrases and verb particles are immobile because they form a complex predicate with the verb in a cross-linguistically uniform fashion. So while the data contradict Haider's prediction, it can be argued that they contradict the theory of a cross-linguistically

Criteria	German	Udmurt	Finnish	English
Properties of the VP – section 3				
compactness of V and direct object (DO)	DO–X–V, *i.e.*, adverbials can intervene between V and DO		V–X–DO, **but obligatory verb raising**	*[$_{\text{VP}}$ V X DO], *i.e.*, adverbials cannot intervene between V and DO
scrambling	DO–IO–V, DO–S–V, *i.e.*, variable order for all elements inside VP		*V–DO–S, *i.e.*, no scrambling across subject; indirect object = adverbial	*V–DO–IO, *i.e.*, no variable order inside VP
Properties of the subject (S) – section 4				
subject condition	XP$_i$ … [$_{\text{SUBJECT}}$ … e$_i$ …], *i.e.*, extraction from subjects and preverbal positions is possible		*XP$_i$ … [$_{\text{SUBJECT}}$ … e$_i$ …], *i.e.*, extraction from subjects and preverbal positions is not possible	
superiority	*wh*$_{\text{XP}}$…*wh*$_{\text{S}}$, *i.e.*, interrogatives **can** precede interrogative subjects	*wh*$_{\text{XP}}$…*wh*$_{\text{S}}$, *i.e.*, interrogatives **can** precede interrogative subjects, **but no obligatory *wh*-movement**	**wh*$_{\text{XP}}$ … *wh*$_{\text{S}}$, *i.e.*, interrogatives **cannot** precede interrogative subjects	
Properties of the verb-complex (VC) – section 5				
partial VP-fronting of ditrans. V	V … IO DO Aux / DO V … IO Aux / IO V … DO Aux / DO IO V … Aux / *i.e.*, V can be fronted alone, with one argument, and with both arguments		*V…Aux IO DO / *V DO…Aux IO / *V IO… Aux DO / *V IO DO… Aux / *i.e.*, neither partial nor full VP-fronting	*V…Aux IO DO / *V DO…Aux IO / *V IO… Aux DO / V IO DO… Aux / *i.e.*, no partial only full VP-fronting
canonical VC order	V–Aux, *i.e.*, selected verbs **precede** selecting verbs		Aux–V, *i.e.*, selected verbs **follow** selecting verbs	
rigidity of VC order	V$_3$–V$_2$–V$_1$ / V$_3$–V$_1$–V$_2$ / V$_1$–V$_3$–V$_2$, *i.e.*, **variable** order between selecting and selected verbs		V$_1$–V$_3$–V$_2$ / *V$_3$–V$_2$–V$_1$, *i.e.*, contrastive fronting of most deeply embedded verb (restricted)	*V$_1$–V$_3$–V$_2$, / *V$_2$–V$_1$–V$_3$, *i.e.*, **rigid** order between selecting and selected verbs
VC compactness	*V–X–Aux, *i.e.*, non-verbal material **cannot** intervene between verbs of the VC	V–X–Aux, *i.e.*, non-verbal material **can** intervene between verbs of the VC in most contexts	Aux–X–V, *i.e.*, non-verbal material **can canonically** intervene between verbs of the VC	
Properties of resultative phrases and verb particles (Prt) – section 6				
position of Prt	preverbal V-adjacent	pre- & postverbal V-adjacent & non-V-adjacent		postverbal V-adjacent & non-V-adjacent

Table 1: Haider's (2010, 2013, 2014) criteria in which differences were observed between German (OV) and English (VO) in comparison to Udmurt (OV) and Finnish (VO). Light grey signifies accordance with Haider's prediction, dark grey signifies non-accordance, very light grey signifies that no definite conclusion was drawn. Abbrev.: DO – direct object; IO – indirect object; S – subject; *wh* – interrogative phrase; VC – verb complex; Aux – verb-selecting verb.

uniform structure of verb-particle constructions. As indicated by Udmurt and Finnish sharing a single cell, resultative phrases and verb particles behave like any other phrase in Finnish as well. Therefore it can be argued that resultative constructions in the Uralic languages have a different structure than resultative constructions in the Germanic languages. As a consequence, the position of particle phrases would have to be dropped as a criterion from Haider's list altogether. It could be tried to prevent the dropping of this criterion by restricting Haider's prediction to only those languages in which resultative constructions behave like in Germanic but this would simply mean to immunise Haider's predictions against counterevidence because any piece of counterevidence could simply be debunked by referring to this restriction. For the sake of the typology of resultative and verb particle constructions, an investigation of the prediction is still favourable.

In all of the remaining six criteria in table 1, Udmurt conforms to Haider's prototypical OV language German as indicated by the shared cells. Since superiority is not applicable to Udmurt, this criterion can be dropped, leaving six out of eight borne-out predictions. Furthermore, the prediction regarding verb particles is not applicable to both Udmurt and Finnish, such that it can also be dropped. With these omissions, Udmurt is in line with six out of seven predictions.

Udmurt is distinct from English in every respect but the compactness of the verb complex. It is distinct from Finnish in at least five aspects: the subject condition, the obligatory fronting of interrogatives, and in all of the verb-complex properties save compactness. On the surface, the data for adverbial intervention between verb and direct object, and for the scrambling of direct object and indirect object are the same. The clear surface difference is that there is no scrambling across subjects in Finnish. This is the only clear surface difference at the VP level. As discussed above, resultative phrases and verb particles are likely to behave mostly like any other phrase in both Udmurt and Finnish, which sets these Uralic languages apart from both German and English.

With respect to Haider's syntactic criteria, Udmurt has more commonalities with the totally unrelated OV language German than with the more closely related VO language Finnish. The totally unrelated VO language English is the most distinct from Udmurt. Hence, the basic word order of Udmurt is a better predictor of Haider's syntactic properties than the family it belongs to. Additionally, Udmurt is in line with every 'classical' word order correlation for an OV language (F. Gulyás, 2011b).

As a conclusion, Udmurt can be regarded an OV language that is in line with Haider's predictions.

7.2 Finnish as a VO language

Table 1 shows that Finnish is in line with six out of nine of Haider's predictions. There is only one piece of strict counterevidence regarding the syntactic properties of resultative phrases and verb particles which has already been accounted for in the discussion on Udmurt above.

Unfortunately, no conclusion could be drawn with respect to the two features which directly relate to the structure of the VP: the availability of **intervening adverbs** between the verb and its direct object, and the availability of **scrambling**. On the surface, there is adverbial intervention and word order variation between a direct object and an indirect object. As pointed out in table 1, what is standing in the way of a conclusion is the non-suppressible movement of both finite and non-finite verbs to a projection above VP. As a consequence, it cannot be reliably determined whether a superficially intervening adverbial is merged inside VP, constituting

counterevidence, or on top of VP, whereby the construction would not be ruled out by Haider's theory. The same problem repeats itself in the discussion of the order of direct and indirect object. Indirect objects follow the direct object in canonical position, much like English prepositional objects. Additionally, the literature on Finnish mostly treats indirect objects as adverbials because they bear a local case. This makes it probable that the recipients in ditransitive sentences are, in fact, adverbials. For this reason in combination with obligatory verb raising, it can also not be determined whether the word order variation is the result of optional VP-external merger and extraposition. The only piece of evidence against VP-internal word order variation is the ungrammaticality of scrambling of structures in which the direct object precedes the subject.

Finnish clearly conforms to Haider's prototypical VO language English in four aspects. Especially subjects behave alike in Finnish and English. This is evidence that a special place is reserved for subjects in Finnish as well. The Finnish verb complex conforms to the English verb complex only with respect to canonical word order and the availability of non-verbal material between verbs of the verb complex. The slightly more variable word order in the Finnish verb complex is connected to the different behaviour with regard to VP-fronting. It seems that partial VP-fronting is generally unavailable in Finnish, just like in English, but that full VP fronting is ungrammatical in most cases in Finnish, too. The exception is if the VP contains nothing but an, preferably, intransitive, infinitive verb. A further exception are constructions which involve a fronted transitive verb and an information-structurally given object. In such sentences, objects are able to surface in preverbal position such that these constructions can be argued to involve actual remnant-VP fronting. It is the same two contexts that allow for contrastively *preposing* the most deeply embedded verb to a position between or in front of the verbs of the verb complex. Apart from marked sentences of this kind, the word order of selected and selecting verbs is rigid, and partial VP-fronting is not available. Therefore Finnish can be said to conform to English in six aspects. Note however, that the verb complex in the Finnish of Anders Holmberg behaves like in German in the presence of sentence-initial focus.

When subtracting the non-applicable criteria from the total count of criteria (the VP-criteria, and verb particles as in Udmurt above), Finnish is left with six out of six criteria with respect to which it conforms to English. In contrast to this, Finnish is fully distinct from German. It is distinct from Udmurt in five criteria: the subject condition, the obligatory fronting of interrogatives, and in all of the verb-complex properties save compactness.

In sum, Finnish has more Haiderian commonalities with the totally unrelated VO language English than with the more closely related OV language Udmurt. Finnish has no commonalities with the unrelated OV language German respective the present criteria at all. In comparison, Finnish is in line with only five out of twelve 'classic' word order correlations for VO languages according to F. Gulyás (2011b).

In conclusion, Finnish can be regarded a VO language that is in line with Haider's predictions.

7.3   General conclusion and future directions

Let it be reiterated: with respect to Haider's criteria that were applicable for each language, the OV language Udmurt is almost completely distinct from the VO language English, and the VO language Finnish is completely distinct from the OV language German; vice versa, the two OV languages are almost completely similar, and the two VO languages are also almost completely similar. This conclusion strongly favours Haider's proposal that the *syntactic structures* in OV languages are systematically different from those in VO languages.

In the introduction to this study it was discussed that the OV language Japanese showed differences to English as well. There it was already mentioned that Japanese lacks the English subject–object asymmetries (Oseki & Miyamoto, to appear). Additionally, it is in concord with Haider's other criteria where applicable. As in Udmurt, superiority effects cannot occur due to the lack of obligatory *wh*-movement. Japanese also allows for scrambling (Grewendorf & Sabel, 1999) and adverbial intervention (Fukui, 1986). Finally, Japanese verb complexes exhibit verb clustering (for an overview, Takahashi, 2012). This means that there is an OV language from a third family that adheres to Haider's predictions.

Haider's predictions are borne out with respect to two Germanic OV languages, German and Dutch, and five Germanic VO languages, assuming that Haider checked all of his criteria for at least Dutch and the Scandinavian languages. Two Uralic languages can be added to this count, and the East Asian language Japanese. In sum, this makes a total of ten languages. This is not enough to proclaim the ascent of a new super-parameter yet, but it is enough to warrant the investigation of further languages. A next aim could be the investigation of Udmurt's closest VO relative, Komi, and the investigation of a closer OV relatives of Finnish, such as Southern Sami (if it still exists). Since Haider's claims are most controversial with respect to the analysis of OV languages, the further Finno-Ugric OV languages, such as Mari and Khanty, and especially the rigid OV language Nenets, would be interesting targets for investigation, also because these languages are poorly covered by syntactic research at the time. Apart from the Finno-Ugric languages, any family that contains both OV and VO languages is a viable target for future research. The present study can provide a basis for these further studies since it could be shown that Udmurt, as an OV language, differs Haiderianly from Finnish, as a VO language.

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Grapheme-phoneme correspondences of Udmurt

Source: Winkler (2011, Appendix 1)

Vowels:

	front unrounded	central unrounded	back rounded
high	$i\|\ddot{u}\sim u$	$\underline{i}\|$ы $\sim$ьы	$u\|y\sim$ю
mid	$e\|$э$\sim e$	$\underline{e}\|\ddot{o}\sim$ьö	$o\|o\sim\breve{e}$
low		$a\|a\sim$я	

Consonants:

		bi- labial	labio- dental	dento- alveolar	alveo- palatal	palato- alveolar	palatal	velar
Plosive	uvcd.	$p\|n$		$t\|m$			$t'\|$ть	$k\|$к
	vcd.	$b\|$б		$d\|$д			$d'\|$дь	$g\|$г
Affricate	uvcd.				$\check{c}\|$ч	$\hat{c}\|$ӵ		
	vcd.				$\check{3}\|$ӟ	$\hat{3}\|$ӝ		
Fricative	uvcd.			$s\|$с	$\check{s}\|$сь	$š\|$ш		
	vcd.			$z\|$з	$\check{z}\|$зь	$ž\|$ж		
Nasal		$m\|$м		$n\|$н			$\acute{n}\|$нь	
Lateral				$l\|$л			$l'\|$ль	
Vibrant				$r\|$р				
Approximant			$v\|$в				$j\|\breve{u}$	

Selbstständigkeitserklärung

Hiermit versichere ich, dass ich diese Arbeit selbstständig verfasst und keine anderen als die angegeben Hilfsmittel benutzt habe. Die Prüfungsleistung wurde bisher bzw. gleichzeitig keiner anderen Prüfungsbehörde vorgelegt. Alle Zitate oder Stellen, die dem Wortlaut nach anderen Werken entnommen sind, habe ich in jedem einzelnen Fall unter genauer Angabe der Quelle deutlich als Entlehnung kenntlich gemacht.

Ort, Datum   Unterschrift

Zusammenfassung auf Deutsch

DAS UDMURTISCHE ALS OV-SPRACHE.
UND DAS FINNISCHE ALS VO-SPRACHE

Dies ist die erste Studie in der untersucht wird, ob sich die von Hubert Haider (2010, 2013, 2014) festgestellten, syntaktischen Unterschiede zwischen der Objekt–Verb(OV)-Sprache Deutsch und der Verb–Objekt(VO)-Sprache Englisch für eine weitere OV- und eine weitere VO-Sprache einer anderen Sprachfamilie nachweisen lassen. Damit kann gezeigt werden, ob die Grundwortstellung eine syntaktisch relevante Eigenschaft einer Sprache ist.

Die zur Untersuchung ausgewählten Sprachen stammen aus der Uralischen/Finno-Ugrischen Sprachfamilie und sind die OV-Sprache Udmurtisch, gesprochen in Udmurtien (Russland), und die VO-Sprache Finnisch. Auf Grundlage der Unterschiede zwischen dem Deutschen und Englischen wurden Vorhersagen für die syntaktischen Eigenschaften des Udmurtischen und Finnischen getroffen. Diese Vorhersagen wurden mithilfe der vorhandenen Literatur zu diesen beiden Sprachen und mithilfe von neu erhobenen Daten überprüft. Für das bisher weniger erforschte Udmurtische überwiegt der Anteil an neu erhobenen Daten während für das Finnische überwieged auf die Literatur zurückgegriffen wird.

Das Udmurtische stimmt bezüglich Haiders Vorhersagen überwieged mit dem Deutschen überein: (a) variable Wortstellung innerhalb der VP ist möglich (*scrambling*); (b) die VP-interne Trennung von Verb und direktem Objekt ist möglich (*adverbial intervention*); (c) die Extraktion aus präverbalen Konstituenten und insbesondere Subjekten ist möglich (*subject condition*); (d) in Fragen mit mehreren Interrogativelementen kann dem Interrogativsubjekt ein anderes Interrogativelement vorangehen (*superiority effect*); (e) Subkonstituenten der VP können vorangestellt werden (*partial VP-fronting*); (f) selegierte Verben gehen selektierenden Verben in kanonischer Wortstellung voraus; (g) die Abfolge der Verben in einer Serie selegierender und selektierter Verben ist variabel. Die Beobachtung zu *superiority effects* ist allerdings nicht aussagekräftig, weil Interrogativphrasen im Udmurtischen nicht obligatorisch vorangestellt werden müssen. Außerdem widerspricht das Udmurtische Haiders Vorhersage darin, dass (h) in sehr viel mehr Kontexten als im Deutschen nicht-verbale Elemente zwischen den Verben einer Serie von Verben auftreten können (*verb clustering*). Dies ist auch die einzige Gemeinsamkeit, die das Udmurtische in jenen Punkten mit dem Englischen aufweist.

Wie vorhergesagt verhält sich das Finnische in den obengenannten Eigenschaften meist gegenteilig zum Udmurtischen und entsprechend zum Englischen: (c) die Extraktion aus präverbalen Konstituenten ist *nicht* möglich; (d) in Fragen mit mehreren Interrogativelementen kann dem Interrogativsubjekt *nicht* ein anderes Interrogativelement vorangehen; (e) Subkonstituenten der VP können *nicht* vorangestellt werden, Ausnahmefälle sind als Fälle der Voranstellung einer 'entleerten' VP zu betrachten (*remnant movement*); (f) selegierte Verben *folgen* selektierenden Verben in kanonischer Wortstellung; (g) die Abfolge der Verben in einer Serie selegierender und selektierter Verben ist *nicht* variabel, Ausnahmefälle sind ebenfalls als *remnant movement* zu betrachten. Zu Eigenschaften (a) und (b) konnte kein klares Urteil gefällt werden da das Finnische obligatorische Verbanhebung in eine Position oberhalb von VP aufweist.

Das Udmurtische und das Finnische unterscheiden sich gemeinsam von den germanischen Sprachen dadurch, dass (i) Resultativphrasen und Verbpartikeln (sekundäre Prädikate) nicht ein von anderen Phrasen (z.B. Adverbialphrasen) unterscheidbarer syntaktischer Status zukommt.

Diesbezüglich wird behauptet, dass Haiders Vorhersage auf der falschen Prämisse beruht, dass die syntaktischen Eigenschaften sekundärer Prädikation crosslinguistisch uniform sind. Somit kann dieser Widerspruch zu Haiders Vorhersagen nicht auf die Grundwortstellung zurückgeführt werden.

Insgesamt kann anhand der Daten der Schluss gezogen werden, dass sich Haiders Vorhersagen bestätigt haben. Die OV-Sprache Udmurtisch verhält sich in Bezug auf Haiders Kriterien fast gleich der OV-Sprache Deutsch und stimmt in nur einem Punkt mit dem Englischen überein. Die VO-Sprache Finnisch hingegen ist der VO-Sprache Englisch viel ähnlicher als dem Deutschen. Schließlich: obwohl Udmurtisch und Finnisch miteinander verwandt sind und viele Gemeinsamkeiten in augenscheinlicheren Eigenschaften wie dem Lexikon oder der Morphologie aufweisen unterscheiden sie sich bezüglich Haiders *syntaktischen* Eigenschaften in fast allen Punkten. Die Grundwortstellung hat also einen größeren Einfluss auf die Ausprägung von Haiders Kriterien als die Verwandtschaft der Sprachen.

Die Ergebnisse dieser Studie zeigen erste Evidenz dafür, dass sich die Unterschiede zwischen dem Deutschen und dem Englischen auch in anderen Sprachpaaren zeigen können. Dies ist ein erster Schritt dahin die Grundwortstellung als Prädiktor für syntaktische Eigenschaften zu etablieren. Das ist ein Anreiz, weitere Sprachen auf Haiders Kriterien hin zu untersuchen. Es ist außerdem ein Anreiz, die Grundwortstellung in der syntaktischen Theoriebildung zu berücksichtigen. Das bedeutet auch, dass Englisch nur bedingt als Vorbild für die syntaktische Analyse einiger Aspekte von OV-Sprachen angemessen ist.