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**Information structure in
Caucasian Urum**

An empirical investigation on the effect of
focus and topic on word order

vorgelegt von
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Contents

Eigenständigkeitserklärung	i
Acknowledgments	ii
Contents	viii
List of Abbreviations	ix
List of Figures	xii
List of Tables	xiv
1 Introduction	1
1.1 Relevance of the thesis	1
1.2 The data	1
1.3 Structure of the thesis	2
I Theoretical background	4
2 Information structure	5
2.1 Introduction	5
2.2 Concepts of information structure	7
2.3 The notion of focus	9
2.3.1 Definition	9
2.3.2 Focus types	10
2.3.2.1 Non-identificational focus	10
2.3.2.2 Identificational focus	11
2.3.3 Strategies of focus marking	13
2.3.4 Summary	15
2.4 The notion of topic	15
2.4.1 Definition	15
2.4.2 Topic types	18
2.4.3 Strategies of topic marking	19

2.4.4	Summary	22
2.5	Conclusion	22
3	Urum: A brief description	24
3.1	Introduction	24
3.2	Documentation and language use	26
3.3	Language contact	29
3.4	Lexicon	30
3.5	Phonology	30
3.5.1	Consonants	30
3.5.2	Vowels	31
3.5.3	Vowel harmony	32
3.6	Nominal morphology	32
3.6.1	Number	32
3.6.2	Case	33
3.6.3	Possession	36
3.6.4	Determiners	37
3.6.5	Quantifiers and numerals	37
3.6.6	Personal pronouns	38
3.6.7	Interrogative pronouns	38
3.6.8	Adjectives	39
3.6.9	Negation	40
3.7	Verbal morphology	40
3.7.1	Passive	40
3.7.2	Negation	41
3.7.3	Person and number	41
3.7.4	Aspect	42
3.7.5	Tense	42
3.7.6	Mood	44
3.7.7	Adverbs	45
3.8	Basic word order	45
3.8.1	Structure of the NP	45
3.8.2	Structure of the VP	46
3.9	Questions	48
3.9.1	<i>Wh</i> -questions	48
3.9.2	Polar questions	50
3.9.3	Tag questions	51
3.10	Coordination	52

3.11	Subordination	53
3.11.1	Complement clauses	53
3.11.2	Adverbial clauses	53
3.11.3	Relative clauses	55
3.12	Summary	55
4	Word order in Turkish and Russian	56
4.1	Introduction	56
4.2	Turkish	57
4.2.1	Basic word order	57
4.2.2	Word order and information structure	59
4.2.2.1	Focus and word order	60
4.2.2.2	Topic and word order	65
4.2.3	Summary	67
4.3	Russian	67
4.3.1	Basic word order	67
4.3.2	Word order and information structure	71
4.3.2.1	Focus and word order	72
4.3.2.2	Topic and word order	73
4.3.3	Summary	74
4.4	Final comparison	75
5	Syntactic approaches to information structure	76
5.1	Introduction	76
5.2	Some notes on the generative framework	76
5.2.1	The Minimalist Program	76
5.2.2	Derivation by Phase	79
5.2.3	Summary	80
5.3	Overview of previous approaches	80
5.3.1	Classification	80
5.3.2	Approaches to Russian IS	84
5.3.2.1	Cartographic approaches	84
5.3.2.2	Non-cartographic approaches	88
5.3.3	Approaches to Turkish IS	96
5.3.3.1	Cartographic approaches	96
5.3.3.2	Non-cartographic approaches	100
5.3.4	Summary	104
5.4	A simplified syntactic approach to Turkish and Russian IS	105
5.4.1	IS-related movement in Russian	105

5.4.2	IS-related movement in Turkish	112
5.5	Summary and conclusions	116

II Empirical studies and syntactic analysis 117

6 Focus 118

6.1	Introduction	118
6.2	Speech production	120
6.2.1	Introduction	120
6.2.2	Method	121
6.2.2.1	Participants	121
6.2.2.2	Material and design	122
6.2.2.3	Procedure	125
6.2.3	Scoring	126
6.2.4	Results	127
6.2.4.1	Turkish	127
6.2.4.2	Russian	130
6.2.4.3	Urum	133
6.2.5	Summary and discussion	136
6.2.6	Interim conclusions	138
6.3	Acceptability judgment	139
6.3.1	Introduction	139
6.3.2	Method	140
6.3.2.1	Participants	140
6.3.2.2	Material and design	141
6.3.2.3	Procedure	145
6.3.3	Results	146
6.3.3.1	Turkish	147
6.3.3.2	Russian	152
6.3.3.3	Urum	157
6.3.4	Summary and discussion	160
6.3.5	Interim conclusions	161
6.4	Conclusions	162

7 Topic 164

7.1	Introduction	164
7.2	Speech production	165
7.2.1	Introduction	165

7.2.2	Method	170
7.2.2.1	Participants	170
7.2.2.2	Material and design	170
7.2.2.3	Procedure	173
7.2.3	Scoring	174
7.2.4	Results	175
7.2.4.1	Turkish	175
7.2.4.2	Russian	182
7.2.4.3	Urum	188
7.2.5	Summary and discussion	195
7.2.6	Interim conclusions	196
7.3	Acceptability judgment	197
7.3.1	Introduction	197
7.3.2	Method	199
7.3.2.1	Participants	199
7.3.2.2	Material and design	199
7.3.2.3	Procedure	204
7.3.3	Results	204
7.3.3.1	Turkish	205
7.3.3.2	Russian	208
7.3.3.3	Urum	212
7.3.4	Summary and discussion	215
7.3.5	Interim conclusions	216
7.4	Conclusions	217
8	The syntax of focus and topic in Urum	219
8.1	Introduction	219
8.2	Base position of arguments	220
8.3	Problems with a cartographic approach	225
8.4	An alternative approach to Urum IS	226
8.4.1	Focus movement	226
8.4.2	Topic movement	230
8.4.2.1	Preverbal topics	230
8.4.2.2	Postverbal topics	233
8.4.2.3	Summary	234
8.4.3	Interim summary	234
8.5	Conclusions	235

9 Conclusions	236
9.1 Summary	236
9.2 The role of language contact	238
9.3 The role of literacy	239
9.4 Relevance of the thesis from a broader perspective	240
9.5 Future research	240
Bibliography	242
Appendices	256
Appendix A Material focus elicitation study	257
Appendix B Material focus acceptability judgment task	264
Appendix C Material topic elicitation study	289
Appendix D Material topic acceptability judgment task	296
Zusammenfassung (German summary)	321

List of Abbreviations

*	ungrammatical example
??	reduced grammaticality
.	separates complex glosses
1	1st person
2	2nd person
3	3rd person
A	adjective
ABL	ablative case
ABIL	ability
ACC	accusative case
ADJR	adjectivizer
AG	agent
AN	ancestor story
CH	cheese story
CG	common ground
CL	culture story
COP	copula
COM	comitative
COMP	complementizer
CP	complementizer phrase
CVB	converb suffix
DAT	dative case
D	determiner
DO	direct object
DOC	double object construction
EPST	epistemic
F	feminine
FE	feast story
FM	family story
FNOM	factive nominal
FOC	focus
FOCC	contrastive focus

FOCCOR	corrective focus
GEN	genitive case
GIV	given element
INS	instrument
INS	instrumental case
IO	indirect object
INF	infinitive object
IPFV	imperfective
IS	information structure
LG	language story
LOC	locative
LOC	locative case
MR	marriage story
ML	modern life story
MST	Modern Standard Turkish
M	masculine
N	noun
N	neuter
NEG	negative, negation
NEG.EXIST	negative existential
NR	nominalizer
NP	noun phrase
O/OBJ	object
OPT	optative
PA	path description
PASS	passive
PAT	patient
PFV	perfective
PL	plural
POSS	possessive
PP	people story
PREP	prepositional case
PRF	perfect
PROG	progressive
PS	pear story
PST	past
PTCP	participle
Q	question particle

QU	quantifier
REC	recipient
RP	resumptive pronoun
S/SBJ	subject
SEN	sentence collection
SG	singular
T3	language of the third type
TAM	tense, aspect, mood
TP	tense phrase
TXT	text collection
TOP	topic
TOPC	contrastive topic
TOPCOR	corrective topic
U	universal quantifier
UG	universal grammar
UUM	Urum
V	verb
VL	village story
XP	phrase of an arbitrary category (x serves as a variable for the head category)

List of Figures

3.1	Greek migration to Georgia in the 19th/20th century (Ladze 2016: 179)	25
3.2	Average of judgments about Urum language use (16 speakers per stage)	28
3.3	Urum pitch contours: assertion vs. polar question	51
6.1	Example of visual stimuli used in elicitation task.	122
6.2	Focus elicitation study: OSV orders produced by Turkish speakers	129
6.3	Focus elicitation study: OVS orders produced by Russian speakers	132
6.4	Focus elicitation study: OVS orders produced by Urum speakers	135
6.5	Manipulated pitch contour of SVO target sentence (Item 02, Russian)	145
6.6	Focus acceptability judgment task: Mean ratings of Turkish speakers for SVO/OVS orders	147
6.7	Focus acceptability judgment task: Mean ratings of Turkish speakers for SOV/OSV orders	150
6.8	Focus acceptability judgment task: Mean ratings of Russian speakers for SVO/OVS orders	153
6.9	Focus acceptability judgment task: Mean ratings of Russian speakers for SOV/OSV orders	155
6.10	Focus acceptability judgment task: Mean ratings of Urum speakers for SVO/OVS orders	157
6.11	Focus acceptability judgment task: Mean ratings of Urum speakers for SOV/OSV orders	159
7.1	Item set used in the <i>agent vs. patient</i> experiment	171
7.2	Item set used in the <i>theme vs. locative</i> experiment	172
7.3	Item set used in the <i>recipient vs. patient</i> experiment	172
7.4	Item set used in the <i>instrument vs. patient</i> experiment	173
7.5	Turkish: PAT<AG linearizations	176

7.6	Turkish: LOC<THE linearizations	178
7.7	Turkish: PAT<REC linearizations	180
7.8	Turkish: PAT<INS linearizations	181
7.9	Russian: PAT<AG linearizations	183
7.10	Russian: LOC<THE linearizations	184
7.11	Russian: PAT<REC linearizations	186
7.12	Russian: INS<PAT linearizations	187
7.13	Urum: PAT<AG linearizations	189
7.14	Urum: LOC<THE linearizations	191
7.15	Urum: PAT<REC linearizations	193
7.16	Urum: INS<PAT linearizations	194
7.17	Topic acceptability judgment task: Mean ratings of Turkish speakers for SVO/OVS orders	206
7.18	Topic acceptability judgment task: Mean ratings of Turkish speakers for SOV/OSV orders	207
7.19	Topic acceptability judgment task: Mean ratings of Russian speakers for SVO/OVS orders	209
7.20	Topic acceptability judgment task: Mean ratings of Russian speakers for SOV/OSV orders	211
7.21	Topic acceptability judgment task: Mean ratings of Urum speakers for SVO/OVS orders	213
7.22	Topic acceptability judgment task: Mean ratings of Urum speakers for SOV/OSV orders	214

List of Tables

3.1	Urum consonant inventory (IPA values in brackets; orthography in italics) (adapted from Skopeteas 2013: 339)	31
3.2	Urum vowel inventory	32
3.3	Paradigm of possessive person suffixes in Urum	36
3.4	Paradigm of personal pronouns in Urum	38
3.5	Paradigms of verbal person suffixes in Urum	41
5.1	Focus options in Turkish	113
6.1	Experimental design of focus-elicitation study	122
6.2	Focus elicitation study: Valid Turkish data	128
6.3	Focus elicitation study: Fixed effect estimates for Turkish OSV orders	130
6.4	Focus elicitation study: Valid Russian data	130
6.5	Focus elicitation study: Fixed effect estimates for Russian non-canonical orders	132
6.6	Focus elicitation study: Pairwise post-hoc comparisons (Russian)	133
6.7	Focus elicitation study: Valid Urum data	133
6.8	Focus elicitation study: Urum V-medial constructions	134
6.9	Focus elicitation study: Urum V-final constructions	134
6.10	Focus elicitation study: Fixed effect estimates for Urum OVS orders	135
6.11	Experimental design of focus acceptability judgment (context conditions)	141
6.12	Focus acceptability judgment task: SVO vs. OVS (Turkish) .	147
6.13	Focus acceptability judgment task: Fixed effect summary for Turkish OVS orders with non-identificational foci	148
6.14	Focus acceptability judgment task: Fixed effect summary for Turkish OVS orders with corrective foci	149
6.15	Focus acceptability judgment task: Tukey HSD (Turkish, corrective, SVO/OVS)	149
6.16	Focus acceptability judgment task: SOV vs. OSV (Turkish) .	150

6.17	Focus acceptability judgment task: Fixed effect summary for Turkish OSV orders with non-identificational foci	151
6.18	Focus acceptability judgment task: Tukey HSD (Turkish, non-identificational, SOV/OSV)	151
6.19	Focus acceptability judgment task: Fixed effect summary for Turkish OSV orders with corrective foci	151
6.20	Focus acceptability judgment task: Tukey HSD (Turkish, corrective, SOV/OSV)	152
6.21	Focus acceptability judgment task: SVO vs. OVS (Russian) .	152
6.22	Focus acceptability judgment task: Fixed effect summary for Russian OVS orders with non-identificational foci	153
6.23	Focus acceptability judgment task: Fixed effect summary for Russian OVS orders with corrective foci	154
6.24	Focus acceptability judgment task: SOV vs. OSV (Russian) .	154
6.25	Focus acceptability judgment task: Fixed effect summary for Russian OSV orders with non-identificational foci	155
6.26	Focus acceptability judgment task: Tukey HSD (Russian, non-identificational, SOV/OSV)	156
6.27	Focus acceptability judgment task: Fixed effect summary for Russian OSV orders with corrective foci	156
6.28	Focus acceptability judgment task: SVO vs. OVS (Urum) . .	157
6.29	Focus acceptability judgment task: Fixed effect summary for Urum V-medial ratings (=corrective foci)	158
6.30	Focus acceptability judgment task: SOV vs. OSV (Urum) . .	158
6.31	Focus acceptability judgment task: Fixed effect summary for Turkish V-final ratings (=corrective foci)	159
6.32	Focus and word order in Turkish, Russian and Urum	163
7.1	Experimental design of topic-elicitation study	170
7.2	Turkish: <i>agents vs. patients</i>	175
7.3	Turkish: Fixed effect estimates for PAT<AG linearizations .	177
7.4	Turkish: <i>themes vs. locatives</i>	177
7.5	Turkish: Fixed effect estimates for LOC<THE linearizations	178
7.6	Turkish: <i>recipients vs. patients</i>	179
7.7	Turkish: Fixed effect estimates for REC<PAT linearizations .	180
7.8	Turkish: <i>instruments vs. patients</i>	180
7.9	Turkish: Fixed effect estimates for PAT<INS linearizations .	182
7.10	Russian: <i>agents vs. patients</i>	182
7.11	Russian: Fixed effect estimates for PAT<AG linearizations .	183

7.12	Russian: <i>themes vs. locatives</i>	184
7.13	Russian: Fixed effect estimates for LOC<THE linearizations	185
7.14	Russian: <i>recipients vs. patients</i>	185
7.15	Russian: Fixed effect estimates for REC<PAT linearizations	186
7.16	Russian: <i>instruments vs. patients</i>	186
7.17	Russian: Fixed effect estimates for PAT<INS linearizations .	188
7.18	Urum: <i>agents vs. patients</i>	188
7.19	Urum: Fixed effect estimates for PAT<AG linearizations . .	189
7.20	Urum: <i>themes vs. locatives</i>	190
7.21	Urum: Fixed effect estimates for LOC<THE linearizations .	191
7.22	Urum: <i>recipients vs. patients</i>	192
7.23	Urum: Fixed effect estimates for PAT<REC linearizations . .	193
7.24	Urum: <i>instruments vs. patients</i>	193
7.25	Urum: Fixed effect estimates for PAT<INS linearizations . .	195
7.26	Experimental design of topic acceptability judgment (context conditions)	200
7.27	Topic acceptability judgment task: SVO vs. OVS (Turkish) .	205
7.28	Topic acceptability judgment task: SOV vs. OSV (Turkish) .	206
7.29	Topic acceptability judgment task: Fixed effect summary for Turkish V-final ratings (=simple topics)	207
7.30	Topic acceptability judgment task: Tukey HSD (Turkish, simple, SOV/OSV)	208
7.31	Topic acceptability judgment task: Fixed effect summary for Turkish V-final ratings (=contrastive topics)	208
7.32	Topic acceptability judgment task: SVO vs. OVS (Russian) .	209
7.33	Topic acceptability judgment task: Fixed effect summary for Russian V-medial ratings (=simple topics)	210
7.34	Topic acceptability judgment task: SOV vs. OSV (Russian) .	210
7.35	Topic acceptability judgment task: Fixed effect summary for Russian V-final ratings (=simple topics)	211
7.36	Topic acceptability judgment task: Fixed effect summary for Russian V-final ratings (=contrastive topics)	212
7.37	Topic acceptability judgment task: SVO vs. OVS (Urum) . .	212
7.38	Topic acceptability judgment task: SOV vs. OSV (Urum) . .	213
7.39	Topic acceptability judgment task: Fixed effect summary for Urum V-final ratings (=simple topics)	214
8.1	Structural positions of foci in Urum	230
8.2	Structural positions of topics in Urum	234

Chapter 1

Introduction

1.1 Relevance of the thesis

A current development that can be observed all over the world is the emergence of multilingual contact situations. Contact situations typically result from migration processes. A natural consequence of language contact due to migration is the development of bilingual communities. The exploration of contact situations is thus very crucial in order to understand how languages change due to contact.

The aim of this dissertation is to analyze the effect of language contact on the information structure in Caucasian Urum. Information structure is an essential part of communication and describes the way in which the information of a sentence is linguistically packaged in order to be best understood by the addressee (Chafe 1976). Caucasian Urum (henceforth: Urum) is an Anatolian Variety of Turkish which is spoken by a small minority of ethnic Greeks in the Small Caucasus in Georgia. The ancestors of the Urum speakers came from several cities in North Eastern Anatolia (e.g., Kars, Erzurum, Bayburt) and moved to the Caucasus in the beginning of the 19th century. Since that time Urum speakers have been in close contact with the other languages of the Caucasus, particularly with Russian which was the dominant language in Georgia until the end of the Soviet Union in 1991 (Pavlenko 2008). Therefore Urum offers an ideal opportunity in order to analyze the effect of language change due to contact.

1.2 The data

Urum is categorized as a severely endangered language. According to the last official population census in 2006 there were less than 1500 Urum speakers living in Georgia (Wheatley 2009). A special characteristic of Urum is that it is only spoken, i.e., there exists no written variety of the language.

Therefore one particular objective of the dissertation is the development of experimental material, which can be used for the exploration of spoken language in the laboratory (i.e., with Russian and Turkish native speakers) as well as in fieldwork environments (i.e., with Urum native speakers). For the data collection I developed four studies on the correlation of syntax and information structure, using two different research methods: speech production and acceptability judgment. The reasons for these two methods are two-fold. Firstly, the speech production studies were designed in order to elicit semi-spontaneous data, which show the word order preferences of the speakers. Secondly, the acceptability judgments tasks were constructed in order to analyze whether not or rarely produced orders are really less acceptable than frequently produced orders or if there are other reasons why some orders are more or less frequent than others.

1.3 Structure of the thesis

The dissertation consists of two main parts: a theoretical part (Chapters 2-5) and an empirical part (Chapters 6-8).

Chapter 2 provides some theoretical background on the notion of information structure. Within the first part of this chapter I provide a definition of the term information structure and discuss several concepts of the term. Subsequently I concentrate on the two relevant information structural concepts focus and topic, their specific types and their linguistic expressions.

Chapter 3 contains a brief description of the grammar of Urum. The first part of the chapter provides a general overview of the speakers and the language and focuses on the contact situation. Afterwards the chapter provides some basic information about the lexicon, the phonology, the morphology and the syntax of Urum.

Chapter 4 deals with the derivation of canonical and non-canonical orders in the substrate language Turkish and the contact language Russian and discusses the syntactic properties of topics and foci in both languages. Chapter 5 provides some general information on the generative framework, introduces two major types of syntactic approaches to information structure and presents an overview of the most relevant syntactic analyses to Turkish and Russian information structure. Based on the theoretical assumptions, Chapter 5 finally analyzes the structural differences between Turkish and Russian regarding their information structural possibilities and provides a

simplified syntactic approach which captures the differences between the two languages.

Chapter 6 and 7 report the empirical studies. Chapter 6 provides two experimental studies on the effect of focus on the structure of the clause in the three object languages Turkish, Russian and Urum. The first part of the chapter reports a speech production study while the latter presents an acceptability judgment task. Each part provides detailed information on the material, the method, the procedure and the results of the respective study. Finally, the chapter contains a general discussion which compares the findings of the three languages and discusses the results of the studies with regard to the main research questions. Similarly, Chapter 7 presents two empirical studies on the interaction of topics (here understood in terms of discourse given material) and word orders. The structure of chapter 7 compares to that of Chapter 6.

Chapter 8 discusses the empirical findings for Urum in comparison to Turkish and Russian and provides a syntactic analysis to Urum information structure. The results of the dissertation are finally summarized and discussed in Chapter 9.

Part I

Theoretical background

Chapter 2

Information structure

2.1 Introduction

The term information structure (IS) goes back to Halliday (1967) who introduced the notion in order to describe the segmentation of spoken language into so-called information units. According to Halliday's approach these information units do not necessarily coincide with the syntactic units of a sentence, but are rather distinguished by phonological means, i.e., each information unit is assumed to be realized as one phonological unit (Halliday 1967: 200). Consider for instance the examples in (1) where the information units are separated by //.

- (1) a. // John saw the play yesterday //
- b. //John // saw the play yesterday //
- c. // John // saw the play // yesterday //
- d. //John saw the play yesterday but said nothing about it //

(Halliday 1967: 201)

The sentences in (1) are all different varieties of the (written) clause *John saw the play yesterday*. Whereas Halliday (1967: 201) considers (1a) as unmarked since the clause is only one information unit, he proposes that all other examples, in which the information unit does not match with the clause boundaries, but is less or more than one clause, are marked varieties. Consider for instance the examples in (1b) and (1c) where the clause consists of two or respectively three information units and also the example in (1d) where the clause is part of a larger information unit.

Another very popular approach of information structure was developed by Chafe (1976). He introduced the metaphor of *information packaging* and claims that information structure does not primarily refer to the content of a message but to the strategies used in order to transfer the information of a message in such a way that it can be well understood by the addressee (Chafe

1976: 28). According to this approach, information packaging is depending on the discourse context and the communicative goals of the interlocutors. Consider for instance the sentences in (2).

- (2) a. Betty peeled the onions.
b. The onions were peeled by Betty.
c. The onions, Betty peeled. (Chafe 1976: 27)

The examples in (2) are all varieties of the sentence *Betty peeled the onions*. However, all three utterances differ with regard to their information structure. Chafe distinguishes between three types of subjects: the grammatical subject, the logical subject (i.e., the agent) and the psychological subject (i.e., the discourse topic). The sentence in (2a) is a canonical active sentence with *Betty* being the grammatical, logical and psychological subject. The sentence in (2b) is a passive construction. While *Betty* still remains the logical subject of the sentence, the role of the grammatical and psychological subject is taken by the NP *the onions*. Finally (2c) is an example of scrambling. The NP *the onions* is fronted and functions as the psychological subject, whereas the NP *Betty* fulfils the role of the grammatical and the logical subject of the sentence (Chafe 1976: 27). All three varieties in (2) are thus varying with regard to their propositional contents and may be used in different discourse contexts.

Another attempt to information structure arises from Prince (1981) who proposes a correlation of information structure (i.e., the form of an utterance) and the mental states of the interlocutors. According to her definition information-packaging “reflects the sender’s hypotheses about the receiver’s assumptions and beliefs and strategies.” (Prince 1981: 224) In a similar vein, Lambrecht (1994) regards information structure as a grammatical component that is responsible for the pragmatic structuring of propositions within the discourse.

A more recent approach to information structure goes back to Krifka (2008) who characterizes the notion within the communicative model of Common Ground (CG). Krifka distinguishes between two dimensions of Common Ground: CG content and CG management. Whereas the former refers to the shared knowledge of the interlocutors, the latter describes the strategies of information structure that are used in order to create the CG content (Krifka 2008: 243).

According to Féry and Krifka (2008) information structure is used in order to satisfy the immediate communicative needs of the interlocutors

and affects all structural levels of a language (such as syntax, phonology, morphology). A quite similar view is advocated by Zimmermann and Féry (2010) who consider information structure as a cognitive domain that mediates between the modules of linguistic competence.

This section provided a short introduction into the concept of information structure. Though a number of different definitions exist, the term is primarily used to refer to the strategies of packaging/structuring information within an utterance in such a way that it can be optimally transferred between the interlocutors in a discourse. However, whereas earlier approaches discussed information structure either in terms of phonology (e.g., Halliday 1967) or syntax (e.g., Chafe 1976), recent approaches agree that languages use different linguistic means (e.g., phonology, syntax, morphology) or rather a combination of these in order to express information structure (e.g., Krifka 2008, Féry and Krifka 2008, Zimmermann and Féry 2010).

2.2 Concepts of information structure

A very common concept of information structure is the binary distinction between *old* (= *given*) and *new information*. Although the term information structure was first mentioned by Halliday (1967), the concept itself has its roots in the middle of the 19th century. Consider for instance Henri Weil (1844) who assumed a binary distinction between given (*le connu*) and new information (*l'inconnu*), which determines the linearization of the arguments in a sentence (i.e., given < new). A few years later, the German linguist and sinologist Georg von der Gabelentz (1868) introduced another binary distinction. He differentiates between the *psychological subject* and the *psychological predicate* of a sentence. The psychological subject denotes that part of the utterance to which the speaker directs the addressee's attention. The psychological predicate contains the information that the addressee is intended to think which is held within the psychological subject (von der Gabelentz 1868: 378). Similar to Weil (1844), von der Gabelentz (1868: 379) assumed a correlation of the binary distinction with word order and proposed that the psychological subject precedes the psychological predicate.

Paul (1880) adopted the terminology of von der Gabelentz. However, he argued for a prosodic rather than a syntactic distribution of the psychological subject and the psychological predicate:

Im isolierten Satze ist das psychologische Prädikat als das bedeutsamere, das neu hinzutretende stets das stärker betonte Element. Dies dürfen wir wohl als ein durch alle Völker und Zeiten durchgehendes Gesetz betrachten. (Paul 1880: §88)

Another pair of information structure terminology was coined by Ammann (1928). In his language physiological studies on the human discourse he established the binary division of *theme* and *rheme*. By contrast to the given-new distinction, the theme-rheme opposition is more speaker-oriented. Whereas the term theme is used to describe what a speaker is talking about, the term rheme refers to what the speaker is saying about a particular theme (Ammann 1928: 3).

Ammann's theme-rheme distinction became particularly popular during the time of the Prague school, where it was primarily discussed in terms of givenness (e.g., Mathesius 1929, Firbas 1964, Daneš 1970). Moreover Halliday (1967) distributed the theme-rheme distinction among the American structuralists. According to Halliday's definition the theme is equivalent to the element in the clause-initial position, whereas the rheme refers to the rest of the clause. However, by contrast to the linguists of the Prague School, Halliday does not expect the theme to be necessarily old information. He argues that the distinctions given-new and theme-rheme are independent from each other. However, he assumes that the functions are somehow related, because the focus of information typically coincides at least with a part of the rheme (Halliday 1967: 201).

Halliday's theme-rheme distinction closely resembles Hockett's *topic-comment* distinction, according to which "the speaker announces a topic and then says somethings about it." (Hockett 1958: 201) The notion of topic belongs to one of the most discussed concepts of information structure. Another very popular notion of information structure is the concept of *focus*.¹ Both concepts will be discussed in more detail within Sections 2.3 and 2.4.

This section provided a brief overview about several dimensions of information structure which derived out of different research traditions. Consider for instance *given vs. new*, *psychological subject vs. psychological predicate*, *theme vs. rheme*, *topic vs. comment*, *focus vs. presupposition* or *focus vs. background*. It was shown that not all of these terms are used in a uniform manner, but that different authors sometimes use the same expressions in order to refer to different concepts (for an overview see e.g., Musan 2002).

¹Consider for instance the distinction of *focus* and *presupposition* (Chomsky 1971), or the division of *focus* and *background* (e.g., Prince 1981, Vallduví 1992, Vallduví and Engdahl 1996).

Probably most controversial within the linguistic literature are the concepts of focus and topic, which are discussed in more detail in the following sections.

2.3 The notion of focus

2.3.1 Definition

The concept of focus is comprehensively discussed within different theoretical frameworks of information structure. Authors vary with regard to whether they understand the notion of focus as semantically or syntactically (Büring 2007). In the following focus is considered as a syntactic notion, which bears the syntactic focus feature (+FOC).

Though there exist a wide range of definitions, the term focus is in the majority of cases discussed in terms of (a) newness and (b) question-answer congruence (Büring 2007: 448). Consider for instance Halliday (1967) who used the term in order to refer to the ‘new’ constituent of a sentence. Whereby new information does not necessarily imply that it has been previously mentioned, but simply that the information is not recoverable from the preceding discourse (Halliday 1967: 211).

By contrast, Krifka (2008) (cf. also Féry and Krifka 2008, Selkirk 2008) discusses the concept of focus mainly in relation to question-answer congruence. Krifka’s definition is primarily based on the central insights of the Alternative Semantics (Rooth 1985, Rooth 1992) according to which the function of focus is not to identify new information, but to indicate “the presence of alternatives that are relevant for the interpretation of linguistic expressions” (Krifka 2008: 247). According to his approach the focused constituent typically corresponds to the constituent that is asked for by the use of a *wh*-question. Consider for instance the question-answer pair in (3).

- (3) A: Who stole the cookie?
B: [Peter]_{FOC} stole the cookie. (Krifka 2008: 250)

The question of A evokes a set of inherent alternative propositions. However, B’s answer only picks out one of these alternatives, while the focus (*Peter*) signals the availability of alternatives (Féry and Krifka 2008: 4). Regarding the alternative propositions Krifka (2008) distinguishes between two types of focus: *expression* and *denotation focus*. Whereas the former only affects the surface representations of linguistic objects (i.e., the choice of words or of pronunciation), the latter does not influence the form of the

expression in focus but the meaning. Moreover, Krifka (2008) distinguishes two different uses of focus: pragmatic and semantic uses. The pragmatic uses relate to the communicative goals of the participants in an interaction and do not affect the truth-value of a sentence. Typical pragmatic uses of focus are for instance answers to *wh*-questions, corrections, confirmations, parallel expressions and delimitations. Semantic uses of focus on the other hand relate to the factual information and do have an effect on the truth-conditional value of a sentence. Typical semantic uses of focus thus include focus-sensitive particles (e.g., *only*, *also*, *even*), negations, reason clauses and restrictors of quantifiers (Krifka 2008: 250-255). Though the two uses of focus cannot always be separated, there exist a number of different focus types that are considered to fulfil either one or the other use. A selection of these focus types will be discussed in the following subsection.

2.3.2 Focus types

Though there exist several different assumptions about focus types, the majority of authors agree that one must distinguish at least two different types of foci: one that merely expresses non-presupposed information and one that expresses exhaustive and/or contrastive identification (see e.g., Halliday 1967, Rochemont 1986, Kiss 1998). According to Kiss (1998), the latter type is referred to as *identificational focus*, while the former one is called *non-identificational focus*.

2.3.2.1 Non-identificational focus

The non-identificational focus (also: *information focus*, *presentational focus* or *neutral focus*) can be defined as the constituent that corresponds to the constituent that is asked for by a *wh*-question (see e.g., Krifka 2008). Consider for instance the example in (3), which is repeated in (4).

- (4) A: Who stole the cookie?
 B: [Peter]_{FOC} stole the cookie. (Krifka 2008: 250)

However, different questions may evoke different sets of alternatives. Consider for instance the examples in (5). Depending on the set of alternatives that is induced by the questions, one can distinguish several focus domains. Most authors draw a general distinction between *narrow focus* (i.e., argument focus) and *broad focus* (i.e., focus on more than one argument) (Lambrecht 1994: 223). Compare the example with the argument focus in

(5a) to the examples with the predicate focus (5b) and the sentence focus in (5c).

- (5) a. A: What stole Peter?
 B: Peter stole the [cookie]_{FOC}.
 b. A: What did Peter do?
 B: Peter [stole the cookie]_{FOC}.
 c. A: What happened?
 B: [Peter stole the cookie]_{FOC}.

2.3.2.2 Identificational focus

By contrast to non-identificational foci, which simply express new or non-presupposed information, identificational foci typically express exhaustive and/or contrastive identification:

An identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds. (Kiss 1998: 245)

Consider for instance the examples from Hungarian in (6). The preverbal focus in (6a) is an example of an identificational focus, since it expresses exhaustive identification. This means there is a set of individuals present in the discourse domain of whom only one (*Mary*) and nobody else was introduced by the speaker to Peter last night. By contrast, the postverbal focus in (6b) is a non-identificational focus. Here *Mary* expresses non-presupposed information, which implies that it is quite possible that the speaker also introduced other persons to Peter than just *Mary*.

- (6) a. *Tegnap este [Marinak]_{FOC} mutattam be Pétert.*
 last night Mary:DAT introduced:I PST Peter:ACC
 ‘It was to Mary that I introduced Peter last night.’
 b. *Tegnap este be mutattam be Pétert [Marinak]_{FOC}.*
 ‘Last night I introduced Peter to Mary.’ (Kiss 1998: 247)

A common feature of identificational foci is that they may involve contrast. Identificational foci which involve contrast are commonly referred to as *contrastive foci*. A crucial property of contrastive foci is that they require that the alternatives relevant for the interpretation of the focus are known to

the interlocutors. Hence, they operate on a closed set of alternatives (Krifka 2008: 258). Consider the example in (7).

- (7) A: What do you want to drink, tea or coffee?
 B: I want [TEA]_{FOC}. (Krifka 2008: 258)

Whereas contrastive foci always operate on a closed set of alternatives, other types of identificational foci can operate on an open set of alternatives (Kiss 1998: 268). Consider for instance the example from Hungarian in (8), which does not have a contrastive but an exhaustive interpretation. In order to avoid terminological confusion, I refer to this subtype of identificational foci as *exhaustive foci*.

- (8) a. *Ki írta a Háború és békét?*
 who wrote the War and Peace
 ‘Who wrote the *War and Peace*?’
 b. *A Háború és békét [Tolsztoj]_{FOC} írta.*
 the War and Peace:ACC Tolstoy wrote
 ‘It was Tolstoy who wrote *War and Peace*.’ (Kiss 1998: 268)

However, this thesis neither deals with instances of exhaustive nor contrastive focus but with another subtype of identificational foci, namely *corrective foci*. According to Tomioka (2010), corrective foci include a proposition that was already proposed in the immediately preceding common ground and may be understood as a direct rejection of an alternative (cf. also Krifka 2008, Gussenhoven 2008, Zimmermann 2008). Compare the three types of identificational foci in (9).

- (9) a. Exhaustive focus:
 A: Who did you invite?
 B: [PAUL]_{FOC}, I invited (but nobody else).
 b. Contrastive focus:
 I did not invite [PETER]_{FOC}, but [PAUL]_{FOC}.
 c. Corrective focus:
 A: You invited [PETER]_{FOC}?
 B: No, I invited [PAUL]_{FOC}. (Zimmermann 2008: 347-348)

(9a) is an example for an exhaustive focus since the focused NP involves exhaustive identification in the sense of *It was Paul, whom I invited to the party and nobody else*. The sentence in (9b) is a contrastive focus, because it involves a set of alternatives (i.e., *not Peter, but Paul*). Finally, the example

in (9c) is a corrective focus since the focused object (*Paul*) in B's answer involves a correction of the object (*Peter*) that was introduced by speaker A.

2.3.3 Strategies of focus marking

The languages of the world exhibit different strategies to express focus. Intonation languages, like German and English, indicate foci by pitch accents, i.e., the focus constituent carries the nuclear pitch accent (Zimmermann and Onea 2011: 1658). Compare for instance the examples in (10), where the backslash (\) marks the falling tone on the nuclear accent.

- (10) a. Q: What did Peter sell?
 A: Peter sold [the CAR\]_{FOC}.
 b. Q: What did Peter do with the car?
 A: He [SOLD\]_{FOC} the car.

(Zimmermann and Onea 2011: 1658)

However, languages may also use other prosodic strategies in order to mark foci. Some tonal languages for instance mark foci by the use of phonological boundaries, which they insert either before or after the focused constituent (Zimmermann and Onea 2011: 1660).²

Moreover, some languages express foci by morphological means. Consider for instance the examples from the West Chadic language Guruntum in (11) where the focused constituents are preceded by the morphological focus marker *a*.

- (11) a. Context: Who is chewing the colanut?
Á fúrmáyò bà wúm kwálingálá.
 FOC fulani PROG chew colanut
 'THE FULANI is chewing colanut.'
 b. Context: What is he chewing?
Tí bà wúm-á kwálingálá.
 3SG PROG chew-FOC colanut
 'He is chewing COLANUT.'

(Zimmermann and Onea 2011: 1660)

²For a detailed overview of the prosodic strategies to realize foci in different languages of the world, consider for instance Büring (2009).

Another popular strategy of focus marking is the use of syntactic devices. Hungarian for instance exhibits a syntactic focus position in the preverbal slot, where focused constituents move to in order to receive their discourse interpretation (Kiss 1998). Consider for instance the example in (12).

- (12) a. *Péter [a padlón]_{FOC} aludt.*
 Peter on floor sleep:pst
 ‘Peter slept on the FLOOR.’
 b. *A padlón [Péter]_{FOC} aludt.*
 ‘PETER slept on the floor (and no one else).’

(Zimmermann and Onea 2011: 1661)

However, only exhaustive foci have to move to the preverbal position in Hungarian, whereas non-identificational foci remain in their base positions. Compare the example with the exhaustive subject focus in (12b) to the example with the non-identificational subject focus in (13).

- (13) *A padlón aludt [Péter]_{FOC}.*
 on floor sleep:PST Peter
 ‘Peter slept on the floor (and possibly someone else too).’

(Zimmermann and Onea 2011: 1666)

While Hungarian shows a syntactic difference between non-identificational and identificational foci, many other languages reveal a difference with regard to the prosodic contour of the two focus types (Zimmermann and Onea 2011: 1164). Other languages again exhibit a formal distinction between the two focus types, e.g., by using different kinds of focus particles to express either one or the other type of focus (Gussenhoven 2008: 91).

This subsection showed that there exist a great variety of focus-marking strategies among the languages of the world. Cross-linguistically, focus may be either marked by prosodic prominence, syntactic devices (e.g., specific positions for focused constituents) and/or morphological means (e.g., focus particles). However, the majority of languages do not simply use one strategy but rather a combination of different strategies. Moreover, this subsection revealed that many languages are ascribed to show different focus-marking strategies for non-identificational and identificational instances of focus. This observation is captured by the generalization that non-identificational foci are considered to be a weaker kind of focus that is marked by less prominent formal features or in some languages not even marked at all (Zimmermann and Onea 2011: 1664).

2.3.4 Summary

This section provided an overview of the notion of focus. The first part of the section presented a number of different focus definitions. However, despite the variety of definitions, the term focus is most commonly discussed in terms of either newness or question-answer congruence.

The second part of this section outlined an overview of the major focus types. Though there is no general agreement with regard to the terminology, the majority of authors agree that there exist at least two types of focus: one that merely expresses non-presupposed information and one that expresses exhaustive identification (Kiss 1998). Whereas non-identificational foci typically correspond to the answer of *wh*-questions, there exist three different subtypes of identificational foci which differ with regard to their interpretation: exhaustive, contrastive and corrective foci.

The last part of this section dealt with the cross-linguistic strategies to express focus. It was shown that the languages of the world exhibit a number of different focus strategies, which range from prosodic over syntactic up to morphological means. Moreover, it was shown that most languages do not only use one but a combination of different strategies in order to express focus. Finally, the section revealed that many languages use different strategies in order to mark different types of focus which was explained by the fact that non-identificational foci are considered to constitute a weaker kind of focus than identificational foci.

2.4 The notion of topic

2.4.1 Definition

The notion of topic is extensively discussed within different theoretical information structural frameworks. The notion itself goes back to Hockett (1958) who introduced the term in order to denote the entity that a speaker is going to talk about. Consider for instance the examples in (14). As demonstrated in (14a), topics often correspond to the grammatical subject of a sentence. Nevertheless, topics may also be other arguments, as for example direct objects, see (14b) (Hockett 1958: 201).

- (14) a. [John]_{TOP} ran away.
 b. [That new book by Thomas Guernsey]_{TOP} I haven't read yet.

(Hockett 1958: 201)

The topics described here are also referred to as *sentence topics* and have to be distinguished from *discourse topics*. While the former strictly operate on the sentence-level and must correspond to a particular expression in the sentence (i.e., topic expression), the latter are topics of larger units (e.g., a book, a conversation, a sentence etc.) and are usually more abstract (Reinhart 1981: 54). See for instance the example in (15). While the discourse topic of the sentence in (15) may be summarized as *Mr. Morgan's scholarly ability*, the sentence topic is *Mr. Morgan* (Reinhart 1981: 54).

- (15) Mr. Morgan is a careful researcher and a knowledgeable semiticist, but his originality leaves something to be desired.

(Reinhart 1981: 54)

The study of information structure is only concerned with sentence topics. Hence, whenever talking about topics in the following I refer to sentence topics. Apart from Hockett's approach, there exist several other definitions of the topic-term. Leaving aside purely syntactical definitions (see e.g., Halliday 1967 who defines the term topic as the first element in the sentence) or prosodic definitions (see e.g., Chomsky 1971 or Jackendoff 1972 who define the term as the non-stressed element in a sentence), there have been two major approaches to the term: (i) The topic is what the sentence is about; (ii) The topic is that part of the sentence which contains old, given or presupposed information. Whereas the former "views topichood as a relation between an argument and a proposition relative to a context", the latter regards topichood "as a property of the referents denoted by linguistic expressions in a given context" (Reinhart 1981: 61).

However, as pointed out by Reinhart (1981) (see also Prince 1981) there is some evidence against the second view since one can easily think of an example in which the sentence topic refers to a discourse referent, which is new information. See for instance the example in (16) where the speaker introduces the referent *Pat McGee* as topic expression, although he must be fully aware that this referent is probably not known to the addressee.

- (16) Pat McGee, I don't know if you know him, he - he lives in Palisades
 - he used to go to the school I did... (Reinhart 1981: 78)

Therefore Reinhart (1981: 80) argues against defining topics as old information but rather proposes to consider them as entries in a subject catalogue under which particular propositions are stored. She assumes that interlocutors share a common context set which consists of a subset of different propositions. These propositions are not just randomly stored but are ordered according to specific principles. One of these ordering principles relates to the ordering principle of a subject catalogue. Consider for instance the examples in (17). Whereas the proposition in (17a) is stored as information about the catalogue entry of *Aristotle Onassis*, the proposition in (17b) is stored as information about *Jacqueline Kennedy*.

- (17) a. [Aristotle Onassis]_{TOP} married Jacqueline Kennedy.
b. [Jacqueline Kennedy]_{TOP} married Aristotle Onassis.

(Krifka 2008: 265)

Another definition of topics arises from Lambrecht (1994) who distinguishes between the pragmatic category of a *topic referent* and the grammatical category of a *topic expression*. Whereas the former refers to the entity the sentence is about (i.e., to the actual topic), the latter refers to the linguistic expressions that are used in order to denote the topic referent (Lambrecht 1994: 131).

A more recent topic definition comes from Jacobs (2001) who defines a topic as a multi-dimensional concept. According to Jacobs (2001) a topic has four prototypical attributes: (i) *informational separation* (with the topic being informationally separated from the rest of the clause (i.e., the comment), (ii) *predication* (with the topic specifying a variable in the semantic valency of an element in the comment), (iii) *addressation* (with the topic being a mental address, which marks the point in the speaker-hearer knowledge where the information of the comment has to be stored) and (iv) *frame-setting* (with the topic specifying a domain of reality to which the proposition expressed by the comment is restricted).

Furthermore, Krifka (2008) defines topic constituents in relation to the concept of common ground. According to his definition, a “topic constituent identifies the entity or set of entities under which the information expressed in the comment constituent should be stored in the CG content.” (Krifka 2008: 265)

2.4.2 Topic types

The previous subsection introduced the concept of topics. The type of topics discussed so far is typically referred to as *simple topics* or *aboutness topics* (Jacobs 2001). Sentences have usually only one topic constituent. However, under certain circumstances sentences may also have more than one topic. Consider for instance the case of *contrastive topics*. Following Büring (1997) (also Büring 2003) contrastive topics typically occur in answers to questions, which are too complex to be answered on the basis of a simple topic. The function of contrastive topics is to indicate that a question is only partly answered and that there is some more information to be discussed. Consider for instance the example in (18), in which A asks about the clothing of the popstars. However, the answer of B does not fully answer A's question, since it only contains information about the clothing of a subgroup of the popstars, namely the female popstars, but not about the clothing of the entire group.

- (18) A: What did the pop stars wear?
 B: The [female]_{TOPC} pop stars wore [caftans]_{FOC}.

(Büring 1997: 56)

According to Krifka (2008: 267), contrastive topics can be defined as a combination of topic and focus, i.e., they consist of an aboutness topic that includes a focus, which indicates an alternative. Consider for instance B's answer in the example in (19), which consists of two clauses, each containing a contrastive topic. The contrastive topic in the first clause (*my sister*) indicates that the question of A is not fully answered by the end of the clause, but that there is an alternative, which is made explicit by introducing a second contrastive topic (*my brother*) in the remainder of the sentence.

- (19) A: What do your siblings do?
 B: [My [SISter]_{FOC}]_{TOPC} [studies MEDicine]_{FOC}, and
 [my [BROther]_{FOC}]_{TOPC} is [working on a FREIGHT ship]_{FOC}.

(Krifka 2008: 268)

A contrastive topic can thus be understood as a subset of an already established set of entities. Consider again the contrastive topic *female popstars* in (18), which belongs to the larger set of *popstars* as well as the contrastive topics *my brother* and *my sister* in the example in (19), which are parts of the larger set *siblings*.

Another types of topics are *frame setters*. Frame setters are adverbials, which set a frame in which the following expression should be interpreted (Krifka 2008: 269). Consider the example in (20) which reveals that frame setters do by contrast to other types of topics not fulfill the *aboutness* criterion, i.e., B's statement in (20) cannot be entered under a file card about the health situation.

- (20) A: How is John?
 B: [Healthwise / As for his health]_{FRAME} he is [FINE]_{FOC}.

(Krifka 2008: 268)

2.4.3 Strategies of topic marking

The languages of the world use different linguistic means to express topics. Some languages, such as Japanese, mark topics by means of special morphemes. Consider the example in (21) where the morphological topic marker *wa* is attached to the subject *John* in order to denote it as the topic referent.

- (21) *John-wa gakusei desu.*
 John-TOP student is
 'Speaking of John, he is a student.'

(Kuno 1973: 38)

However, only a few languages of the world have morphological topic marking, whereas the majority of languages use syntactic devices in order to indicate topics. Cross-linguistically topics are most likely to be realized in the beginning of a sentence. This results from the fact that they are considered to constitute a mental address from which the information of a sentence is stored (Féry and Krifka 2008: 8). Consider for instance the example in (21) above. A common syntactic strategy in order to topicalize objects is left-dislocation. Left-dislocations involve leftward adjunction to an clause-external position (Lopéz 2016: 1). Consider for instance the example in (22).

- (22) [This guy]_{TOP}, Mary doesn't like *pro*. (Lopéz 2016: 1)

A subtype of left dislocation is the so-called *clitic left dislocation*, which is very common especially in Romance languages. Compare for instance the two sentences from Catalan in (23). Whereas (23a) represents a canonical Catalan SVO sentence with the direct object (*les pomes*) being realized after

the verb as part of the VP, the sentence in (23b) is an example of clitic left dislocation, i.e., the direct object is adjoined to CP and resumed by the clitic *les* (López 2016: 1).

- (23) a. *Jo no he vist les pomes.*
 I NEG have:1.SG seen the apple:PL
 ‘I haven’t seen the apples.’
- b. *[Les pomes]_{TOP}, jo no [les]_{RP} he vist.*
 the apple:PL I NEG them have:1.SG seen
 ‘The apples, I haven’t seen them.’ (López 2016: 1)

Another type of left-dislocations are *hanging topics*. By contrast to left-dislocations, hanging topics do not require case-matching. Moreover, by contrast to clitic left dislocations where the resumptive element is either a clitic or a zero, the resumptive element of a hanging topic can be either a clitic, a pronoun or an epithet (Giorgi 2015: 230). Consider the examples in (24).

- (24) a. *[Gianni]_{TOP}, gli hanno dato un bel voto.*
 Gianni him they gave a good mark
 ‘Gianni, they gave him a good mark.’
- b. *[Gianni]_{TOP}, hanno dato un bel voto perfino a lui.*
 Gianni they gave a good mark even to him
 ‘Gianni, they gave a good mark even to him.’
- c. *[Gianni]_{TOP}, hanno dato un bel voto perfino a quel cretino*
 Gianni they gave a good mark even to that idiot
 ‘Gianni, they gave a good mark even to that idiot.’

(Giorgi 2015: 230)

Though topics are typically associated with the sentence-initial position, they can also occur in other positions of the clause. See for instance the example from French in (25) in which the topic constituent (*la pomme*) is right-dislocated (Féry and Krifka 2008: 8).

- (25) *Pierre [l’a]_{RP} mangée, [la pomme]_{TOP}.*
 Peter it:ACC has eaten the apple
 ‘Peter has eaten the apple.’ (Féry and Krifka 2008: 8)

Another syntactic strategy of topicalization is scrambling. Whereas left-dislocation involves leftward adjunction to a clause-external position,

scrambling alters the order among constituents inside the clause (Ross 1967). In languages where grammatical functions are only purely morphologically marked such as Dutch, scrambling only changes the order of arguments relative to adjuncts. In languages like German, however, where grammatical functions are identified by case and agreement, scrambling can change the relative order of arguments (Fanselow 2016: 625). Consider for instance the German OSV order with the topicalized object in (26).

- (26) *Ich fürchte dass [den Artikel]_{TOP} niemand gelesen hat.*
 I fear that the:ACC article nobody:NOM read has
 ‘I fear that nobody has read the article.’ (Fanselow 2016: 625)

Another common characteristic of topic constituents is that they tend to be informationally separated from the rest of the sentence (Jacobs 2001: 645). This means the speaker first announces a topic and then, in a second step, provides additional information about this topic. This informational separation is often marked by a prosodic break.

The strategies to mark contrastive topics are mainly the same as for non-contrastive topics. However, some languages use different strategies in order to express different kinds of topics. In German for instance, movement and left dislocation are common strategies to mark both aboutness and contrastive topics, whereas hanging topics only occur with aboutness topics (Neeleman and Kučerová 2015: 4). Moreover, some languages also have specific intonational patterns to mark contrastive topics. In English for instance, contrastive topics are typically characterized by a fall-rise contour (Wagner 2012). Consider the examples in (27) where the fall-rise following a contrastive topic is marked by ‘∨’.

- (27) A: Who ate what?
 B: FRED_{TOPC}∨ ate the BEANS_{FOC} and
 MARY_{TOPC}∨ ate the SPINACH_{FOC}. (Wagner 2012: 19)

This subsection presented an overview of different grammatical strategies of topic marking. While some languages mark topics by morphological means (e.g., by adding a morphological topic marker), the majority of languages exhibit syntactic topic marking strategies (e.g., fronting (movement), clitic left dislocation, hanging topic left dislocation). Moreover, it was shown that some languages use prosodic means in order to express topics. However, most languages do not only use one but a combination of different strategies.

In English for example topics may be marked by lexically (e.g., by particular paraphrases like *as for*, *speaking of*, *talking of*), by specific syntactic constructions (e.g., cleft sentences, left dislocation, right dislocation) and/or by prosodic means (e.g., fall-rise contour of the contrastive topic) (Büring 2007: 1).

2.4.4 Summary

This section discussed the notion of topic. Similar to the notion of focus (cf. Section 2.3), the topic term has been defined in a number of different ways. In the following, I am going to consider topics as contextually given elements. Typically, there are two classes of referents that are defined as given: (i) referents which are explicitly introduced in the given discourse context and (ii) referents that are not explicitly mentioned but assumed to be in the shared common ground of the interlocutors (see e.g., Halliday 1967, Chafe 1976, Clark and Haviland 1977, Krifka 2008). Moreover this section provided an overview of different topic types (aboutness/simple topics, contrastive and frame-setting topics). Finally, I presented a number of different strategies of topic marking. It was shown that the languages of the world use different means in order to mark topic referents which can be of morphological, syntactic or even phonological nature. However, from a cross-linguistic point of view, topics are most likely to be marked by syntactic devices, such as fronting, (clitic) left dislocation or right dislocation.

2.5 Conclusion

This chapter provides some theoretical background on the notion of information structure. The first part of the chapter presented several definitions of information structure and gave an overview about the major information structural dimensions such as *psychological subject vs. psychological predicate* (Gabelentz 1868, Paul 1880), *theme vs. rheme* (Ammann 1928, Halliday 1967, Sgall 1972), *topic vs. comment* (Hockett 1958, Sgall 1972, Reinhart 1981, Gundel 1985, Gundel 1988, Jacobs 2001), *focus vs. background* (Prince 1981, Vallduví 1992) or *focus vs. presupposition* (Chomsky 1971, Jackendoff 1972).

The second part of this chapter (cf. Sections 2.3 and 2.4) discussed the two information structural categories focus and topic and presented an overview of different focus/topic types and their linguistic expressions in the

languages of the world. As shown above the concept of focus is commonly opposed to the concept of ‘presupposition’ or ‘background’, whereas the concept of topic is commonly opposed to the concept of ‘comment’. By contrast to most authors who assume a bipartite structure, Vallduví (1992) (Vallduví and Engdahl 1996) propose that the topic (*link* in his terminology) is a part of the non-focused material, i.e., the background. Therefore Vallduví (1992) argues to assume a tripartite structure of the clause. I follow this view and distinguish between focus, topic and background. For the notions of focus and topic I adapt the definitions by Krifka (2008) given in (28) and (29).

(28) **Definition of focus:**

Focus indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions. (Krifka 2008: 265)

(29) **Definition of topic:**

The topic constituent identifies the entity or set of entities under which the information expressed in the comment constituent should be stored in the CG content. (Krifka 2008: 265)

Everything that is neither identified as focus nor topic I consider as background material. Similar to topics background material is discourse given or presupposed. However, by contrast to topics which are considered to be the pointer to the relevant information to be accessed by the addressee, background material provides information that may be necessary in order for a good understanding of the focused information (Butt and King 2000: 6).

Chapter 3

Urum: A brief description

3.1 Introduction

Urum is a little-documented and severely endangered variety of Anatolian Turkish which is spoken by a small group of ethnic Pontic Greeks in the highlands of K'vemo K'art'li in the Small Caucasus in Georgia. The native speakers of this language refer to themselves as *urumlar* 'Urum people' (Standard Turkish: *rum* 'Greek, who is living in Turkey') or *greklar* 'Greeks' (Höfler 2011: 3). Besides Urum Greeks there is also a big community of Pontic Greeks living in Georgia. However, though both communities are ethnic Greeks who originate from the former Ottoman Empire, both groups linguistically differ from each other. Whereas Urum Greeks speak an Anatolian variety of Turkish and originate in the Turkish-speaking Greek populations settled in the regions of Kars, Erzurum and Bayburt, Pontic Greeks speak Greek and originate from territories like Ordu, Giserun, Trabzon, Gümüşhane and Rize (Loladze 2016: 178). All these territories are also known as the Pontos area. Hence, from an areal point of view, both communities are referred to as Pontic Greeks (Höfler 2011: 12).

The Greek migration process from Pontos to the Caucasus proceeded in several waves and started in the beginning of the 19th century. The first big emigration wave took place in 1829 at the end of the Russo-Ottoman War (1828-1829) (Xanthopoulou-Kyriakou 1991: 358). During this time about 42.000 Pontic Greeks¹ fled from the areas of Gümüşhane and Erzurum to the Caucasus after the Russian military decided to stop the occupation of the cities, because they feared revenge and retaliation by the Ottoman authorities against Orthodox Christians (Xanthopoulou-Kyriakou 1991: 358). Another emigration wave took place during the Crimean War (1853-1856). After the end of this war, the Russian empire tried to strengthen its position by expelling Muslim populations (e.g., Kurds, Crimean Tartars, Circassian and

¹This is at least a fifth of the total Greeks population of the Pontus.

Abkhazians) from the Caucasus. At the same time they attracted Christians from the Ottoman and the Persian Empires to migrate to the Caucasus (Xanthopoulou-Kyriakou 1991: 359). The third emigration wave took place during and after the end of the last Russo-Ottoman War (1879-1879). With the systematic expulsion of the Turkish populations, the Russian empire achieved an indirect population exchange in the newly acquired territories. At that time about 100.000 Pontic Greeks emigrated to Southern Russia and in particular to the Caucasus (Xanthopoulou-Kyriakou 1991: 360). At the end of the 19th century and the beginning of the 20th century many Pontic Greeks came to the Caucasus as seasonal workers. The seasonal migration turned into permanent settlement in the majority of cases and the number of Pontic Greeks in the Caucasus increased to about 150.000 people at the beginning of the 20th century (Xanthopoulou-Kyriakou 1991: 360). However, not all of them lived in Georgia but in different regions of the Caucasus. With the end of World War I (1914-1918) when the Russian army withdrew from the eastern area of Pontos, once again about 80.000 Pontic Greeks left their homes and migrated to the Caucasus in order to escape religious prosecution (Xanthopoulou-Kyriakou 1991: 361).

In Georgia, the majority of the Greek migrants were resettled in the regions of K'vemo K'art'li, Samtskhe-Javakheti (Southern Georgia), Ach'ara (South-Western Georgia) and Abkhazia (North-Western Georgia), see Figure 3.1 (Loladze 2016: 178).

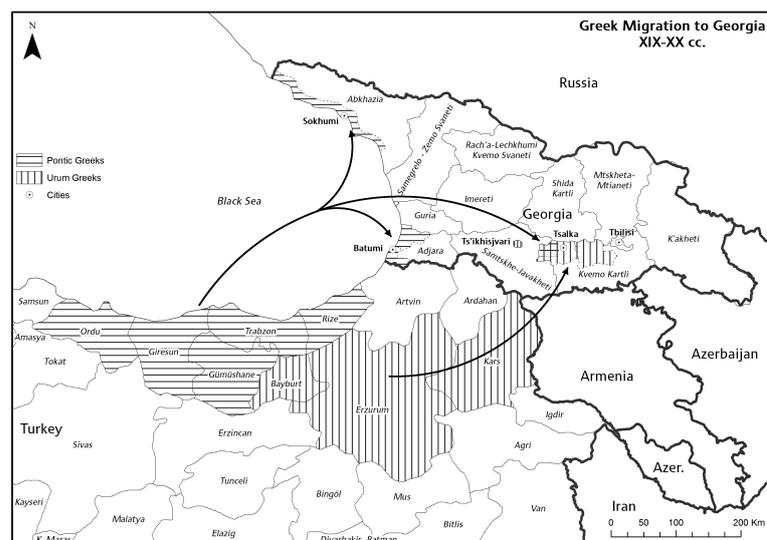


Figure 3.1: Greek migration to Georgia in the 19th/20th century (Loladze 2016: 179)

As shown in Figure 3.1 below Urum Greeks settled in several places in K'vemo K'art'li, in particular in the villages around the lake of Tsalka as

well as in Tetrīts'q'aro. Pontic Greeks on the other hand mainly settled in Western Georgia (Batumi, Sokhumi) as well as in three villages in K'vemo K'art'li: Santa, Gumbati and Khareba (Loladze 2016: 178-179). Moreover, Pontic Greeks also settled in Tsikhisjvari, a village in the Borjomi region in Samtskhe-Javakhei, which is completely separated from the other Greek settlements (Loladze 2016: 179).

I concentrate on Urum Greeks or to be more precise on the Urum language.² Urum can be categorized as a severely endangered language. According to the Population Census of the Georgian Soviet Socialist Republic (SSR) in 1979 the number of ethnic Greeks living in the district of Tsalka amounted to 30.811 people (Wheatley 2006: 6). However, the Greek population decreased rapidly in the course of the years since many people moved from the rural area to the urban centres of Georgia (mainly to Tbilisi) and from there to further destinations outside Georgia, mainly to Greece.³ The number of Urum Greeks living in the Tsalka district in 2006 was estimated at about 1500 (decreasing from almost 4.600 people in 2002 and more than 27.000 people in 1989) (Wheatley 2009: 38). Unfortunately there are no more recent counts. However, in 2013 the Federation of Greek communities in Tbilisi estimated the number of Urum Greeks living in Tsalka at around 1000-1500 people (Skopeteas 2013: 335).

3.2 Documentation and language use

Urum has no writing tradition and is only poorly documented. The examples presented within this chapter are taken from a corpus which was developed within the course of two documentation projects: (i) the 'Urum documentation project'⁴ and (ii) the VW-project 'The impact of current transformational processes on language and ethnic identity: Urum and Pontic Greeks in Georgia'⁵. The data collection of these projects was based on a repeated-observations design.

²The Urum language spoken in Georgia must be distinguished from the Urum language spoken on the Crimean Peninsula. Although both languages are spoken by ethnic Greeks and share the same ethnonym, there is no evidence that both languages are immediately related (Skopeteas 2013: 336-339).

³See e.g., Loladze 2016 for the motivation of Greeks in Georgia to emigrate to Greece.

⁴A collaborative project of the Universities of Athens, Bielefeld, Bremen, and Potsdam, funded by the Latsis foundation (January 2010 - February 2011).

⁵A collaborative project of researchers in Germany (Bielefeld University and European-University Viadina, Frankfurt (Oder)) and Georgia (Ivane Javakhishvili Tbilisi State University, Georgian Academy of Sciences), funded by the Volkswagen Foundation (August 2013 - July 2017).

The text collection of the VW-project (Moisidi et al. 2016) comprises semi-naturalistic narratives by 48 Urum native speakers in three idealized language stages (i.e., 16 speakers per stage):

- Stage A: Tsalka (=homeland of the Urum speakers)
- Stage B: Tbilisi (=internal migration)
- Stage C: Greece (=external migration)

Each of the speakers produced eight narratives on eight culturally relevant topics. Consider the list of topics below:

- Ancestors (AN2): ‘Please, tell me how your ancestors came to Georgia.’
- Culture (CL): ‘Please, tell me a fairy tale or a poem in your native language. (If you do not know any fairy tale/poem, please tell me what you find most important in the culture of your people).’
- Feast (FE): ‘Please, tell me a difference between the way you celebrate a particular feast in your group and the groups of the other people of your environment? (Christmas, Easter, Panajia).’
- Family (FM): ‘Please, tell me the history of your family (how did your family come from the villages to Tbilisi and from Tbilisi to further destinations)?’
- Language (LG): ‘Please, tell me how you perceive the major differences between your language and Russian.’
- Marriage (MR): ‘Please, tell me how your people celebrate an engagement/marriage and what is the difference to the way other people in this village/city celebrate a marriage.’
- People (PP): ‘Please, tell me how your people are different from the other people in the village/city (Russian, Greek)?’
- Village (VL): ‘Please, describe the village your family comes from.’

In total, the Urum text collection of the VW-project contains 384 narratives (8 topics x 16 speakers x 3 stages). Furthermore, the Urum corpus contains 80 semi-naturalistic narratives by 16 native speakers on different 5 topics, which were collected within the framework the ‘Urum documentation project’ (Moisidi and Skopeteas 2014). Consider the list of topics below:

- Ancestors (AN1): ‘Please, tell me how the Urum people came to the Caucasus.’
- Modern life (ML): ‘Please, tell me about the changes in the situation of the Urum people in the last twenty years.’
- Path description (PA): ‘Please, describe the path to go from Besh-tasheni to Hadik/from Vake to Marjanishvili to me.’
- Pear story⁶ (PS): ‘You are going to see a film twice. Please, take notice of what happens in the film and tell me the story.’
- Traditional activity (CH): ‘Please, tell me how you are making cheese/pizza in Tsalka.’

In total, the Urum corpus comprises 464 (384 + 80) different narratives. The data collection of the VW-project was accompanied by a sociolinguistic questionnaire containing several questions about their language profile. Within the questionnaire each speaker was asked to judge the frequency of using Urum with (a) their parents, (b) their own children, (c) their neighbors and (d) the children of their neighbors on a 5-point Likert scale from 1 (=never) to 5 (=always). The average judgments of the speakers in the three different stages (Tsalka, Tbilisi and Greece) are summarized in Figure 3.2.

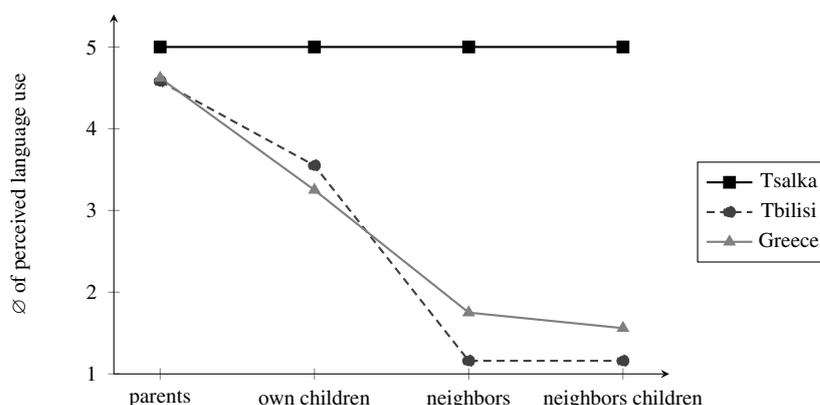


Figure 3.2: Average of judgments about Urum language use
(16 speakers per stage)

Figure 3.2 indicates that the use of Urum is shrinking among speakers living outside the original settlements. The data show that the use of Urum among the speakers living in Tbilisi and Greece is mainly restricted to family

⁶The Pear Story is a six-minutes film made at the University of California in 1975 by Wallace Chafe and is was used for the elicitation of controlled narratives in a large number of languages.

communication, especially to the communication with elderly family members (i.e., the parents). It is preferred to use other languages (i.e., Russian, Georgian) with children as well as with people outside one's own family. By contrast, speakers living in Tsalka frequently use the language when talking to different generations within and outside their family. In a nutshell, the data in Figure 3.2 implies that the intergenerational language transmission is decreasing due to the multiethnic and multilingual environment of the speakers living in Tbilisi and Greece (cf. also Skopeteas (2013)).

3.3 Language contact

Since the migration to the Caucasus, Urum has been in permanent contact with Russian. In Georgia, Russian became the dominant language with the Russian annexation in 1801. The Tsarist regime closed all Georgian schools and replaced them by Russian ones, where Georgian was only taught as an optional subject (Hewitt 1989: 126). However, with the Russian Revolution of 1905 the language policy in the Russian empire became more tolerant towards minority languages. The number of minority schools increased and literature and periodicals became available in several minority languages (Pavlenko 2008: 279). In 1938 Russian became an obligatory second language in all non-Russian schools. Three years before, all Soviet languages with Latin alphabets were already transferred into Cyrillic (Pavlenko 2008: 281). However, the aim of the russification in the Soviet Union was not to replace the local languages with Russian, but rather to enact russification policies at the same time that it maintained and to strengthen national institutions (Pavlenko 2008: 281). In the 1950s, Georgian enjoyed its linguistic and cultural revival. The Georgian-language theatre, film and literature became popular and more and more people became literate and educated in Georgian (Pavlenko 2008: 282).

Georgia is one of three countries in the Caucasus (besides Armenia and Azerbaijan) where the national language was already declared officially under the Soviet regime. With the end of the Soviet era in 1991, Georgian finally became the sole state language (Pavlenko 2008: 292). Though the number of monolingual Russian speakers in Georgia in 1991 was not as high as in other former states of the Soviet Union, the multiethnic populations in Georgia relied (and partly still rely) on Russian as a *lingua franca* in the interethnic communication (Höfler 2011: 9-10). The language barriers between the multiethnic and multilingual populations in Georgia are still problematic. A

survey conducted in 2006 revealed that only 16.9% of the respondents in the area of K'vemo K'art'li are competent in the Georgian language (Pavlenko 2008: 294-295). The results of the sociolinguistic questionnaire reveal that 87.5% of the Urum speakers living in the rural areas of Tsalka consider themselves as competent in Russian, whereas 43.75% consider themselves as also competent in Georgian. Furthermore, all speakers consulted in Tbilisi considered themselves fluent in Russian as well as in Georgian whereas the informants living in Greece considered themselves as competent in Russian and in Greek.

3.4 Lexicon

Previous studies on Urum revealed that the variety of Urum which is currently spoken in Georgia shares many substantial similarities with Standard Turkish as well as with other Anatolian Turkish dialects. However, the Urum language shows a lot of influences from Russian, especially in the lexicon. An empirical study on the Urum lexicon revealed that the majority of Urum loanwords are borrowed from Russian (514 out of 2550 analyzed words; 20.2%), while only 14 words (0.5%) are borrowed from Georgian and 7 words (0.3%) from Greek (Ries et al. 2013). Moreover, the results of the study showed that most borrowings from Russian relate to concepts of the modern world, warfare and hunting, law, house and clothing etc. whereas the words with Turkish origin relate to more conservative semantic fields like kinship terms, expressions of time, sense perception etc. (Ries et al. 2013). These findings support the hypothesis that Turkish is the substrate language of Urum. However, the high amount of loanwords especially from Russian indicates that the language is highly influenced by language contact.

3.5 Phonology

3.5.1 Consonants

Urum has the same consonant inventory as Turkish, see Table 3.1. The palatal allophone [c] of the phoneme *k* immediately occurs left or right adjacent to a front vowel (i, e/ä, ü, ö), e.g., the adjective *kök* 'thick' is realized as [cœc]. The palatal allophone [j] of the phoneme *g* is always preceding front vowels, e.g., the noun *göl* 'lake' is realized as [jœl]. And the velar allophone [t] of

the phoneme *l* occurs after back vowels (i, a, u, o), e.g., the Urum word *yol* is realized as [joɫ] (Skopeteas 2013: 339).

Table 3.1: Urum consonant inventory (IPA values in brackets; orthography in italics) (adapted from Skopeteas 2013: 339)

		bilabial	labiod.	alveol.	postalv.	palatal	velar	glottal
plosive	–voiced	[p] <i>p</i>		[t] <i>t</i>		[c] <i>k</i>	[k] <i>k</i>	
	+voiced	[b] <i>b</i>		[d] <i>d</i>		[j] <i>g</i>	[g] <i>g</i>	
fricative	–voiced		[f] <i>f</i>	[s] <i>s</i>	[ʃ] <i>š</i>		[x] <i>h</i>	[h] <i>h</i>
	+voiced		[v] <i>v</i>	[z] <i>z</i>	[ʒ] <i>ž</i>		[ɣ] <i>ğ</i>	
affricative	–voiced				[tʃ] <i>č</i>			
	+voiced				[dʒ] <i>ǰ</i>			
nasal		[m] <i>m</i>		[n] <i>n</i>			[ŋ] <i>n</i>	
tap				[r] <i>r</i>				
lateral				[l] <i>l</i>			[ɫ] <i>l</i>	
approximant						[j] <i>y</i>		

Since Urum has no writing tradition, the transcriptions are based on the Turkish orthography. However, it deviates from Turkish in the use of the haček for fricative and affricative postalveolar consonants, see Table 3.1. This way of transcription is chosen because it is commonly used for the transcription of Turkic languages which are in close contact with Slavic languages (cf. for instance Schöning 1998 on Azerbaijanian or Menz 1999 on Gagauz) (Skopeteas 2013: 339).

3.5.2 Vowels

The Urum vowel inventory is illustrated in Table 3.2. As in Turkish, Urum vowels can be distinguished with regard to the frontness of the tongue (*front* vs. *back*) and the roundedness of the lips (*rounded* vs. *unrounded*). However, by contrast to Standard Turkish where the vowel /e/ has a mid-closed allophone [e] and a mid-open allophone [ɛ] which occurs in word-final open syllables (e.g., *kel* ‘castle’ vs. *ka’le* ‘castle’), these sounds are realized as separate phonemes /e/ and /ä/ in Urum. Compare for instance the following minimal pairs: *el* ‘stranger’ vs. *äl* ‘hand’ (Skopeteas 2013: 339). Interestingly this phonological contrast is also found in other Anatolian dialects (Brendemoen 1998). Nevertheless, the narratives in the Urum corpus reveal a remarkable phonological variation regarding the realization of the two phonemes and for many tokens it cannot be clearly clarified whether they are instances of the phoneme /e/ or /ä/ (Skopeteas 2013: 339).

Table 3.2: Urum vowel inventory

Articulatory features	IPA	Orthography
	[i]	<i>i</i>
front	–rounded [e]	<i>e</i>
	[æ]	<i>ä</i>
	+rounded [y]	<i>ü</i>
	[œ]	<i>ö</i>
back	–rounded [ɯ]	<i>ı</i>
	[a]	<i>a</i>
	+rounded [u]	<i>u</i>
	[o]	<i>o</i>

3.5.3 Vowel harmony

Similar to Turkish the quality of Urum vowels is determined by vowel harmony. However, Urum differs from Turkish with respect to the harmony of the I-suffixes. Whereas in Turkish all I-suffixes are affected by vowel harmony, in Urum the accusative suffix *-(y)I* as well as the 3rd person possessive suffix *-i* are opaque to the rules of vowel harmony (Verhoeven 2011). Moreover, Urum differs from Turkish in that only rounded vowels assimilate in frontness, whereas the unrounded vowels (/i/ and /e/) do not. Hence the central vowel /ɨ/ occurs after back and front unrounded vowels (Skopeteas 2013).

3.6 Nominal morphology

Urum is an agglutinative language. Thus grammatical categories like number, case and possession are attached to the stem as single affixes.

3.6.1 Number

Plural in Urum is expressed by the plural suffix *-lAr*, which immediately attaches to the verbal stem. The vowel quality of the plural suffix is determined by the frontness harmony. This means it is realized as /a/ if it follows syllables with the back vowels /a/, /ɨ/, /o/ and /u/, whereas it is realized as /e/ or /ä/ if it follows syllables with front vowels (Verhoeven 2011: 4). However, plural marking in Urum is optional. Hence not all plural referents bear overt plural marking (cf. for instance Bittricher et al. 2011 for corpus data or Schüler 2013 for a study including corpus and experimental data). Consider the examples from the Urum corpus in (30).

- (30) a. *Bu oğlan-lar güc-ti-lär o yol-i.*
 this boy-PL pass-PST-PL that road-ACC
 ‘These boys passed the road.’ (PS-Y41.013)⁷
- b. *Armut-i topl-ier halat-ın iç-in-ä.*
 pear-ACC gather-IPFV[3] robe-GEN inside-POSS.3-DAT
 ‘He gathers pears into his robe.’ (PS-X34.003)

The use of the plural suffix is determined by two factors: (i) contextual properties (i.e., the plural suffix is less likely if the plural interpretation is obvious from the context) and (ii) inherent properties of the referent (i.e., the higher a referent is located within the animacy hierarchy⁸, the more likely it bears overt plural marking) (Skopeteas 2013: 342). Moreover, the plural suffix is typically avoided with numerals (Bittricher et al. 2011). See the example in (31).

- (31) *İki oğlan, iki kız gül-di.*
 two boy two girl come-PST
 ‘Two boys and two girls came.’ (AN-X25.005)

3.6.2 Case

Urum has seven cases: nominative, accusative, dative, ablative, genitive, locative and an instrumental case. With the exception of the nominative, which does not have any overt marking, case is encoded by suffixes at the right edge of a noun phrase. Apart from the instrumental, the Urum case suffixes are generally very similar to the Turkish case suffixes (Skopeteas 2013: 345).

Accusative

Accusative in Urum is expressed by the case suffix *-(y)I* which is by contrast to Turkish not affected by vowel harmony (Verhoeven 2011: 5). Similar to Turkish, accusative marking in Urum is not obligatory but depending on the specificity of the direct objects (Böhm 2013, Böhm 2015). Whereas marked direct objects trigger a specific interpretation, bare objects typically receive a non-referential reading and are unspecified for number (Böhm 2015). Compare the examples adapted from Böhm (2013) in (32).

⁷The original source is (UUM-TXT-PS-00000-Y41.013). For practical reasons and a better readability the prefixes "UUM-TXT" and the "00000" are omitted in all examples taken from the Urum data collection.

⁸speaker (1st person) > addressee (2nd person) > 3rd person > kin > human > animate > inanimate (Corbett 2000: 56 following Smith-Stark 1974)

- (32) a. accusative marked direct object:
Kostas kartina-i chäqu-ier-di.
 woman picture-ACC paint-IPFV-PST.3.
 ‘Kostas was painting the/a specific picture.’
- b. bare object:
Kostas kartina chäqu-ier-di.
 Tsalka-LOC cheese make-IPFV-PST-3.PL
 ‘Kostas was painting a picture/pictures.’

Nevertheless, by contrast to Turkish where bare objects are restricted to the immediately preverbal position, the position of bare objects in Urum is flexible (Böhm 2015). Consider for instance the postverbal bare object in (33).

- (33) *Soram o süd-ün iç-in-ä ğat-er-lär maya.*
 then that milk-GEN inside-POSS.3-DAT add-IPFV-3.PL whey
 ‘Then they put whey into that milk.’ (CH-X34.010)

Dative

The Urum dative case suffix is *-(y)A*. Dative in Urum occurs in three configurations. First of all the dative suffix is used to mark indirect objects in ditransitive sentences, see (34).

- (34) *Ver-di baĝarmud-i o uşah-lar-a.*
 give-PST.3 pear-ACC that children-PL-DAT
 ‘He gave pears to those children.’ (PS-X21.019)

Secondly, the dative case in Urum is assigned to objects that express the target of a motion, see (35).

- (35) *Biz-ım halh gäl-di ğürjistan-a.*
 1.PL-GEN people come-PST.3 Georgia-DAT
 ‘Our people came to Georgia.’ (AN-B02.001)

Finally, Urum exhibits a number of verbs that necessarily require a dative complement. Consider the example in (36).

- (36) *Bu oĝlan bu çüçük ğız-a bah-ti.*
 this boy this little girl-DAT look-PST.3
 ‘This boy looked at this little girl.’ (PS-Y42.010)

Ablative

Similar to Turkish, Urum also exhibits an ablative case. The ablative case suffix *-dAn* is assigned to objects that express the source of a motion, see (37).

- (37) *Khars-tan gäl-di-lär.*
 Khars-ABL come-PST-3.PL
 ‘They came from Khars.’ (AN-X31.002)

Moreover, the ablative suffix occurs with partitives, see (38).

- (38) *Birinji ğarı-dan var üç ušağ-i.*
 first wife-ABL exist three child-ACC
 ‘With his first wife he has three children.’ (FM-A10.002)

Genitive

The Urum genitive case suffix *-(n)In* typically occurs in possessive constructions. Whereas the possessor in Urum bears genitive case, the possessum carries a possessive suffix (cf. also Section 3.6.3). Consider the example in (39).

- (39) *Birinji inäg-in mämä-lär-in-i yah-ier-ih.*
 first cow-GEN udder-PL-POSS.3-ACC wash-IPFV-1.PL
 ‘First we wash the cow’s udder.’ (CH-X21.001)

Locative

The Urum locative suffix *-dA* is assigned to objects which designate static locations. Consider for instance the example in (40).

- (40) *Tsalka-da abasnavatsa et-tı-lar.*
 Tsalka-LOC settle:INF do-PST-3.PL
 ‘They settled in Tsalka.’ (AN-B08.007)

Instrumental

Urum also exhibits an instrumental case. The Urum instrumental case suffix *-(I)nIn/-(I)nAn* is assigned to all arguments denoting an instrument. Consider the example in (41).

- (41) *Käs-ien käsk-inän.*
 cut-ADJR knife-INS
 ‘You cut it with a knife.’ (CH-X31.009)

Moreover, the instrumental case suffix is used to express comitatives. See (42).

- (42) *Or-dan adam geč-ti gäči-nän.*
 there-ABL man pass-PST.3 goat-INS
 ‘From there passed a man with a goat.’ (PS-X25.003)

Similar to Turkish, negative instruments and comitatives in Urum are expressed by the suffix *-sIz*, as illustrated in (43).

- (43) *Gäl-di pul-suz.*
 come-PST.3 money-NEG.INS
 ‘Some came without money.’ (AN-A06.001)

3.6.3 Possession

Possessive constructions in Urum typically consist of a possessor and a possessum whereby the former carries a genitive suffix and the latter a possessive suffix (Neugebauer 2016: 282). See the example in (44).

- (44) *ğız-in dodax-lar-i*
 girl-GEN lip-PL-POSS.3.SG
 ‘the girl’s lips’ (lit: ‘the girl’s her lips’) (Neugebauer 2016: 282)

Possessive suffixes in Urum always agree with the possessor in number and person. Consider the paradigm of possessive suffixes in Table 3.3.

Table 3.3: Paradigm of possessive person suffixes in Urum

	1	<i>-(I)m</i>
SG	2	<i>-(I)n</i>
	3	<i>-s(I)n</i>
	1	<i>-(I)mIz</i>
PL	2	<i>-(I)z</i>
	3	<i>-lArI(n)</i>

However, though double-marking with a genitive marker on the possessor and a possessive marker on the possessum is considered as the basic form of possessive marking, the possessive marker is frequently dropped, especially in constructions with alienable heads (Neugebauer 2016). Consider the example adapted from Neugebauer (2016: 103) in (45).

- (45) *äv-in krisha*
 house-GEN roof
 ‘the house’s roof’

3.6.4 Determiners

Urum does not have a definite determiner. However, definiteness in Urum can be expressed either by the third person personal pronoun *o* ‘that’ (46) or the demonstrative pronoun *bu* ‘this’ (47).

- (46) *Aldı-lar o šapka-yi.*
take-PST-PL that hat-ACC
‘They took that hat.’ (PS-X32.016)

- (47) *Bu oğlan bu çüçük ğız-a bah-ti.*
this boy this small girl-DAT look-PST
‘This boy looked at this little girl.’ (PS-Y42.010)

The indefiniteness of a noun phrase can be expressed by the numeral *bir* ‘one’. See (48).

- (48) *Bir oğlan çal-di bir karzina-i.*
one boy steal-PST one basket-ACC
‘A boy stole one basket.’ (PS-Y45.002)

3.6.5 Quantifiers and numerals

Quantifiers in Urum include adjectives (e.g., *är* ‘every’, *birğaç*, ‘some’, *čoğ* ‘much’) as well as numeral expressions (Skopeteas 2013). Consider for instance the examples in (49).

- (49) a. Quantifier:
Birğaç adam gäl-di bur-ya.
some person come-PST.3 here-DAT
‘Some persons came here...’ (AN-X28.013)
- b. Numeral:
Or-dan gäl-er-dı-lär üctänä ušağ.
there-ABL come-IPFV-PST-3.PL three child
‘There were three children coming.’ (PS-X34.013)

Whereas NPs determined by numerals usually do not bear plural marking (cf. Section 3.6.1), the use of plural suffixes on NPs quantified by adjectives is depending on animacy, i.e., plural suffixes occur more often with inanimate than with animate NPs (Schüler 2013). Moreover, Urum exhibits an universal quantifier *äp* ‘all’. By contrast to other quantifiers the use of the plural marking of NPs quantified by *äp* is optional (Schüler 2013). Compare the examples in (50).

- (50) Universal quantifier:
- a. *Äp armut düš-ier.*
all pear fall.down/get/turn-IPFV.3.SG
'All pears fall down' (PS-Y48.006)
- b. *Karzina-da eh-il-di äp armut-lar*
basket-AND destroy-PASS-PST.3.SG all pear-PL
tyokyul-di ulitsa-ya.
come-PST.3.SG street-DAT
'The basket got broken and all pears fell out on the street'
(PS-X34.012)

3.6.6 Personal pronouns

Similar to Turkish Urum exhibits free personal pronouns that inflect for person, number and case. Consider the inflectional paradigm of personal pronouns in Table 3.4.

Table 3.4: Paradigm of personal pronouns in Urum

	SINGULAR			PLURAL		
	1	2	3	1	2	3
NOM	<i>bän</i>	<i>sän</i>	<i>o</i>	<i>biz</i>	<i>siz</i>	<i>on-nar</i>
ACC	<i>bän-i</i>	<i>sän-i</i>	<i>on-i</i>	<i>biz-i</i>	<i>siz-i</i>	<i>on-nar-i</i>
DAT	<i>bän-ä</i>	<i>sän-ä</i>	<i>on-a</i>	<i>biz-ä</i>	<i>siz-ä</i>	<i>on-nar-a</i>
GEN	<i>bän-ım</i>	<i>sän-ım</i>	<i>on-un</i>	<i>biz-ım</i>	<i>siz-ın</i>	<i>on-nar-ın</i>
LOC	<i>bän-dä</i>	<i>sän-dä</i>	<i>on-da</i>	<i>biz-dä</i>	<i>siz-dä</i>	<i>on-nar-da</i>
ABL	<i>bän-dän</i>	<i>sän-dän</i>	<i>on-dan</i>	<i>biz-dän</i>	<i>siz-dän</i>	<i>on-nar-dan</i>
INS	<i>bän-nän</i>	<i>sän-nän</i>	<i>on-nan</i>	<i>biz-inän</i>	<i>siz-inän</i>	<i>on-nar-inan</i>

3.6.7 Interrogative pronouns

Urum has two interrogative pronouns. The pronoun *kim* 'who' is used for all animates (i.e., humans and non-humans), whereas the pronoun *nä(i)* 'what' is used for inanimates (cf. also Section 3.9.1). Similar to nouns interrogative pronouns exhibit case-marking. As illustrated by the example in (51) the use of the accusative suffix is optional (cf. also Section 3.9.1).

- (51) *Nä(-i) di-em šindi?*
what-(ACC) say-1.SG now
'What to say know?' (CL-C07.001)

Interrogative pronouns do not only appear in questions, but also in embedded clauses, as illustrated in (52).

- (52) *Nä-bıl-er-ım nä di-em.*
 NEG-know-IPFV-1.SG what say-1.SG
 ‘I don’t know what to say.’ (AN-Y01.008)

3.6.8 Adjectives

Urum does not exhibit a lexical distinction between adjectives and adverbs (Skopeteas 2013: 351). Hence, the same lexical elements can modify either a verb or a noun. Compare the examples in (53) and (54) where the quantifier *čoğ* ‘much’ is used as a verbal modifier in (53) and as an attribute to a noun in (54).

- (53) *Biz-ım dil-i bän čoğ säv-er-ım.*
 1.PL-GEN language-POSS.3 1.SG much love-IPFV-1.SG
 ‘I love our language very much.’ (LG-B08.002)
- (54) *Čoğ ekät nahıled-er-di halh.*
 much poem tell-IPFV-PST people
 ‘People were telling a lot of poems.’ (CL-C10.001)

Adjectives are typically preceding the nominal head. As illustrated by the examples in (53) and (54), number and case are phrasal in Urum. Hence, only adjectives that precede a nominal head bear inflectional suffixes. However, if the NP does not have a nominal head, the declension suffixes of the noun may attach to the adjective (Skopeteas 2013: 352), see (55).

- (55) *Ğoja-lar-a ver-di pensiya.*
 old-PL-DAT give-PST pension
 ‘They gave a pension to the old people.’ (LI-X32.011)

Comparatives in Urum are formed with the adverb *daha* ‘much’ which is preceding the adjective (e.g., *daha güzal* ‘prettier’). As illustrated by the examples in (56) and (57), comparatives either take a complement in the ablative case⁹ or are combined with the Russian conjunction *čem* ‘than’ (Skopeteas 2013: 352).

- (56) *Nu, iräl-dän daha yahşı-idi čem šindi...*
 well before-ABL much good-PST.COP than now
 ‘Well, earlier it was better than now...’ (LI-X25.021)

⁹In cases where an ablative complement is present, the use of *daha* is not obligatory and can be felicitously omitted (Skopeteas 2013: 353).

- (57) *Biz-ım halh daha işli-an-dir* *čem gürji*
 1.PL-GEN people much work-ADJR-EPST.COP than Georgian
halh.
 people
 ‘Our people are more hardworking people than Georgians.’
 (PP-B03.001)

The superlative is identical to the comparative form, whereby the ablative complement explicitly refers to the total set of referents to which the entity that is attributed by the superlative adjective belongs to (Skopeteas 2013: 352f.). Consider the example in (58).

- (58) *Äv-umuz härkäš-in-dän güzäl-ıdı.*
 house-POSS.1.PL all-POSS.3-ABL beautiful-PST.COP
 ‘Our house was the most beautiful (of all).’ (VL-C08.004)

3.6.9 Negation

Non-verbal predicates are negated by the negation predicate *dägil* or by the negative existential *yoh*, as shown in (59) and (60).

- (59) *Bu biz-ım dil* *dägil.*
 this 1.PL-GEN language NEG.COP
 ‘This is not our language.’ (LG-C14.001)
- (60) *Da kimsä yoh-tur* *bızım köv-dä*
 and someone NEG.EXIST-EPST.COP 1.PL-GEN village-LOC
yaš-ier.
 live-IPFV.3SG
 ‘There is nobody living in our village.’ (VL-C17.007)

3.7 Verbal morphology

Urum has a very rich verbal morphology. Verbal suffixes are attached to the bare stem in the following order: passive, negation, TAM markers (tense, aspect, mood), person/number.

3.7.1 Passive

Passive in Urum is expressed by the suffix *-ıl* which immediately attaches to the verbal stem. See (61).

- (61) *Yol-lar aç-ıl-dı-lar.*
 road-PL open-PASS-PST-3.PL
 ‘The roads were opened.’ (FM-C03.005)

3.7.2 Negation

Verbal negation is expressed by the negation suffix *-m(E)*. In active sentences, the negation suffix typically attaches immediately to the bare stem of the verb. Consider the example in (62).

- (62) *Biz o dil-i eç büil-ıl-ier-dı-h.*
 1.PL that language-ACC at.all know-NEG-IPFV-PST-1.PL
 ‘We did not know that language at all.’ (LG-C10.001)

3.7.3 Person and number

Urum shows subject-verb agreement. Hence, finite verbs agree with subjects in number and person, as illustrated in (63).

- (63) *Baş-tan urum-lar yaş-ier-dı-lar turtsia-da.*
 beginning-ABL Urum-PL live-IPFV-PST-PL Turkey-LOC
 ‘First the Urum people lived in Turkey.’ (AN-Y05.001)

Urum exhibits three paradigms for subject agreement suffixes on verbs. Consider Table 3.5.

Table 3.5: Paradigms of verbal person suffixes in Urum

		Paradigm I	Paradigm II	Paradigm III
	1	<i>-Im</i>	<i>-m</i>	NA
SG	2	<i>-sIn</i>	<i>-n</i>	<i>-∅</i>
	3	<i>-∅</i>	<i>-∅</i>	<i>-sIn</i>
	1	<i>-Ih</i>	<i>-h</i>	NA
PL	2	<i>-sIs</i>	<i>-z</i>	<i>-In</i>
	3	<i>-lAr</i>	<i>-lAr</i>	<i>-sInlAr</i>

The suffixes of the first paradigm attach to the present stem, the imperfective suffix, the aorist and the future as well as to the optative suffix (Skopeteas 2013). Consider for instance the example in (64).

- (64) *Biz gürjistan-da yaş-ier-ıh.*
 1.PL Georgia-LOC live-IPVF-1.PL
 ‘We live in Georgia.’ (PP-B12.001)

By contrast, the suffixes of the second paradigm attach to the past tense and to the conditional suffix, see (65) (Skopeteas 2013).

- (65) *Bız birinji yaş-ier-dı-h gretsia-da.*
 1.PL first live-IPVF-PST-1.PL Greece-LOC
 ‘First we lived in Greece.’ (AN-B12.001)

Finally, the suffixes of the third paradigm only attach to the imperative, as shown in (66).

- (66) *Ged-in de-in ğardaş-ım-a.*
 go-IMP.2.PL tell-IMP.2.PL brother-POSS.3SG-DAT
 ‘Go and tell my brother!’ (CL-A10.003)

3.7.4 Aspect

Urum distinguishes two aspects: perfective and imperfective. Whereas the former is used to describe actions that happened and ended in the past and has no particular suffix, the imperfective aspect is used to describe ongoing or continuous actions and is expressed by the suffix *-(i)er*. Consider for instance the examples in (67). However, the imperfective aspect can also combine with the past tense suffix *-d(I)*, see (67b).

- (67) Imperfective:
- a. *Sävın-ier-d-ıh.*
 happy-IPFV-1.PL
 ‘We are happy!’ (FE-B12.004)
- b. *Dädäm di-er-di ki biz*
 grandfather-POSS.1.SG say-IPFV-PST.3SG COMP 1.PL
ğäl-d-ıh ğürjistan-a.
 come-PST-1.PL Georgia-DAT
 ‘My grandfather was telling us that we came to Georgia.’
 (AN-A02.001)

3.7.5 Tense

Past

Similar to Turkish, Urum has two simple past tenses: the definite and the reported past (Kornfilt 1997). The definite past is expressed by the suffixes *-d(I)* or *-t(I)*. See the example in (68).

- (68) *Or-da Tsalka-da yap-t-lar äv-lär-i.*
 there-LOC Tsalka-LOC build-PST-3.PL house-PL-ACC
 ‘They built houses there in Tsalka.’ (AN-B09.007)

By contrast, the reported past is expressed by the suffix *-miš*, see (69). The reported past is used when a speaker is not sure whether the proposition of a statement is true or not, because the action or the event he or she is describing has only been reported to him or her (cf. also Kornfilt 1997 on Turkish).

- (69) *Biz-ım halh yap-miš büyük kissä.*
 1.PL-GEN people build-REP.PST big church
 ‘It appears that our people have built the church.’ (VL-B05.004)

Future

Future in Urum is expressed either by the aorist or by the future case suffix *-AĵA(h)*. Whereas the aorist in Turkish is used to express habitual actions and general events (Kornfilt 1997), the Urum aorist case suffix *-Ir*¹⁰ has a future (or habitual) time reference (cf. the results of an elicitation study by Schellenbach 2014 and an acceptability judgment task by Hass 2014). Consider the example in (70). Moreover it has been found that the use of the Urum aorist suffix correlates with counterfactuality and polarity, i.e., the aorist suffix is predominantly used and accepted in counterfactual contexts that involve negation (cf. the results of an elicitation study by Franz 2014 and an acceptability judgment task by Zähres and Wardhani 2014).

- (70) *Biz-ım halh eĵil-ir kissä-dä.*
 our-GEN people gather-AOR church-AOR
 ‘Our people will get together at the church.’ (FE-B05.002)

Furthermore, future time reference in Urum can be expressed by the future case suffix *-AĵA(h)*, see (71).

- (71) *Bül-m-ier-th nä ol-ajah.*
 know-NEG-IPFV-1.PL what be-FUT
 ‘We don’t know what will happen next.’ (VL-C15.008)

¹⁰If following negation, the Urum aorist is expressed by the allomorph *-z* (Skopeteas 2013: 346).

Present

Urum does not exhibit a present tense suffix. As shown in the previous paragraph, habitual actions in Urum are expressed by the aorist case suffix *-Ir* (72). By contrast, simple present time reference in Urum is indicated by the use of the imperfective aspect marker *-(i)er* (73).

- (72) *Biz-um dil-i bän čoğ säv-er-um.*
 1.PL-GEN language-ACC 1.SG much love-AOR-1.SG
 ‘I love our language very much.’ (PS-X34.001)

- (73) *Adam čih-ier märdivän-dän čam-in*
 man climb-IMPF.3.SG ladder-ABL tree-GEN
ust-ün-dä.
 top-POSS.3.SG-DAT
 ‘A man climbs the tree with a ladder.’ (PS-X34.001)

3.7.6 Mood

Urum has several mood markers. The potential suffix *-(y)A* only occurs in negative verbs forms and is the only suffix that precedes the negation marker. Consider for instance the example in (74).

- (74) *Syabyat bul-a-ma-di.*
 reason find-POT-NEG-PST.3
 ‘He couldn’t find a reason.’ (PS-X35.036)

The potential suffix *-(y)A* can co-occur with the ability suffix *-yAbil*, which is used to express ability or permission. The potential suffix is the only one which can precede the ability marker while all other TAM markers follow the ability suffix, see (75).

- (75) *Yaši-abil-ir-ih.*
 live-ABIL-IPFV-1.PL
 ‘We can live so.’ (VL-A14.007)

Urum also exhibits the conditional suffix *-sA*. Consider the example in (76). By contrast to the other mood markers, the conditional suffix can either precede or follow tense and aspect markers.

- (76) *Ägär var-sa maršutka-inän gid-ier-sin.*
 if be-COND marshrutka-INS go-IPFV-2.SG
 ‘If there is a marshrutka you go with it.’ (PA-X29.002)

Moreover, Urum has an optative suffix *-yA* (OPT) which is used to express hope or advice (77).

- (77) *Baba-si di-er-di ki gid-ä-h gretsia-ya.*
 father-POSS.3SG say-IPFV-PST COMP go-OPT-INF Greece-DAT
 ‘Her father was telling her to go to Greece.’ (AN-C08.005)

3.7.7 Adverbs

As shown in Section 3.6.8, Urum has no lexical distinction between adjectives and adverbs. Hence the same lexical item can modify either a verb or a noun. Compare the examples in (78) and (79).

- (78) *Güzäl köv-dür.*
 beautiful village-EPST.COP
 ‘It’s a beautiful village.’ (VL-B12.002)
- (79) *güzäl atmečat ed-ir-lär*
 beautiful celebrate:INF do-AOR-PL
 ‘we celebrate it beautifully’ (FE-A15.002)

Furthermore, adverbs can be used with the epistemic copula *-dIr*, as illustrated in (80).

- (80) *Biz-ım halh birüz seriozni-dır.*
 1.PL-GEN people little serious-EPST.COP
 ‘Our people are a bit serious.’ (PP-B09.001)

3.8 Basic word order

3.8.1 Structure of the NP

The Urum noun phrase is structured as follows: If available, the universal quantifier *äp* (‘all’) occurs at the left periphery of the NP. The universal quantifier can optionally be followed by a determiner or a numeral as well as by an adjective, which typically occur immediately left-adjacent to the modified noun (Skopeteas 2013: 354). Consider the example in (81).

- (81) Structure of the Urum NP:
bu čüčük ğıza
 this little girl/daughter
 ‘this little girl/daughter’ (PS-Y42.010)

3.8.2 Structure of the VP

The previous sections revealed that the variety of Urum that is currently spoken in Georgia shares many similarities with Standard Turkish. However, Urum also reveals some striking differences to Turkish which presumably result from the contact to Russian (Skopeteas 2011: 257). The influence of Russian is particularly visible in the Urum lexicon (cf. Section 3.4) as well as in the syntax. Whereas Turkish is a head-final language with the verbal head following its complements, Russian is a head-initial language with the verb preceding its complements (for a detailed discussion about word order in Turkish and Russian, cf. Chapter 4). Consider the examples in (82) and (83).

- (82) Structure of the Turkish VP:

Hasan [kitab-ı oku-du]_{VP}.
 Hasan book-ACC read-PST.3.SG

‘Hasan read the book.’ (Kornfilt 1997: 89)

- (83) Structure of the Russian VP:

Ol’ga [svarila pel’meni]_{VP}.
 Olga:NOM cook:PST.F pelmeni:ACC

‘Olga cooked pelmeni.’ (Dyakonova 2009: 2)

By contrast to Turkish and Russian, the order of the Urum VP shows substantial variation, i.e., both OV and VO orders occur under similar discourse conditions (Skopeteas 2011: 262). Consider for instance the examples in (84). Both sentences were uttered in the beginning of a narrative describing the way how Urum people make cheese. Though the direct object *inägi* ‘cow’ provides new information in both cases, the speaker in (84a) produced a sentence with the object preceding the verb (OV), whereas the speaker in (84b) produced a sentence with the object following the verb (VO) (Skopeteas 2013: 263).

- (84) Structure of the Urum VP:

a. [*inäg-i sağ-ier-lär*]_{VP}
 cow-ACC milk-IPFV-3.PL
 ‘they milk a cow’ (CH-X26.002)

b. [*sağ-ier-ih inäg-i*]_{VP}
 milk-IPFV.1.PL cow-ACC
 ‘we milk a cow’ (CH-X33.001)

A corpus study by Skopeteas (2014) on the texts of the Urum narrative collection (Moisidi and Skopeteas 2014) revealed that the number of OV constructions significantly decreases within the group of the younger Urum speakers, i.e., speakers born before 1979 produced significantly more OV constructions than speakers born after 1979. Nevertheless, the younger generation frequently produce OV orders which leads to the assumption that Urum has undergone a change in the word order from OV to a language with a free placement of the verb within the verb phrase.

Further evidence for this assumption arises from Urum double object constructions (DOCs). Consider for instance the examples in (85) which reveal that the verb in Urum DOCs can felicitously precede (85a), follow (85b) or occur between the two verbal arguments (85c).

- (85) a. *ver-di on-nar-a birüz armut*
 give-PST.3SG 3-PL-DAT little pear
 ‘he gave them a little pear’ (PS-Y48.011)
- b. *siz-ü bağarmud-i ver-ier-im*
 2.PL-DAT pear-ACC give-IPFV-1.SG
 ‘I gave you pears’ (PS-X21.018)
- c. *uřah-lar-a ver-di bağarmud-lar-i*
 child-PL-DAT give-PST.3SG pear-PL-ACC
 ‘he gave the children the pears’ (PS-X25.008)

Whereas the structure in (85b) is typical for a head-final language (like Turkish), the structure in (85a) is typical for a head-initial language (like Russian). By contrast, the structure in (85c) is characteristic for languages of the so-called third type (=T3) (cf. Haider 2000, 2010, 2012). A crucial property this type of languages is that they are un(der)specified with regard to their directionality. Whereas head-final structures result from a regressive directionality and head-initial structures result from a progressive directionality, T3 structures are flexible regarding their directionality and can change at any time within the subtree (Haider 2012: 111). Compare the examples in (86).

- (86) a. [XP [YP [ZP V^o]]] (head-final structure)
 b. [XP [V^o_i [YP [_e_i ZP]]] (head-initial structure)
 c. [XP [YP [V^o ZP]]] (T3 structure)

A crucial characteristic of T3 languages is that they can exhibit all three types of structures, i.e., head-final, head-initial as well as T3 structures. Hence, by contrast to Standard Turkish where VO orders are considered to be

derived by object dislocation (cf. Chapter 5), I assume that V-initial orders in Urum are derived by V-fronting.

Evidence for the assumption that the VO order in Urum results from V-fronting rather than from object right-dislocation as assumed for Standard Turkish (cf. Chapter 5) also arises from the fact that Urum allows non-specific objects to occur after the verb, whereas the postverbal domain in Turkish can only host background material and hence specific arguments (Böhm 2015). Furthermore, postverbal material in Urum can receive stress, whereas Turkish does not allow stress on postverbal elements (Skopeteas 2014). Final evidence for the assumption that VO orders in Urum undergo V-fronting comes from binding. Though both, Standard Turkish and Urum, allow antecedent binding in the pre- and postverbal domain and reject postcedent binding in the preverbal domain, only Standard Turkish allows postcedent binding in the postverbal domain whereas Urum does not allow postcedent binding at all (Skopeteas 2014).

In a nutshell, this subsection showed that Urum is a language that allows free movement of the verb within the VP. Similar observations were also reported for other Turkic languages which are spoken in contact with Slavic languages (cf. for instance Menz 1999 for Gagauz in contact with Russian, Csató 2000 for Karaim in contact with Russian/Lithuanian and Matras and Tufan 2007 for Macedonian Turkish in contact with Macedonian and Albanian).

3.9 Questions

3.9.1 *Wh*-questions

Similar to Turkish, Urum exhibits several interrogative pronouns which are used for the formation of questions, e.g., *kim* ‘who’, *nä(i)* ‘what’, *nerdä* ‘where’, *niya* ‘why’, *näsıl* ‘how’, *nävädä* ‘when’. In Turkish the most unmarked position for a *wh*-word is left-adjacent to the predicate. Alternatively interrogatives can also occur in their original positions (Kornfilt 1997: 9). Consider the examples in (87).

(87) Turkish:

a. *Bu kitab-ı kim oku-du?*
this book-ACC who read-PST.3SG

‘Who read this book?’

b. *Kim bu kitab-ı oku-du?*
who this book-ACC read-PST.3SG

‘Who read this book?’

(Kornfilt 1997: 10)

Like in Turkish, *wh*-words in Urum can occur either left-adjacent to the predicate or in the beginning of a sentence, see the examples in (88).

(88) Urum:

a. *Biz-ım halh nəsul airlan-ier on-nar-dan?*
1.PL-GEN people how differ-IPFV.3SG 3-PL-ABL

‘How our people differ from them?’ (PP-A01.001)

b. *Nəsul biz-ım halh gäl-di gürjüstan-da?*
how 1.PL-GEN people come-PST.3SG Georgia-LOC

‘How our people came to Georgia?’ (AN-B13.001)

Similar to Turkish the Urum interrogative corresponding to direct objects (*nä* ‘what’) can occur either with or without accusative marking. Whereas the former typically asks for a non-specific entity (e.g., *any book*), the latter refers to an entity with a specific interpretation (e.g., *a certain book*). Compare the examples in (89) and (90). Whereas the questions in (89a) and (90a) do not ask for any specific item, the questions in (89b) and (90b) presuppose that the hearer will read a certain groups of items and ask for one specific item, e.g., a particular book or article. Hence, the questions in (89b) and (90b) typically trigger an answer with a marked direct object, whereas the questions in (89a) and (90a) may trigger either an answer with a marked or a bare direct object (cf. also Section 3.6.2).

(89) Turkish:

a. Non-specific object question:

Bügün ne oku-yacak-sın?
today what read-FUT-2.SG

‘What will you read today?’

b. Specific object question:

Bügün ne-yi oku-yacak-sın?
today what-ACC read-AOR-2.SG

‘What will you read today?’

(Kornfilt 1997: 317)

(90) Urum:

a. Non-specific object question:

Bögün nä oh-ir-sın?
today what read-AOR-2.SG

‘What will you read?’

b. Specific object question:

Bögün nä-i oh-ir-sın?
today what-ACC read-AOR-2.SG

‘What will you read today?’ (V. Moisiđi, p.c.)

By contrast to Turkish where interrogatives corresponding to non-specific objects have to occur immediately left-adjacent to the verb (Göksel and Kerslake 2005: 262), the Urum interrogative *nä* is not restricted in this way (cf. also Section 3.6.2).

3.9.2 Polar questions

By contrast to Turkish, where polar questions are formed by attaching the question particle *mi* either to the predicate (91a) or to a particular phrase (91b) (Göksel and Kerslake 2005: 251), polar questions in Urum are formed without a question particle. Compare the examples from Turkish (91) and Urum (92).

(91) Turkish:

a. *Kedi-ler iki k conserve-yi de bitir-miř-ler mi?*
cat-PL two can-ACC both finish-EV.PST-3.PL Q

‘Have the cats finished both tins?’

b. *Zehra Londra-ya eylül-de mi gid-ecek?*
Zehra London-DAT September-LOC Q go-FUT

‘Is Zehra going to London in SEPTEMBER?’

(Göksel and Kerslake 2005: 251-252)

(92) Urum:

a. *O Tsalka-da-dır.*
3.SG Tsalka-LOC-COP

‘He is in Tsalka.’

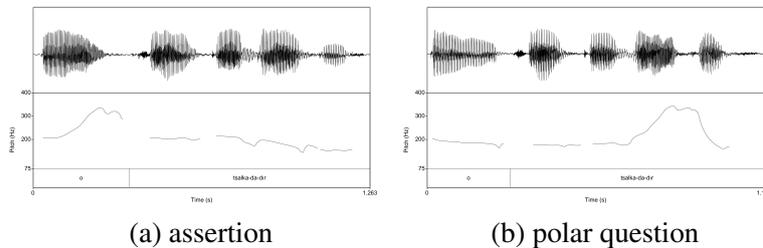
b. *O Tsalka-da-dır?*
3.SG Tsalka-LOC-COP

‘Is he in Tsalka?’

(Skopeteas 2013: 346)

Hence, the contrast between assertions and polar questions in Urum solely relies on intonation. Consider the pitch contours of the Urum assertion and the polar question in (92) in Figure 3.3.

Figure 3.3: Urum pitch contours: assertion vs. polar question



3.9.3 Tag questions

Tag questions are attached to the end of an assertion in order to seek confirmation whether a statement is true or not. Whereas tag questions in Turkish are formed by the negative copula *değil* ‘not’ and the questions particle *mi* (Kornfilt 1997), tag questions in Urum are formed by the adjectives *düz* ‘true’ or *elä* ‘such’ in combination with the copula *-dlr* or even more colloquial with the discourse particle *xä* ‘yes’. Compare for instance the examples from Turkish (93) and Urum (94).

(93) Turkish:

Ahmet dün sinema-ya git-ti, değil mi?
 Ahmet yesterday cinema-DAT go-PST.3.SG NEG.COP Q

‘Ahmet went to the movies yesterday, didn’t he?’

- a. *Evet, git-ti.*
 yes go-PST.3.SG
 ‘Yes, he went.’
- b. *Hayır, gid-me-di.*
 no go-NEG-PST.3.SG
 ‘No, he didn’t go.’

(Kornfilt 1997: 6-7)

(94) Urum:

Čoğ halh get-ti rassia-ya, düz-dür?
many people go-PST.3 Russia-DAT true-COP

‘Many people went to Russia, is that true?’

a. *Xä, get-ti-lär rassia-ya.*
yes go-PST-3.PL Russia-DAT

‘Yes, they went to Russia.’

b. *Yox, get-ti-lär gretsia-ya.*
no go-PST-3.PL Greece-DAT

‘No, they went to Greece.’

(V. Moisiđi, p.c.)

3.10 Coordination

Coordination in Urum is expressed by the clitic =*DA* ‘and’¹¹ (95) or by the Urum conjunctions *ya* ‘or’ (96) and *ama* ‘but’ (97).

(95) *Gürjüstan-a gäl-dı-lär or-da=da başla-dı-lar*
Georgia-DAT come-PST-3.PL there-LOC=and start-PST-3.PL
yaša-mah.
live-INF

‘They came to Georgia and started living there.’ (AN-B06.010)

(96) *ya torun-nar ğal-dı-lar or-da.*
or grandchild-PL stay-PST-3.PL there-LOC

‘[...] or the grandchildren stayed there.’ (LI-Y45.008)

(97) *ama baba-m ol-di tsalka-da.*
but father-POSS.1.SG be-PST.3.SG Tsalka-LOC

‘[...] but my father was born in Tsalka.’ (FM-B04.001)

However, coordination in Urum is also frequently expressed by Russian loanwords (i.e., *i* ‘and’, *ili* ‘or’, *no* ‘but’). See for instance the example in (98).

(98) *Yap-tı-lar i başla-dı-lar yäsa-mah.*
build-PST-3.PL and start-PST-3.PL live-INF

‘They built houses and started living there.’ (AN-B11.009)

¹¹Please note that the clitic =*DA* is not only used as a coordinative conjunction, but also functions as a connective.

3.11 Subordination

3.11.1 Complement clauses

Complement clauses can be expressed in different ways. First of all they can be introduced by the complementizer *ki* ‘COMP’ followed by a canonical subordinate verb¹², see (99a). Moreover, complement clauses in Urum can be marked at the subordinate verb by either using only the infinitive suffix *-mah* (99b) or the infinitive suffix plus the dative ending *-(y)A* (99c). Finally, complementation can be also expressed without a particular morphosyntactic subordination encoding (99d). Consider the examples adopted from Lorenz (forthcoming: 12f.) in (99).

(99) Complementation in Urum:

- a. *Bän düš-ün-du-m ki bir ikityanya ist-ier.*
 1.SG think-AOR-PST-1.SG COMP one two want-IPFV
 ‘I thought that he wanted one or two pears.’ (PS-X35.009)
- b. *Başla-dı-lar äv-lär yap-mah.*
 start-PST-3.PL house-PL build-INF
 ‘They started to build houses.’ (AN-Y01.006)
- c. *Tsalka-da başla-dı-lar yap-may-a av-lar-i.*
 Tsalka-LOC start-PST-3.PL build-INF-DAT house-PL-ACC
 ‘They started to build houses in Tsalka.’ (AN-Y45.006)
- d. *başla-dı-lar yap-ti-lar ŧei ŧäär-i*
 start-PST-3.PL build-PST-3.PL that city-ACC
 ‘they started [to build] the city’ (AN-Y08.005)

For a corpus study on the influence of different classes of complement-taking predicates on the choice of the four alternative patterns of Urum complement clauses, consider Lorenz (forthcoming).

3.11.2 Adverbial clauses

Urum exhibits a set of conjunctions that introduce adverbial clauses. Conditional clauses are introduced with the conjunction *ägär* ‘if’ (Skopeteas 2013: 355), see (100).

- (100) *Ägär mashina ol-di Tsalka-ya tah götür-ier.*
 if car be-PST Tsalka-DAT up take-IPFV
 ‘If there is a car, it takes you up to Tsalka.’ (PA-X25.006)

¹²The use of the complementizer *ki* is a very common characteristic of Anatolian dialects of Turkish and occurs frequently in other Turkish languages that are in close contact with Slavic languages (see e.g., Menz 2001 for Gagauz).

Causal relations are expressed by the conjunction *onučun* ‘because’, see (101). As illustrated by the example in (101), the causal conjunction is quite frequently followed by the complementizer *ki*. According to Johanson (1993: 256) these complex structures, which can also be found in other Turkish dialects that are in contact with Slavic languages (e.g., Gagauz: *neçin ki/neçin ani* ‘because’ (Menz 1999, 2001)), developed as an analogy to the corresponding Russian conjunction *potomu čto* ‘because’ (Skopeteas 2013: 355).

- (101) *Biz-ım halh gäl-di turtsia-dan onučun ki dad*
 1.PL-GEN people come-PST.3SG Turkey-ABL because that taste
ver-mer-dı-lar köti-idi or-da yaša-mah.
 give-NEG-PST-3-PL bad-PST.COP there-LOC live-INF
 ‘Our people came here from Turkey because it was hard to live there.’
 (AN-B08.001)

Purpose clauses in Urum are typically introduced by the Russian conjunction *čtob* ‘in order to’. See (102).

- (102) *O-nun ana-si aba-si=da*
 3.SG-GEN mother-POSS.3 grandmother-POSS.3=and
gäl-dı-lär šäär-ä čtob işli-a-lär.
 come-PST-PL city-DAT in.order.to work-POT-PL
 ‘His mother and grandmother came to the city in order to work.’
 (FM-B11.003)

Temporal clauses are often introduced by temporal conjunctions such as *nävädä* or *näväh* ‘when’. See the example in (103). Furthermore, temporal subordination in Urum can be expressed by converbs ending with the suffix *-AndAn* ‘CVB’, see (103b). These converbs also occur in other Anatolian dialects (see e.g., Menz 2002 on the dialects of Erzurum) and are used to embed events that take place at the same time as the event described in the matrix clause (Skopeteas 2013: 348). Moreover, temporal subordination can be expressed by converbs ending in *-Ip*. By contrast to converbs ending in *-AndAn*, converbs ending in *-Ip* are used to express events that did not happen at the same time but occur successively. Consider the example in (103c) (Skopeteas 2013: 348).

- (103) a. *Nävädä bu adam topl-ier-di armut bir çüçük*
 when this man gather-IPFV-PST.3.SG pear one small
oğlan gäl-di.
 boy come-PST
 ‘When this man was gathering pears, a small boy came.’
 (PS-Y47.004)
- b. *Av-ä götür-anda, ord-an geri-dän gäl-di ғız.*
 house-DAT take-CVB there-ABL back-ABL come-PST girl
 ‘While he was taking it home, there came a girl from behind.’
 (PS-X24.008)
- c. *Torba-da sıh-ier-lär, cigart-ıp ғo-ier-lär galib-a.*
 sack-LOC squeeze-IPFV-PL take-CVB put-IPFV-PL shape-DAT
 ‘They squeeze it in the sack, take it and put it into a shape.’
 (CH-X26.009)

3.11.3 Relative clauses

Relative clauses in Urum are typically introduced by the relative pronoun *angi* ‘REL’ which is often accompanied by the complementizer *ki* (Skopeteas 2014: 350). Furthermore, relative clauses can be introduced by interrogative pronouns. Consider the examples in (104).

- (104) a. *Oğlan angi-si ki çal-di birär armud...*
 boy REL-POSS.3.SG COMP steal-PST.3SG pear
 ‘The boy who stole all the pears.’ (PS-Y03.007)
- b. *Soradan bu oğlan kim-ki velasiped-i var-ıdı*
 afterwards this boy who-COMP bicycle-ACC be-PST.COP
gid-ier-di.
 go-IPFV.3.SG-PST
 ‘Then the boy who had a bike went away.’ (PS-Y48.009)

3.12 Summary

This chapter provided a brief description of the Urum grammar. It was shown that Urum exhibits a lot of similarities with Standard Turkish. However, the language also reveals several influences from Russian especially in the lexicon (cf. Section 3.4) and in the syntax (cf. Section 3.8). The syntactic change from OV to a language with a free position of the verb within the VP is of particular importance, since it is very crucial for the investigation of the correlation of word order and information structure.

Chapter 4

Word order in Turkish and Russian

4.1 Introduction

As mentioned in the previous chapter, Urum is only poorly documented. There is no detailed grammatical description of the language and there are only a few studies available that are dealing with the structure of the language. Hence, there does not exist any literature on Urum information structure so far. However, since Urum is an Anatolian variety of Turkish and shows a lot of similarities with Modern Standard Turkish, it is very reasonable to provide some theoretical background on information structure in Turkish. As syntax in Urum moreover reveals some influences from Russian (cf. Section 3.3), it is also relevant to present some theoretical background on the correlation of syntax and information structure in Russian.

This chapter provides some theoretical background on the correlation between word order and information structure in Standard Turkish (cf. Section 4.2.1) and Russian (cf. Section 4.3). The two main sections consist of three parts. The first part of each section is a general discussion about the basic word order of the languages. The second part deals with derived word orders and focuses on the question if and how foci and topics are syntactically realized in these languages. Part three finally summarizes the major assumptions about word order and information structure in the respective language. The main findings of the correlation of syntax and information structure in both languages are finally compared and further discussed in Section 4.4.

4.2 Turkish

4.2.1 Basic word order

Turkish is a verbfinal language with SOV assumed to be the canonical word order in transitive sentences (e.g., Erguvanlı 1984, Kural 1992, Hoffman 1995, Kornfilt 1997, Kılıçaslan 2004, Göksel and Kerslake 2005). However, word order in Turkish is quite flexible. Hence, even a simple sentence can have six possible permutations. See the examples in (105).

- (105) a. *Ayşe Fatma-yı gör-dü.*
 Ayşe Fatma-ACC see-PST[3]
 ‘Ayşe saw Fatma.’ (SOV)
- b. *Fatma’yı Ayşe gördü.* (OSV)
- c. *Ayşe gördü Fatma’yı.* (SVO)
- d. *Fatma’yı gördü Ayşe.* (OVS)
- e. *Gördü Fatma’yı Ayşe.* (VOS)
- f. *Gördü Ayşe Fatma’yı.* (VSO)

(Hoffman 1995: 39)

This word order flexibility results from the fact that Turkish is an agglutinating language. The grammatical category of a constituent is marked morphologically and thus relatively independent from its position in the sentence. Consider for instance the accusative suffix *-ı* in the examples in (105) which indicates the NP as the direct object (e.g., Erguvanlı 1984). However, it must be noted that overt case-marking of direct objects (DOs) in Turkish is only used for objects that refer to specific entities, i.e., entities that are assumed to be familiar to the addressee but are not unambiguously identifiable in the given context. Non-specific direct objects (i.e., DOs that refer to entities whose identity is new to the addressee) on the other hand remain unmarked (Göksel and Kerslake 2005: 325). By contrast to specific objects, non-specific DOs are restricted to the immediately preverbal position of a clause and may not occur in any other position (e.g., Erguvanlı 1984, Kural 1992, Hoffman 1995, Kornfilt 1997, Kılıçaslan 2004, Göksel and Kerslake 2005). Consider the examples in (106).

- (106) a. *Bir adam (bir) bahçe sulu-yor.*
 one man one garden water-PROG[3]
 ‘A man is watering a garden.’
- b. **(Bir) bahçe bir adam suluyor.* (Erguvanlı 1984: 21)

Whereas bare objects may not occur in any other than the immediately preverbal position, the position of marked DOs is highly flexible. However, only the SOV order in (105a) is considered to be discourse-neutral, while all other orders are assumed to be derived by information structure and are thus discourse-dependent (cf. Section 4.2.2).

While it is generally agreed that the canonical order of Turkish transitive sentences is SOV, there exist two competing views regarding the canonical word order of Turkish ditransitives. The majority of authors (e.g., Underhill 1972, Kural 1992, Kornfilt 1997, İşsever 2003) assume that the underlying word order in Turkish double object constructions is IO<DO. Consider for instance Kornfilt (1997) who observed that most Turkish native speakers judge the order with the direct object preceding the indirect object as the unmarked one, whereas the reverse order (IO<DO) leads to an interpretation where the DO is focused. Consider the examples in (107).

- (107) a. *Ali kitab-i Hasan-a ver-di.*
 Ali book-ACC Hasan-DAT give-PST
 ‘Ali gave the book to Hasan.’
- b. *Ali Hasan-a kitab-i ver-di.*
 Ali Hasan-DAT book-ACC give-PST
 ‘Ali gave THE BOOK to Hasan.’ (Kornfilt 2003: 141)

Though most authors claim that DO<IO is the underlying word order in Turkish DOCs, Öztürk (2005) argues that both orders (DO<IO and IO<DO) can be base-generated as underlying orders in Turkish. She proposes that the canonical order is IO<DO if the indirect object is interpreted as a possessor (108), whereas the canonical order is DO<IO if the indirect object has a locative interpretation (109).

- (108) *Her adam-a resm-in-i ver-di-m.*
 every man-DAT picture-3-ACC give-PST-1.SG
 ‘I gave every man his picture.’

- (109) *Resm-i çerçeve-sin-e koy-du-m.*
 picture-ACC frame-3.SG-DAT put-PST-1.SG
 ‘I put the picture in its frame.’ (Öztürk 2005: 154)

Similar to Öztürk, Simpson et al. (2009) propose that there are two underlying orders in Turkish ditransitives. They argue that the canonical order is depending on the accusative marking of the direct object. If the direct object bears overt marking and is interpreted as either definite or specific

indefinite NP, the neutral order is DO<IO (110a). If the direct object is not bearing overt accusative marking, the neutral order is IO<DO (110b) (Simpson et al. 2009: 55).

- (110) a. *Ahmet Çinli bir öğrenci-yi Japon bir öğrenci-ye*
 Ahmet China a student-ACC Japan a student-DAT
tanıştırdı.
 introduced
 ‘Ahmet introduced a Chinese student to a Japanese student.’
- b. *Ahmet Japon bir öğrenci-ye Çinli bir öğrenci tanıştırdı.*
 Ahmet Japan a student-DAT China a student introduced
 ‘Ahmet introduced a Chinese student to a Japanese student.’

(Simpson et al. 2009: 55)

Moreover, Simpson et al. (2009: 56) found out that in configurations where the indirect object is definite and animate and the direct object is indefinite and inanimate (111), Turkish native speakers tend to judge the IO<DO linearization as the most natural.

- (111) *Ali Ahmet-e/adam-a bir mektub-u gönderdi.*
 Ali Ahmet-DAT/man-DAT a letter-ACC sent
 ‘Ali sent Ahmet/the man a letter.’ (Simpson et al. 2009: 56)

This section revealed that there exist different views regarding the underlying structure of Turkish double object constructions. While it is predominantly argued that the canonical linearization of the verbal arguments is DO<IO (e.g., Underhill 1972, Kural 1992, Kornfilt 1997, İşsever 2003), Öztürk (2005) and Simpson et al. (2009) propose that there are two underlying word orders in Turkish ditransitives which are depending on the thematic role of the indirect object.

4.2.2 Word order and information structure

The previous section was concerned with the basic word order in Turkish. Though the underlying order of Turkish transitives is SOV, the example in (105) (cf. Section 4.2.1) illustrated that Turkish word order is quite flexible. However, word order in Turkish is not free but considered to be depending on information structure (e.g., Erguvanlı 1984, Kural 1992, Hoffman 1994, Kornfilt 1997, Kılıçaslan 2004, Göksel and Kerslake 2005). Word order in Turkish typically follows the *Given-before-new principle* (Gundel 1988):

Speakers first place the information that links the sentence to the previous context, then the important and/or new information immediately before the verb, and the information that is not really needed but may help the hearer understand the sentence better, after the verb. (Hoffman 1994: 117)

The quote indicates that different positions in the Turkish clause are associated with different pragmatic functions: the sentence-initial position typically hosts topics, the immediately preverbal position is reserved for focused constituents and the postverbal domain contains background information. However, there are several empirical and theoretical problems regarding the syntactic mapping of information structural notions like focus and topic to specific sentence positions which are going to be discussed in more detail within the following subsections.

4.2.2.1 Focus and word order

Turkish is generally assumed to have an immediately preverbal focus position (e.g., Erguvanlı 1984, Kural 1992, Kornfilt 1997, Göksel and Özsoy 2000). Consider for instance the examples in (112).

- (112) a. *Ali-ye yemeğ-i BEN pişir-di-m.*
 Ali-DAT food-ACC I cook-PST-3.SG
 ‘I cooked the food for Ali.’
- b. *Ben yemeğ-i ALI-YE pişir-di-m.*
 I food-ACC Ali-DAT cook-PST-3.SG
 ‘I cooked the food FOR ALI.’
- c. *Ali-yle seyahat-e YARIN şiki-ıyor-um.*
 Ali-COM trip-DAT tomorrow go-PROG-1.SG
 ‘I am going on a trip with Ali TOMORROW.’

(Göksel and Özsoy 2000: 219)

The examples in (112) illustrate that the immediately preverbal position can host focused elements with different grammatical functions, i.e., subjects, objects, adverbs etc. However, though there seems to be a strong correlation between focus and the immediately preverbal position, Kılıçaslan (2004) shows that focused arguments in Turkish are not restricted to this position but may also appear in other positions of the clause. Consider for instance the example in (113) which shows that the focused argument can also occur in the very beginning of the sentence.

(113) Context: ‘Who married Kaya?’

[OYA]_{FOC} *Kaya-yla evlen-di.*
Oya Kaya-COM marry-PST

‘OYA married Kaya.’ (Kılıçaslan 2004: 720)

Another argument against the strict syntactic mapping of focus to the immediately preverbal position results from the fact that Turkish allows multiple-focus constructions, as for instance illustrated by the example in (114). The context question in (114) triggers a subject and an object focus. However, due to the fact that the immediately preverbal position can only host one focus constituent, the second focus must be realized in a position preceding the immediately preverbal one.

(114) Context: ‘Who married who?’

[OYA]_{FOC} [KAYA-YLA]_{FOC} *evlen-di.*
Oya Kaya-COM marry-PST

‘Oya married Kaya.’ (Kılıçaslan 2004: 720)

Further evidence against the assumption that Turkish foci have to occur in the immediately preverbal position arises from the fact that there are some cases in which the immediately preverbal position is obligatory filled by another element, as for instance in the case of non-specific direct objects (Kılıçaslan 2004). As mentioned before, Turkish exhibits a contrast between specific and non-specific NPs. By contrast to specific objects, which are morphologically marked by the accusative suffix *-(y)I* and can freely move within the Turkish clause, non-specific objects do not carry any case morphology and are restricted to the immediately preverbal position. As a result, a focused subject is not allowed to intervene between the verb and a non-specific object (Kılıçaslan 2004: 721). Consider the examples in (115).

(115) Context: ‘Who saw a dog in the garden?’

a. *Bahçe-de [OYA]_{FOC} bir köpek gör-dü.*
garden-LOC Oya one dog see-PST

‘Oya saw a dog in the garden.’

b. **Bahçede [OYA]_{FOC} gördü bir köpek.*

c. **Bir köpek bahçede [OYA]_{FOC} gördü.*

d. **Bahçede bir köpek [OYA]_{FOC} gördü.*

(Kılıçaslan 2004: 720)

Finally, it is obvious that focus cannot correlate with the immediately preverbal position in cases where the verb itself is focused, as for instance in the example in (116).

(116) Context: ‘What does Oya feel about Kaya?’

Oya Kaya-yı [SEV-IYOR]_{FOC}.
 Oya Kaya-ACC love-PROG3

‘Oya loves Kaya.’ (Kılıçaslan 2004: 722)

In conclusion, all of the arguments presented above provide evidence against the assumption that foci in Turkish are restricted to the immediately preverbal position. This claim is not new, but has already been discussed by many researchers before. However, most of them do not consider this as evidence against a syntactic correlation of focus and the immediately preverbal position, but rather claim that the possibility to move freely within the preverbal area is a special property of contrastive foci, whereas they assume that non-contrastive foci do not exhibit this flexibility (e.g., Kural 1992, Kornfilt 1997, İşsever 2003). However, Kılıçaslan (2004) provides evidence against this assumption and shows that non-contrastive foci may felicitously occupy other positions than the immediately preverbal one. Consider the examples in (117).

- (117) a. *Kitab-ı Ali-ye [HASAN]_{FOC} ver-di.*
 book-ACC Ali-DAT Hasan give-PST
 ‘HASAN gave the book to Ali.’
 b. *Kitab-ı [HASAN]_{FOC} Ali-ye ver-di. (... Mehmet değil).*
 book-ACC Hasan Ali-DAT give-PST Mehmet NEG
 ‘HASAN gave the book to Ali (and not Mehmet).’

(Kornfilt 1997: 190-191)

According to Kornfilt (1997: 191), the immediately preverbal focused subject in (117a) can be either interpreted as non-contrastive or contrastive. Whereas the focused subject in (117b), which appears not immediately adjacent to the verb, does only allow a contrastive reading. However, as pointed out by Kılıçaslan (2004: 723), it is easily possible to think of a context in which the sentence in (117b) has a non-contrastive reading, as for instance in a situation in which A has told B many times that it was Hasan who gave the book to Ali. Nevertheless, B has posed the same question to A again and again. A gets mad about B and answers in an angry tone. Consider the example in (118).

- (118) *Kitab-ı* [HASAN]_{FOC} *Ali-ye ver-di.* (... *Bunu daha önce*
 book-ACC Hasan Ali-DAT give-PST this more before
birçok kez söyle-dim.)
 many times say-PST
 ‘HASAN gave the book to Ali (I’ve already said that many times).’

(Kılıçaslan 2004: 723)

Though the focused subject in (118) does not occur in immediately preverbal position, it does not exhibit a contrastive interpretation, i.e., it does not operate on a closed set of entities but rather activates information which was already given before (Kılıçaslan 2004: 723). However, it must be noted that the stress on the non-contrastive but not immediately preverbal realized focus in (118) is stronger than on non-contrastive foci which are realized immediately left-adjacent to the verb. Hence, Kılıçaslan (2004: 723) claims that not every focus can be realized in a position preceding the immediately preverbal slot, but only those instances of focus, which are marked by a stronger stress and a higher pitch than the neutral ones and arise from a particular context like contrast (117b) or emotional emphasis (118).

In addition to the empirical arguments Kılıçaslan (2004: 724) presents some theoretical evidence against the assumption that the immediately preverbal position serves as a focus position in Turkish. First of all, he shows that the assumption that non-contrastive foci are restricted to the immediately preverbal position, while contrastive foci may occur in a position preceding the immediately preverbal one, conflict with the crosslinguistic observation that if a language has an overt focus position (i.e., a derived position with a focus feature), usually contrastive foci are moved to this position, while non-contrastive foci remain *in situ* (cf. Kiss 1998).

Another argument comes from Vallduví and Engdahl (1996) who illustrate that Turkish shows a clearly different behavior with regard to focus projection than other languages with an immediately preverbal focus position, like for instance Hungarian. Whereas Hungarian does not allow leftward-projection of focused constituents at all, the constituent which carries the nuclear accent in Turkish (i.e., the object in unmarked sentences) can project its focus feature to higher constituents up to the entire sentence (İşsever 2006). Consider for instance the example in (119) which shows that the direct object *notu* ‘note’ can project the focus feature to higher constituents up to the sentence level.

- (119) *Bir hizmetçi* [*yemek-ten önce* [*masa-nın üzer-i-ne*
 one servant meal-ABL before table-GEN3 top-POSS3-DAT
 [[*NOT-U*]_{FOC} *birak-tı*]_{FOC}]_{FOC}.
 note-ACC leave-PST
 ‘A servant left the note on the table before lunch.’
 a. What did a servant leave on the table before lunch?
 b. What did a servant do before lunch with the table?
 c. What did a servant do before lunch?
 d. What did a servant do?

(Vallduví and Engdahl 1996: 26)

The fact that Turkish allows leftward-projection lead Vallduví and Engdahl (1996: 26) to the assumption that not the focused elements, but rather the unfocused elements undergo movement in Turkish. Hence, Turkish shows a quite similar behavior as Catalan where non-focal elements that occur between the focus and the verb are moved out of the immediately preverbal position. Compare for instance the examples from Catalan and Turkish in (120) and (121).

- (120) *El ganivet*_I [*el*_I *vaig ficar* *t*_I *al* *CALAIX*]_{FOC}.
 the knife OBJ 1.SG-PST-put in.the drawer
 ‘The knife (I) put in the drawer.’
 (121) *Not-u*_I [*MASA-nın üzer-i-ne* *t*_I *birak-tı*]_{FOC}.
 note-ACC table-GEN top-POSS-DAT leave-PST-3SG
 ‘The note (s/he) left on the table.’

(Vallduví and Engdahl 1996: 26)

The assumption that Turkish foci do not undergo movement to the immediately preverbal slot but rather remain *in situ*, does not necessarily contradict the hypothesis that the immediately preverbal position is a focus position in Turkish, as for instance noticed by Kural (1992). He agrees that focused constituents in Turkish have to occur in the immediately preverbal position in order to receive a focus feature. He also argues though, that focused elements remain *in situ* while unfocused elements have to scramble out of the (VP-internal) focus domain (Kural 1992: 73).

This subsection revealed that the focused constituents in Turkish rather often occur immediately preverbally. However, it was shown that Turkish foci are not restricted to this slot but may also appear in other positions within the preverbal field as for instance in the very beginning of a sentence.

Nevertheless, Turkish foci are not allowed to occur postverbally since this slot can only host background and thus non-focused material (cf. e.g., Kılıçaslan 2004)

4.2.2.2 Topic and word order

Topics in Turkish are typically associated with the sentence-initial position (e.g., Erguvanlı 1984, Kural 1992, Hoffman 1995, Kornfilt 1997, Kılıçaslan 2004, Göksel and Kerslake 2005). Consider for instance the examples in (122). (122a) is a ditransitive sentence with the direct object (*ıstakozu* ‘lobster’) occurring in immediately preverbal position. In (122b) the direct object became the topic of the sentence and is realized at the beginning of the sentence whereby no copy or proform is left behind in the base position (Kornfilt 1997: 200).

- (122) a. *Hasan Ali-ye ıstakoz-u ver-di.*
 Hasan Ali-DAT lobster-ACC give-PST
 ‘Hasan gave the lobster to Ali.’
 b. [*ıstakoz-u*]_{TOP} *Hasan Ali-ye ver-di.*
 lobster-ACC Hasan Ali-DAT give-PST
 ‘(Speaking of) the lobster, Hasan gave (it) to Ali.’

(Kornfilt 1997: 200)

Although the sentence-initial position is considered to be the most natural slot for Turkish topics, there is evidence which shows that topics can also occur in other positions (Kılıçaslan 2004: 730). Consider for instance the example in (123) where the topic is preceded by another DP.

- (123) Context: ‘What about the lobster? What happened to it?’
 a. *Hasan [ıstakoz-u]_{TOP} [ALI-YE ver-di]_{FOC}.*
 Hasan lobster-ACC Ali-DAT give-PST
 ‘Hasan gave the lobster to Ali.’
 b. *Zaten kimse o-nu yemek iste-mi-yor-di.*
 in.fact nobody it-ACC eat want-NEG-PROG3-PST
 ‘In fact, nobody wanted to eat it.’ (Kılıçaslan 2004: 730)

Furthermore, topics can be felicitously preceded by more than one DP, see the example in (124). It is obvious from the semantics that neither the DP *birkaç gün önce* ‘several days ago’ nor the DP *birisi* ‘someone’ can function

as a topic since both DPs lack a strong (i.e., a generic or a specific) reading¹ which is necessary in order to be interpreted as a topic (Kılıçaslan 2004: 731).

(124) Context: ‘What about the lobster? What happened to it?’

Birkaç gün önce birisi [ıstakoz-u]_{TOP} [ALI-YE ver-di]_{FOC}.
 several day before someone lobster-ACC Ali-DAT give-PST

‘Several days ago someone gave the lobster to Ali.’

(Kılıçaslan 2004: 730)

Though the examples in (123) and (124) revealed that Turkish topics do not necessarily have to occur in sentence-initial position, they are typically not allowed to occur between the focus and the verb, see (125).

(125) Context: ‘What about the lobster? Who ate it?’

a. *[Istakoz-u]_{TOP} birkaç gün önce [ALI]_{FOC} ye-di.*
 lobster-ACC several day before Ali eat-PST

‘Ali ate the lobster several days ago.’

b. *Birkaç gün önce [ıstakoz-u]_{TOP} [ALI]_{FOC} yedi.*

c. **/?? Birkaç gün önce [ALI]_{FOC} [ıstakoz-u]_{TOP} yedi.*

(Kılıçaslan 2004: 731)

However, Turkish topics may not only occur preverbally but also after the verb. This possibility results from the fact that topics in Turkish can also be background elements (Kılıçaslan 2004: 727). However, Turkish topics may only occur postverbally if the topic constituent has already been established in the discourse context. As opposed to that, new topics are restricted to the preverbal field. Compare the examples in (126) and (127), which show that established topics (here: ‘Istanbul’) may be either realized pre- or postverbally, whereas topics which have not been introduced in the preceding discourse are restricted to the preverbal area (Kılıçaslan 2004: 732).

(126) Context: ‘Tell me about Istanbul.’

a. *[ON milyon civarında insan yaşı-yor]_{FOC} [Istanbul-da]_{TOP}.*
 ten million around person live-PROG3 Istanbul-LOC

‘Around ten million people live in Istanbul.’

b. *[Istanbulda]_{TOP} [ON milyon civarında insan yaşıyor]_{FOC}.*

¹A strong reading for weak quantifier can be only achieved by a topic accent on the quantifier (Jäger 1994).

(127) Context: ‘Edirne is a small town.’

- a. [*Istanbul-da*]_{TOP} *ise on milyon civarında insan*
 Istanbul-LOC COND ten million around person

yaşıyor.
 live-PROG3

‘As for Istanbul, around ten million people live there.’

- b. * *On milyon civarında insan yaşıyor [Istanbulda]*_{TOP} *ise.*

(Kılıçaslan 2004: 731-732)

4.2.3 Summary

This section dealt with word order in Standard Turkish. From a typological point of view, Turkish is a verbfinal and hence SOV language. Nevertheless it was shown that word order in this language is very flexible and sensitive to information structure. The theoretical assumptions about word order and information structure in Turkish may be summarized as follows:

- (i) Turkish foci
 - (a) typically occur immediately preverbally;
 - (b) but may also occur in any position within the preverbal field;
 - (c) are not allowed to occur in the postverbal domain.
- (ii) Turkish topics
 - (a) typically occur in the beginning of the sentence;
 - (b) but may also occur in other positions, e.g., not in the very beginning of a sentence or in the postverbal domain;
 - (c) are not allowed to occur between the focus and the verb.

4.3 Russian

4.3.1 Basic word order

Russian shows a great flexibility regarding its ordering possibilities (e.g., Bailyn 1995, King 1995, Junghanns and Zybatow 1997, Slioussar 2007, Kallestinova 2007, Dyakonova 2009). Hence, even a simple transitive sentence can have six possible word order permutations. Consider the examples in (128).

- (128) a. *Anna chitayet knigu.*
 Anna read:IPVF.3SG book:ACC.F
 ‘Anna reads the book.’ (SVO)
- b. *Anna knigu chitayet.* (SOV)
- c. *Knigu chitayet Anna.* (OVS)
- d. *Knigu Anna chitayet.* (OSV)
- e. *Chitayet Anna knigu.* (VSO)
- f. *Chitayat knigu Anna.* (VOS)

Due to its flexible word order Russian is sometimes considered as a so-called *free word order language*. However, as will be shown throughout this section, word order in Russian is not ‘free’ but encodes specific discourse information, i.e., topic and focus information. Hence, though all six orders in (128) are fully grammatical, there is only one basic word order. Whereas the overwhelming majority of linguists working on Russian agree that the underlying word order in Russian is SVO (e.g., Bailyn 1995, Junghanns and Zybatow 1997, Slioussar 2007 and many others), King (1995) argues that Russian is a VSO language that exhibits a syntactic verb raising into T (cf. also Section 5.3.2.1.1).

Russian distinguishes two types of ditransitive sentences: those that take two objects - also referred to as double object constructions (DOCs) - and those that take an object and a prepositional phrase. Consider the examples in (129) and (130).

- (129) *Nastja pokazala Sergeju svoi pokupki.*
 Nastja show:PFV.PST.3.SG.F Sergey:DAT REFL purchases:ACC
 ‘Nastya showed Sergey her purchases.’
- (130) *Mama postavila moloko v holodil’nik.*
 mother put:PFV.PST.3.SG.F milk:ACC into fridge:PREP
 ‘Mother put milk into the fridge.’ (Dyakonova 2009: 36)

However, it must be noted that Russian does not exhibit the same dative alternation as English where a dative object can be either expressed by a noun phrase or by a prepositional phrase. Compare the examples in (131) and (132).

- (131) a. *Nastya showed Sergey her purchases.*
 b. *Nastya showed her purchases to Sergey.*

- (132) * *Nastja pokazala svoi pokupki k*
 Nastja show:PFV.PST.3.SG.F REFL purchase:PL.ACC to
Sergeyu.
 Sergey:DAT
 ‘Nastya showed her purchases to Sergey.’

(Dyakonova 2009: 36)

In the following, I concentrate on sentences with two object arguments. The canonical order of the two verbal arguments in Russian double object constructions is quite controversial. The most detailed syntactic study on this matter originates from Bailyn (1995) who proposed that direct objects in Russian are preceding indirect ones. However, a large number of linguists working on Russian syntax disagree with Bailyn’s proposal and but claim that the canonical order in Russian DOCs is IO<DO (e.g., Junghanns and Zybatow 1997, Dyakonova 2005, 2009, Slioussar 2007). Dyakonova (2009) for instance presents a number of arguments which provide evidence for the assumption that the basic order in Russian DOCs is IO<DO, rather than DO<IO. Her first argument relates to the principles of focus projection. As also pointed out by Reinhart (2003), focus may only project to the entire clause if the focus constituent is in its base position. As will be shown in Section 4.3.2, foci in Russian are typically associated with the clause-final position, i.e., any constituent which appears clause-finally may be interpreted as focus. This implies that if the underlying order of Russian DOCs would be DO<IO as proposed by Bailyn (1995), it should be possible to project focus from a clause-final indirect object to the whole clause. However, as illustrated by the examples in (133), focus projection in Russian DOCs is only felicitous from clause-final direct objects, but not from indirect objects.

- (133) a. Context: ‘What did she buy for Sergey?’ /
 ‘What did she do?’ / ‘What’s new?’
Nastja kupila Sergeyu mashinu.
 Nastja buy:PFV.PST.3.SG.F Sergey:DAT car:ACC
 ‘Nastya bought Sergey a car.’
- b. Context: ‘Who did she bought the car for?’ /
 ‘*What did she do?’ / ‘*What’s new?’
Nastja kupila mashinu Sergeyu.
 ‘Nastya bought a/the car for Sergey.’ (Dyakonova 2005: 1)

The example in (133b) shows that the DO<IO order is only felicitous with a narrow focus on the indirect object. However, according to Dyakonova the

sentence in (133a) with the IO<DO order also allows a broad focus reading, which provides evidence to assume that this is the canonical order in Russian DOCs.

The hypothesis that IO<DO is the basic linearization is also supported by evidence from VP-topicalization. Topicalization is a very common constituency test and is used to identify the constituents of a sentence. According to Bailyn's proposal it should be unproblematic to topicalize a verb together with the indirect object. However, as demonstrated by the examples below, the VP-topicalization of a verb and its indirect object is not felicitous in Russian, see (134).

- (134) a. [*Chitat detyam skazki*]_i *roditeli ochen lyubyat t_i*.
 read:INF kids:DAT tales:ACC parents:NOM very like
 'Parents like to read tales to their kids very much.'
 b. [*Chitat skazki*]_i *roditeli detyam ochen lyubyat t_i*.
 c. ??/* [*Chitat detyam*]_i *roditeli skazki ochen lyubyat t_i*.
 (Dyakonova 2009: 44)

In the example in (134a) the whole V-IO-DO sequence is felicitously topicalized. (134b) presents an example of VP-topicalization: the verb (*chitat*) and the DO (*skazki*) are moved to the beginning of the sentence. However, as illustrated by the example in (134c), VP-topicalization in Russian is only possible with DOs, but not with IOs, which implies that the verb and the indirect object do not form a constituent on its own (Dyakonova 2009: 45).

Another argument in favor of the analysis that the indirect object is in a hierarchical higher position than the DO arises from idioms. Dyakonova's argumentation is based on the work by Marantz (1984) who discusses the influence of the syntactic structure on the formation of lexical units. The results of his study showed that arguments which immediately follow the verb are more likely to form an idiom with the verb than arguments which are realized in a larger distance to the verb. According to King's proposal, it should be easy to find Russian idioms composed of a verb and an indirect object. However, Dyakonova's analysis of a sample of 600 Russian idioms (taken from Shansky and Bystrova 1975) did not reveal any incidence of an idiom comprising of a verb and an indirect object with the exclusion of a direct object. Sticking to the claim by Marantz (1984) that idiom-formation is syntactically restricted to the lexical VP, Dyakonova's analysis thus provides further evidence to believe that the indirect object in Russian is not part of the lexical verb, but rather realized in a position outside the VP. Consider for instance the idiom in (135).

- (135) *Sasha stroit devushkam glazki.*
 Sasha make:3.SG.M girls:DAT eye:PL.ACC
 ‘Sasha flirts with (the) girls.’ (Bailyn 2010: 22)

In sum, all of the aforementioned arguments contradict Bailyn’s proposal that DO<IO is the underlying word order in Russian DOCs, but rather provide evidence to assume that the opposite is the case.

4.3.2 Word order and information structure

The previous section discussed the basic word order in Russian. It was shown that the underlying word order of Russian transitives is considered to be SVO. However, as illustrated by the examples in (128) (cf. Section 4.3.1), word order in Russian is very flexible and sensitive to information structure. Similar to Turkish, the order of arguments in Russian generally follows the *Given-before-new principle* (Gundel 1988), i.e., given information is typically realized at the left-periphery of the sentence, while new information typically occurs at the right periphery of the sentence. Compare for instance the examples in (136).

- (136) a. *Programmist kupil kofevarku.*
 programmer break:PFV.PST.3.SG.M coffee.machine:ACC
 ‘The programmer broke the coffee machine.’
 b. *Kofevarku kupil programmist.*
 ‘The coffee machine was broken by the programmer.’
 (Slioussar 2007: 2)

The two sentences in (136) are both equally grammatical. However, they cannot be used in the same way, but are restricted to particular discourse contexts. The sentence in (136b) with the sentence-initial object (*kofevarku* ‘coffee machine’) and the subject (*programmist* ‘programmer’) at the right edge of the sentence is only felicitous in a context in which the object is given and the subject is new information, e.g., as an answer to the question ‘Who broke the coffee machine?’. On the other hand, the sentence in (136a) with the canonical SVO order can be used in a much wider range of discourse contexts, e.g., as an answer to an *all-new* question like ‘What happened?’ or in a context where the subject is given and the object is new information (Slioussar 2007).

The examples in (136) show that topics in Russian typically occur at the left-periphery of the sentence, whereas foci typically occur at the right-periphery. However, as will be shown in the following subsections, this is not necessarily the case.

4.3.2.1 Focus and word order

Russian foci very typically occur at the right periphery of a sentence (e.g., King 1995, Junghanns and Zybatow 1997, Brun 2001). Consider for instance the examples in (137). The context question in (137a) triggers a subject focus, which leads to an answer with the subject ('Anna') being realized clause-finally. The question in (137b) evokes a focus on the indirect object and thus triggers an answer with the indirect object ('Kate') occurring at the right edge of the sentence. Finally, the question in (137c) triggers a direct object focus, which leads to an answer with the direct object (*knigu* 'book') at the right periphery.

(137) a. Context: 'Who gave a book to Kate?'

Kate knigu dala [ANJA]_{FOC}.
Kate:DAT book:ACC give:PFV.PST.3.SG.F Anna

'ANNA gave a book to Kate.'

b. Context: 'Who did Anna give a book to?'

Anja knigu dala [KATE]_{FOC}.
'Anna gave a book to KATE.'

c. Context: 'What did Anna give to Kate?'

Anja dala Kate [KNIGU]_{FOC}.
'Anna gave a BOOK to Kate.' (Neeleman and Titov 2009: 515)

The examples in (137) provide evidence to assume that Russian has a clause-final focus position. However, many authors assume that this correlation does only hold for non-identificational foci, whereas the position of identificational foci is considered to be more flexible (e.g., King 1995, Junghanns and Zybatow 1997, Mehlhorn 2004). Consider for instance the examples in (138) which show that a contrastive subject focus may occur in the beginning of the sentence (138a), immediately preverbally (138b) or postverbally (138c).

- (138) Context: ‘Did Ljuda leave for Yalta yet?’
- a. [*Miroslava*]_{FOC} *uexala* v *Yaltu*.
 Miroslava leave:PFV.PST.3.SG.F to Yalta:ACC
 ‘It’s Miroslava who left for Yalta.’
- b. *V Yaltu* [*Miroslava*]_{FOC} *uexala*.
- c. *V Yaltu uexala* [*Miroslava*]_{FOC}. (Mehlhorn 2004: 244)

Though many authors claim that fronted foci in Russian encode contrast (e.g., King 1995, Junghanns and Zybatow 1997, Mehlhorn 2004), Dyakonova (2009) provides evidence that neither the middle field nor the left-peripheral focus is necessarily associated with exhaustivity or contrast, but can also have a non-exhaustive and/or non-contrastive reading (cf. Section 5.3.2.1.2).

In a nutshell, the examples presented in this subsection show that the position of foci in Russian seems to be flexible. Though Russian foci often occur at the right-periphery of a sentence, they may also occur in other positions of the clause.

4.3.2.2 Topic and word order

Russian distinguishes two types of topics: internal and external topics (e.g., King 1995, Bailyn 1995, Junghanns and Zybatow 1997). The sentence in (139) is an example for internal topicalization (also referred to as left-edge topicalization). The topicalized object (*èkzamenov* ‘exams’) is moved to the sentence-initial position and leaves a trace in the remainder of the clause.

- (139) [*Èkzamenov_i*]_{TOP} *Zoja boitsja* *t_i*.
 exams:PL.GEN Zoya fear:3.SG.M
 ‘Zoya is scared of exams.’ (Bailyn 2012: 268)

By contrast to internal topics, external topics are hanging topics (140). The example in (140) shows that the direct object is left-adjoined and prosodically separated from the rest of the clause, which contains a resumptive pronoun (*ix* ‘them’). By contrast to left-dislocations, hanging topics do not require case matching. Consider the example in (140), which shows that the resumptive pronoun bears genitive case, while the direct object is in nominative case. This provides evidence to assume that hanging topics are base-generated, whereas left-dislocation is a movement process, i.e., the topicalized constituent is case-marked in its base position and then fronted to the sentence-initial position (Bailyn 2012: 269).

4.4 Final comparison

This chapter was concerned with the interaction of information structure and word order in Turkish and Russian. It was shown that Turkish and Russian differ with respect to their basic word orders. The differences in the basic word order are related to the different structure of the Turkish and Russian verb phrase. Whereas the Turkish VP is head-final (i.e., the verb follows its complement), Russian has a head-initial VP (i.e., the verb is preceding its complement). Moreover, it was argued that Turkish and Russian differ with regard to their informational structural possibilities. The main findings regarding the linear arrangement of topics and foci in both languages can be summarized as follows:

- (i) Turkish:
 - (a) Foci typically occur immediately preverbally. However, they may occur in other positions within the preverbal domain, but not in the postverbal domain.
 - (b) Topics typically occur sentence-initially. However, they may also occur in other positions (e.g., not in the very beginning of a sentence or - provided that they have been already established in the discourse - postverbally).
- (ii) Russian:
 - (a) Foci typically occur clause-finally. However, they may occur in other positions of the sentence (i.e., sentence-initially or in the middle field).
 - (b) Topics typically occur sentence-initially, but may also occur in other positions of the sentence.

Taking everything into consideration, it can be concluded that the information structural possibilities of the two languages differ with regard to two major properties: Firstly, whereas foci in Russian can occur in any position of the clause, Turkish foci are restricted to the preverbal field and may not occur in the postverbal area. Secondly, whereas topics in Turkish may not intervene between the focus and the verb, topics in Russian typically occur in a position preceding the verb.

Chapter 5

Syntactic approaches to information structure

5.1 Introduction

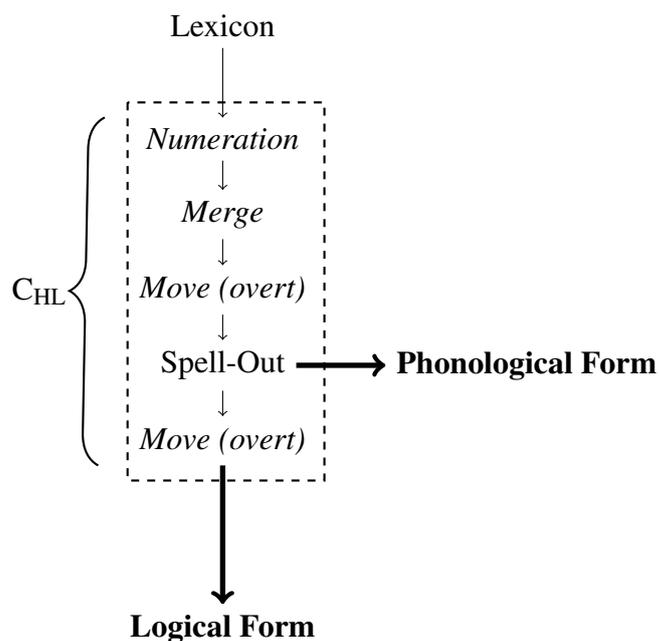
Within the previous chapter it was shown that Turkish and Russian differ with respect to their information structural possibilities. This chapter aims to provide an overview of different syntactic approaches to word order and information structure in the two languages. The syntactic approaches presented in the following are primarily based on the generative framework of the Minimalist Program and the Derivation by Phase, which will be briefly introduced in Section 5.2. Section 5.3 reviews the most relevant approaches on the correlation of syntax and information structure in Turkish and Russian. Section 5.4 summarizes the differences between the two languages and presents a simplified syntactic approach that illustrates the differences between Turkish and Russian information structure. Section 5.5 finally presents a summary and the conclusions.

5.2 Some notes on the generative framework

5.2.1 The Minimalist Program

The Minimalist Program (Chomsky 1995, 2001, 2004, 2008) is fundamentally based on the Government- and Binding (GB) Theory (Chomsky 1981). However, while GB assumes four relevant levels of representation (D-Structure (DS), S-Structure (SS), Phonetic Form (PF) and Logical Form (LF)), the Minimalist Program claims that only the interface levels (i.e., PF and LF) are conceptually required, see the illustration in (142).

(142)



Chomsky (1995) claims that the computational system of human language (C_{HL}), which is considered to be invariant across languages, derives LF and PF. As illustrated in (142), the derivation does not directly access the lexicon but only a subset of the lexicon, the *Numeration*. The derivation is assumed to split at *Spell-Out*, which sends one copy of the derivation to PF and another copy to LF. After *Spell-Out*, the derivation proceeds covertly. Hence, further syntactic operations may take place. However, as PF and LF are not related to each other, these changes proceed invisibly and do not affect PF. Thus, any movement that takes place after *Spell-Out* does not influence the phonological form of the structure.

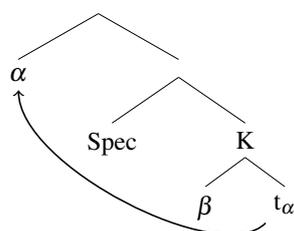
In the Minimalist Program syntactic structures are considered to be built by combining elements from the *Numeration* via two operations: *Merge* and *Move*.¹ According to Chomsky (1995), the operation *Merge* has two crucial properties: (i) It is a binary operation (i.e., it always combines two elements into one larger constituent); (ii) It is recursive (i.e., the output of *Merge* may be subject to another *Merge* operation). Chomsky (1995) proposes that *Merge* can affect two types of syntactic objects: (i) lexical items and (ii) objects of the type $K = \{\gamma, \{\alpha, \beta\}\}$, where α, β are objects and γ is the label of K (Chomsky 2014: 224).

The second structure building operation is called *Move* (also: *internal Merge*). The operation *Move* is considered to form chains of the type following type $CH = \{\alpha, t(\alpha)\}$ where α is the element that moves and t the trace

¹In Chomsky (2004) the relevant operations are referred to as *external Merge* (EM) and *internal Merge* (IM).

that the element leaves behind. Consider for instance the illustration in (143).

(143)



In MP all lexical items are considered to be bundles of formal, semantic and phonological features, some of them being intrinsic (i.e., part of the lexical entry) and others optional (i.e., they are added to the items when entering the Numeration). However, only certain formal features (henceforth: F-features) are *interpretable* at LF (e.g., categorial features and ϕ -features of nouns), while others are *uninterpretable* and must be eliminated for convergence (e.g., case features of nouns or ϕ -features of verbs).

According to Chomsky (1995) the operation Move has to meet several conditions, such as *C-Command*² or the principle of *Last Resort*, which demonstrate that the operation is driven by feature checking, see the definitions in (144) and (145).

(144) C-Command Condition:

H(K) attracts α only if H(K) c-commands α . (Chomsky 1995: 253)

(145) Last Resort:

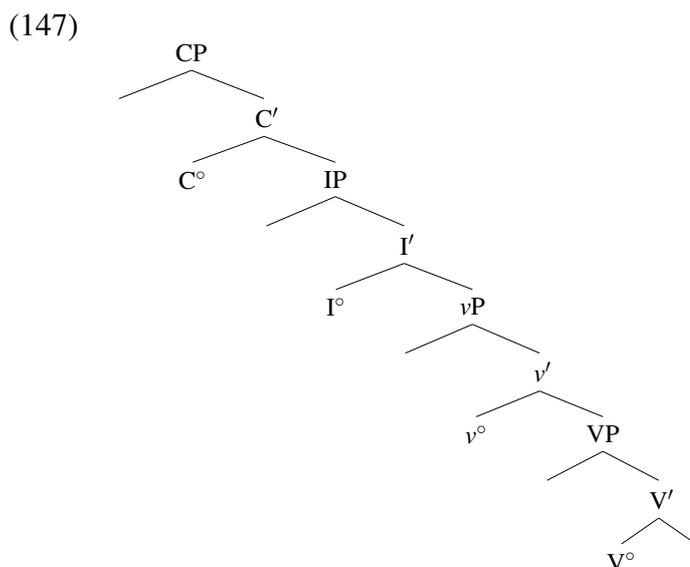
H(K) attracts α only if α enters into a checking relation with a sublabel of K. (Chomsky 1995: 280)

According to Chomsky (1995: 297) “Move concatenates α and K if H(K) attracts α ”. Following the principle of Last Resort, an element can only move to a target if the F-feature of this element enters a checking relation with the uninterpretable F-feature of the target. Since only uninterpretable F-features need to be checked, Chomsky assumes that Move does not affect the lexical item itself but only its F-features. However, he proposes that in overt movement (which takes place before Spell-Out) the remaining features are moved along with the formal features in order to ensure its interpretability at PF. Moreover, Chomsky (1995: 296) claims that Move is subject to the general conditions of economy, such as the *Minimal Link Condition* (MLC), see (146).

²C-Command: “ α c-commands β iff every maximal projection dominating α dominates β .” (Chomsky 1986: 8)

- (146) Minimal Link Condition:
 H(K) attracts α only if there is no β , β closer to H(K) than α , such
 that H(K) attracts β . (Chomsky 1995: 311)

According to Chomsky (1995), properties of lexical items can be projected to a maximal projection whose head is the lexical item itself. On top of a maximal projection further projections can be built. Consider the structure in (147).



As demonstrated by (147), the derivation of a sentence always starts from the lexical domain, i.e., with a verb phrase (VP). From the VP the derivation proceeds to the inflectional domain and from there it goes on to the complementizer domain. The complementizer phrase (CP) is the domain where the sentence type (e.g., relative clause, embedded sentence, question etc.) is encoded. However, the CP is also the domain where the pragmatic interpretation is encoded and thus the most relevant domain with regard to information structural notions.

5.2.2 Derivation by Phase

Chomsky (2001) (cf. also Chomsky 2004, Chomsky 2008) claims that derivations proceed by *phases*. He argues that the maximal projections *vP* and CP are phases in the derivation and proposes that the complements of the phase heads are sent off to Spell-Out directly once a phase is completed. The derivation by phase hence allows Spell-Out at several points in the derivation. According to the derivation by phase, only elements at the edge of a phase remain visible after the completion of a phase, while all other elements are no longer accessible.

According to Chomsky (2001), phase heads bear two types of features: Agree- (i.e., ϕ -features) and Edge-features (EFs), which allow them to move to the edge of a phase. Chomsky proposes that not only lexical items, but also the phase heads of the maximal projections (i.e., v and C) have an Edge Feature. However, these Edge Features differ from the Edge Features of lexical items since the former are assumed to attract constituents in the clause to their specifiers. Moreover, Chomsky assumes that the derivation can only proceed, if the phase is legible at both interfaces. If not, the derivation stops.

According to Chomsky (2008: 140) the operation Move is either triggered by *Agreement*³ or in order to solve discourse interpretational effects. Furthermore, he distinguishes two types of movement: A-movement (movement into an argument position) and A'-movement (movement into a non-argument position). According to the Derivation by Phase. A-movements are triggered by Agree features while A'-movements (e.g., *wh*-movement; Topicalization/Focus movement) are induced by Edge Features (Chomsky 2008: 151).

5.2.3 Summary

This section presented a brief overview about the Minimalist Program and the Derivation by Phase and in particular discussed the operation Move. It was shown that there are two types of movement which vary with regard to the respective landing position: A-movement (=movement into an argument position) and A'-movement (=movement into a non-argument position). Whereas A-movement is triggered by Agree features, A'-movement is always triggered by Edge features. According to the Derivation by Phase, A'-movement is optional and only occurs if the operation has an effect on the outcome. Thus, A'-movement typically yields interpretational effects.

5.3 Overview of previous approaches

5.3.1 Classification

Syntactic approaches to information structure are usually divided into two categories: Cartographic and non-cartographic approaches. The former attempt to map syntactic configurations as detailed and accurately as possible (Cinque and Rizzi 2008: 66). According to Cinque and Rizzi (2008), the

³In MP an Agree relation is initiated by a head (the probe) that probes down in the already existing derivation in order to find an element (the goal) that shares exactly the feature that the probe is looking for.

fundamental idea of such an approach is to assume that all languages have the same functional categories and share the same principles of phrase and clause composition. To be more precise, a cartographic approach is based on the idea that the hierarchy of functional projections is universal with regard to (i) the type of heads and specifiers they involve, (ii) their number and (iii) their relative order (cf. Rizzi 1997, Cinque 1999, Cinque and Rizzi 2008). The cartographic approach became particularly famous by the work of Rizzi (1997). In his influential work he focuses on the mapping between syntax and information structure (topic/focus) in Italian. Rizzi claims that a discourse interpretation is realized as a functional projection (either topic (TopP) or focus projection (FocP)) in the left periphery of the sentence, i.e., in the extended CP domain. Consider Rizzi's split CP approach presented in (148)⁴.

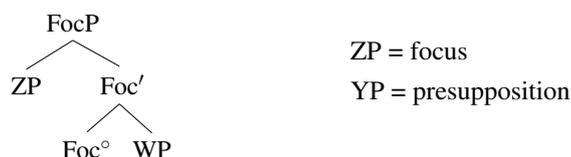
(148) $[_{\text{ForceP}} \text{Force}^\circ [_{\text{TopP}^*} \text{Top}^\circ [_{\text{FocP}} \text{Foc}^\circ [_{\text{TopP}^*} \text{Top}^\circ [_{\text{FinP}} \text{Fin}^\circ [_{\text{IP}}]]]]]]]]$

Rizzi's approach is embedded in the framework of the Minimalist Program, according to which movement to a specifier position is triggered by the features of the head (cf. also Section 5.2.1). In order to receive a discourse interpretation, the topic or focus constituent has to check the feature of the respective projection head and move into the specifier of that projection. According to Rizzi (1997: 286f.), a Top Head consequently takes the topic as its specifier and the comment as its complement, while the Foc Head takes the focus as its specifier and the presupposition as its complement. Consider the structure of the TopP and FocP in (149) and (150).

(149)



(150)



Rizzi (1997) assumes that the head of a TopP/FocP has an uninterpretable feature which probes down in order to find an element that matches with this feature (i.e., goal). If the features of the probe and the goal agree, the goal moves into the specifier of the projection. As illustrated by the structure in

⁴The asterik (*) indicates that the node is recursive.

(148), Rizzi assumes that topics are recursive and can precede or follow the focus. Whereas he assumes that a sentence can have more than one topic, he argues that there can be only one focus. However, his approach does not predict any fixed order between the focus and the topic, since both topic projections are optional. Hence, the approach allows structures with the focus either preceding, following or even occurring in between two topic constituents. Arguments against Rizzi's approach come among others from Benincá (2001) (see also Benincá and Poletto 2004) who claim that topics must obligatory c-command the focus. They argue against the recursion of the TopP and propose that all projections lower than the FocP have the syntactic characteristics of focus elements. Hence, the lower topic position is not considered as a topic at all, but rather as an extension of the focus field (Benincá and Poletto 2004: 54). Consider the fixed order of topics and foci in the CP layer as proposed by Benincá and Poletto (2004) in (151).

(151) [TopP [FocP [IP]]]

The approach by Benincá and Poletto (2004) can explain the fact that in many languages topics obligatory precede foci (cf. for instance Bródy 1990, Horvath 1995, Kiss 2007 on Hungarian). However, the approach obviously fails to explain the fact that there exist a number languages, in which foci may felicitously precede topics (cf. Neeleman and van de Koot 2008).

According to Neeleman and van de Koot (2008) there are in principle two ways to implement this variation into a cartographic approach. The first option is to postulate an approach, which allows the topic and focus projections to freely merge anywhere in the syntactic structure. However, such an approach apparently contradicts the core tenets of cartography (see e.g., Rizzi 1997, Benincá 2001, Benincá and Poletto 2004) according to which there exists a one-to-one correspondence between the syntactic position and the interpretive effect (cf. Neeleman and van de Koot 2008). The second option is to adopt a multitude of topic and focus projections at regular intervals in the syntactic structure (e.g., at the Edge of phases). The disadvantage of such an approach, is that it cannot account for the felicitousness of *in situ* topics and foci, because all topics and foci are required to undergo obligatory movement in order to receive their discourse interpretations (cf. also van Craenenbroeck 2009).

Hence, Neeleman and van de Koot (2008) postulated an alternative approach, according to which topic and focus movements are licensed in order

to match so-called mapping-rules that relate particular syntactic representations with particular aspects of information structure. According to these mapping-rules topic and focus movement does not take place in order to mark the discourse functions of the moved elements, but rather to indicate their comments and background (Neeleman and van de Koot 2008: 143f.). Moreover, the mapping rules make several predictions about the order topics and foci. Consider for instance the structures in (152). Whereas the structure in (152b) is ruled-out, since topic-comment structures cannot be embedded in a background (see e.g., Prince 1981, Reinhart 1981, 1985, Vallduví 1992, Lambrecht 1994), the structure in (152a) with the focus-background structure being a part of the comment is felicitous (Neeleman and van de Koot 2008: 148).

- (152) a. topic*⁵ [COMMENT FOCUS [BACKGROUND ...]]
 b. *FOCUS [BACKGROUND topic [COMMENT ...]]

However, it is crucial that the restrictions in (152) only apply when movement takes place. The core predictions of Neeleman and van de Koot's proposal are summarized in (153).

- (153) (i) The order of *in-situ* topics and foci is free.
 (ii) Moved topics can move out of a constituent containing a focus (whether *in-situ* or not).
 (iii) Moved foci cannot move out of a constituent containing a topic (whether *in-situ* or not).

(Neeleman and van de Koot 2008: 146)

Whereas cartographic approaches are based on the assumption that there exist designated structural positions where constituents have to move to in order to receive their respective discourse interpretation, a wide range of approaches argue against the existence of particular positions for information structural notions. For convenience, I refer to these approaches as non-cartographic approaches. Non-cartographic approaches generally contradict the assumption that there are structural topic (TopP) or focus (FocP) positions, but rather claim that topic or focus constituents may move or be adjoined (in)to any syntactic position, provided that in the end the linear topic<focus order is achieved.

The majority of non-cartographic approaches are feature-based. They assume that topics and foci receive a specific IS-feature (e.g., [+Top] or

⁵The asterik (*) indicates that there can be multiple topics.

[+Foc]) within the course of the derivation and that movement and adjunction take place in order to derive the linear topic<focus order. However, not all non-cartographic approaches are feature-based. Slioussar (2007) for instance provides an analysis on Russian information structure which is not feature-based, but configurational. She assumes that discourse relations are neither encoded by means of IS-features nor by a fixed syntactic position, but rather by the relations between the constituents in a sentence (cf. Section 5.3.2.2.4).

5.3.2 Approaches to Russian IS

This section provides an overview of some of the major syntactic approaches to Russian information structure. The majority of the existing analyses explicitly reject the idea of designated structural positions for information structural notions and are thus of non-cartographic nature (e.g. Bailyn 1995, Kondrashova 1996, Junghanns and Zybatow 1997, Slioussar 2007). Nevertheless, there exist two major structural analyses to Russian information structure which argue for the existence of designed focus and topic positions in the left-periphery of Russian (King 1995, Dyakonova 2009). In the following I am going to provide a brief overview of the aforementioned analyses.

5.3.2.1 Cartographic approaches

5.3.2.1.1 King (1995)

King (1995) developed an approach to Russian information structure which is very close to Rizzi's cartographic approach. She assumes that Russian word order is a direct reflection of the phrase structure and that Russian has fixed structural positions for topics and contrastive foci where constituents have to move to in order to get their discourse interpretation (King 1995: 3). However, by contrast to Rizzi (1997), King does not propose that the discourse interpretations are realized as functional projections (FocP or TopP), but that the existing structural positions are associated with particular information structural interpretations.

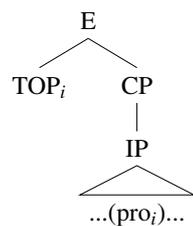
In order to understand King's proposal it is important to note that her analysis is based on the assumption that the underlying phrase structure of Russian is VSO. She assumes that the subject is base-generated in [Spec, VP], while the tensed verb occurs in I° , from which it assigns case to the subject. King proposes that the subject remains in [Spec, VP], unless it moves into a particular discourse function position. Hence, only discourse

neutral subjects occur within the VP, while topicalized and focused subjects have to move out of the VP (King 1995: 65).

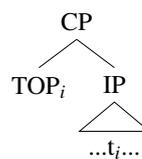
King claims that there are two different structural topic positions in the phrase structure of Russian. Whereas external topics are considered as left-dislocations that occur outside the CP, she considers internal topics as arguments of the verb, which are left-adjoined to IP. Compare the structures in (154).

(154)

(a) External topics



(b) Internal topics



Furthermore, King proposes a difference between non-contrastive (in her terminology: *simple*) and contrastive instances of focus. Assuming that contrastive foci in Russian typically occur in preverbal position, she claims that contrastive foci undergo obligatory movement to [Spec, IP] (King 1995: 110).⁶

Whereas King assumes that contrastive foci are structurally marked, she suggests that non-contrastive foci are not licensed by a particular phrase structure position, but are marked by a falling tone which falls on the right edge of the focused constituent (King 1995: 133). She assumes that all non-contrastive foci are represented by a formal feature [+F] which appears on a phrase structure node over which it has scope. Hence, subjects that are in the scope of focus have to be right-adjoined to the VP. Consider the example and its derivation in (155).

(155) a. Context: Who bought a dress?

Kupila *platje* [*Inna*]_{FOC}.
buy:PFV.PST.3.SG.F dress:ACC Inna

‘Inna bought a dress.’

(King 1995: 132)

⁶King is aware of the fact that contrastive foci in Russian may not only occur immediately preverbally, but also in other positions. However, she claims that “the contrastive focus nature of SpecIP makes movement of [contrastive] foci to this position optimal” (King 1995: 111).

- (158) a. *Ja dumaju, chto Mashu chasto tseluet Ivan.*
 I think:1.SG that Masha:ACC often kiss:3.SG.M Ivan
 ‘I think that Ivan often kisses Masha.’
 b. **Ja dumaju, chto Mashu tseluet chasto Ivan.*

(Titov 2013: 175f.)

5.3.2.1.2 Dyakonova (2009)

A more recent cartographic approach to Russian information structure arises from Dyakonova (2009). Following the lines of Rizzi (1997), Dyakonova proposes that topics and foci are structurally encoded in the syntax of Russian. Similar to Rizzi she claims that several positions within the left periphery of the Russian clause can be targeted by topicalization. However, Dyakonova proposes that these positions are not freely recursive in Russian. She argues that Russian has three topicalization landing sites, which occur in the following order: FrameP > TopP > topP. According to Dyakonova’s approach, aboutness topics (in her terminology: *strong topics*) may only occur in TopP which can be either filled by an overt constituent or by an implicit event argument. Weak topics (i.e., discourse anaphoric constituents) on the other hand are assumed to be hosted by freely generated topPs, while frame-setting adverbials are assumed to be hosted by a distinctive frame projection (FrameP) (Dyakonova 2009: 140). Consider the structure of the Russian CP in (159).

- (159) [_{ForceP} Force[°] [_{FrameP} Frame[°] [_{InterP} Inter[°] [_{TopP} Top[°] [_{topP} top[°] [_{FocP} Foc[°] [_{topP} top[°] [_{FinP} Fin[°]]]]]]]]]]]]]]

According to Dyakonova weak topics (which carry the [+D] feature) differ from other IS-constituents in that they can iterate within the same domain and are not restricted to the Edge of the phase (Dyakonova 2009: 245). Furthermore, she claims that Russian has two functional projections for focused constituents (FocP). She proposes that the clause-final focus is located within the vP Edge (160), while the other FocP is located higher within the CP Edge (159) (Dyakonova 2009: 245).

- (160) [_{topP} top[°] [_{FocP} Foc[°] [vP]]]

Dyakonova maintains that both focus positions encode new information and that the contrastive and/or exhaustive interpretation that is associated with the focus in the high FocP arises from the propositional nature of the CP phase (Dyakonova 2009: 247).

5.3.2.2 Non-cartographic approaches

5.3.2.2.1 Bailyn (1995)

Bailyn (1995) rejects the idea that Russian has specific structural positions for topic and focus constituents but claims that information structural relations are encoded at a unique level of representation (Functional Form (FF)), which he considers as an interface between linguistic and non-linguistic systems (Bailyn 2012: 320). Bailyn proposes that all languages must encode FF relations and that languages differ with regard to which relations are grammatically encoded in their surface structure. He claims that the word order derivation in Russian results from specific FF-related rules. By contrast to other languages, like English for instance, in which these rules apply covertly, the FF rules in Russian have to apply before Spell-out.

According to Bailyn's proposal, topic (in his terminology: *theme*) and focus features are assigned to all constituents of a sentence. He assumes that all arguments that are not marked as focus, automatically receive a topic feature and are adjoined to TP/CP. Focused constituents on the other hand either receive the feature [+F] or the feature [+SF] (=stress focus). While non-contrastive foci carry the feature [+F] and are adjoined to *v*P, contrastive focus can be assigned to any arguments that are bearing the [+SF] feature.

5.3.2.2.2 Kondrashova (1996)

Similar to Bailyn (1995), Kondrashova (1996) assumes that information structural relations are encoded at a specific level of representation, which she calls I-Structure. The main function of the I-Structure is to distinguish between new and given information. Kondrashova assumes that new information is marked with the focus feature [+F], while given information is marked with the topic feature [+T]. Moreover, she formulates two principles that apply at I-structure, see (161). She proposes that the I-Structure is affected by economy principles and argues that only the derivation, which has the minimal number of covert movements and meets the principles in (161) is felicitous while all other derivations crash.

- (161) a. *Discrimination Principle:*
At I-Structure, every element must be F- or T-marked.
- b. *Alignment Principle:*
At I-Structure, T-marked elements must precede F-marked elements .

(Kondrashova 1996)

According to Kondrashova, Russian exhibits two types of Scrambling: F(ocus)-Scrambling and N(eutral)-Scrambling. F-Scrambling refers to the movement of F-marked constituents and is used in order to avoid ambiguity resulting from focus projection. It is thus optional and occurs to disambiguate I-structures. N-Scrambling on the other hand refers to the movement of topic constituents. It is obligatory and occurs in order to satisfy the Alignment principle.

5.3.2.2.3 Junghanns and Zybatow (1997)

Junghanns and Zybatow (1997) propose that overt movement in Russian is derived by information structural requirements. However, by contrast to King (1995) who claimed that Russian has obligatory overt verb raising (cf. section 5.3.2.1.1), Junghanns and Zybatow propose that Russian has only weak grammatical features and that all arguments of the verb as well as the verb itself only move out of their base positions in order to fulfill information structural requirements. With regard to non-contrastive foci they agree with King and propose that narrowly focused subjects have to undergo rightward movement in order to adjoin the VP. However, by contrast to King, they assume that the verb stays in its base position. Moreover, Junghanns and Zybatow claim that contrastive foci in Russian are not fixed to any particular position, but that they are assigned a syntactic feature [+CF] and may occur either *in situ* or in a derived position.

5.3.2.2.4 Slioussar (2007)

Slioussar's approach to Russian information structure differs from the other non-cartographic approaches in that it is not feature-based, but configurational. She assumes that discourse relations are neither encoded by means of IS-features such as [+F] or [+T] nor by a fixed syntactic position, but rather by the relations between the constituents in a sentence. By contrast to the feature-based approaches, which propose that the notions of topics and foci are encoded in the grammar, Slioussar does not assume that Russian word order variation results from the syntactic encoding of topic and focus, but from relative accessibility and salience (subsuming contrast emphasis). Consider Slioussar's (2007: 44) interface rule for Russian Scrambling in (162).

- (162) If X is (re)merged above Y, the discourse entity corresponding to X is at least as accessible and at most as salient as the one corresponding to Y. If there are no independent reasons to remerge X above Y,

the discourse entity corresponding to X is more accessible and less salient than the one corresponding to Y.

From a theoretical point of view, Slioussar's model is largely based on Chomsky's Derivation by Phase (cf. Section 5.2.2). Following Chomsky, Slioussar argues that syntactic reordering in Russian is derived by movement that is triggered by edge features (EFs). Moreover, she assumes that any element can move into the specifier of the phase-heads, as long as the IS-interpretation at the interfaces is correct.

Though Slioussar's IS-model is primarily based on the Derivation by Phase, it also contains a number of modifications. One of the major modifications relates to the 'right position' for a certain IS interpretation. Whereas Chomsky (2008) proposes that elements move into a specific position in the syntactic hierarchy in order to receive their discourse interpretation, Slioussar rejects the existence of fixed IS-positions but argues that the right position for a certain information-structural interpretation is configurational, i.e., relative to other elements. Another modification of Slioussar's model concerns the relation between Merge and Agree. Whereas Chomsky (2008) postulates that Merge and Agree are two independent operations, Slioussar assumes that internal Merge (i.e., movement) and agreement may not be separated. By contrast to Chomsky, she postulates that free internal Merge does only apply to IS-related movements, while non-IS-related movements are launched by Agree features. She argues that agreement is a necessary prerequisite for all non-IS-related movements and that all interpretational effects result from agreement in these cases. Moreover, she proposes that IS-related movement produces interpretational effects according to the interface rule in (162). A third modification of Slioussar's approach relates to the heads that are targeted by internal Merge. Chomsky (2008) argues that only phase heads (C and ν) and the heads of their complements (T and V) can trigger internal Merge. However, Slioussar shows that Russian allows IS-related reorderings of internal arguments inside the VP as well as IS-related reorderings of lower adverbs that are merged between ν and T.

Evidence against Slioussar's configurational IS-model arises, among others, from Dyakonova (2009) (cf. Section 5.3.2.1.2). In a similar way as Slioussar (2007) she considers accessibility as a possible trigger for Scrambling. However, while Slioussar proposes that Russian word order variation solely results from relative accessibility and salience and not from the syntactic encoding of topic and focus, Dyakonova claims that accessibility does

not replace, but rather complements the notions of topic and focus. Moreover, she criticizes that Slioussar's IS-approach particularly struggles with contrastive topics which she assumes to typically occur in sentence-initial position. Consider for instance the example in (163).

- (163) Context: 'How did your boss reward your department for the good performance?'

Nachal'niku ot dela *Sergej Sergeevich*
 head:GEN department:GEN Sergey Sergeevich
podpisal *prodvizhenie* *a* *ostal'ny* *on*
 sign:PVF.PST.3.SG.M promotion:ACC and rest:DAT.PL he
naznachil *premi.*
 award.PVF.PST.3.SG.M bonus:ACC.PL

'Sergej Sergeevich signed the promotion for the Department Head and gave bonuses to the rest.' (Dyakonova 2009: 109)

According to Slioussar's interface rule for Scrambling in (162), the constituent at the right-edge of the sentence is interpreted as the most salient one, whereas the constituent at the left-edge of the sentence is interpreted as the most accessible. Referring to the example in (163) this would imply that the IOs (*nachal'niku ot dela* 'Department Head' and *ostal'ny* 'the rest') are interpreted as more accessible or, respectively, less salient than the subject (*Sergej Sergeevich*). However, the context does not support this interpretation, because it predicts a higher accessibility of the NP coreferring to 'the boss' than of entities referring to the 'department'.

Moreover, Dyakonova argues that Slioussar's IS model lacks to explain the occurrence of fronted foci. In order to account for such instances which violate the IS-Ordering Rule (*topic* < *discourse neutral material (DNM)* < *focus*), Dyakonova (2009: 176) proposes a Scrambling Rule which is based on the concept of D(iscourse)-linking, see (164).

- (164) Scrambling Rule:
 A D-linked constituent should be preposed to a position in the pre-verbal area.

With the Scrambling Rule in (164), Dyakonova provides an explanation for the fact that Russian allows focus fronting, although it violates the common IS-Ordering Rule. She argues that the position of the fronted focus is related to its degree of D-linking and assumes that left-peripheral foci require a much stronger link to the preceding discourse than middle field foci. In particular, she proposes that in sentences with a left-peripheral focus not only

the focused constituent itself, but the whole proposition should be anchored in the preceding discourse, by at least sharing the same topic (Dyakonova 2009: 76). Consider the examples in (165).

(165) Context: ‘Masha’s sister studies at the university.’

a. *Net! [V shkolu]_i ona yeshche khodit t_i.*

no to school:ACC she still go:PRS.3.SG

‘No! She still goes to SCHOOL.’

b. **[V shkolu]_i yeye brat khodit t_i.*

to school:ACC her brother go:PRS.3.SG

‘Her brother goes to SCHOOL.’

c. *A yeye brat [v shkolu] khodit.*

and her brother to school:ACC go:PRS.3.SG

‘And her brother goes to SCHOOL.’ (Dyakonova 2009: 77)

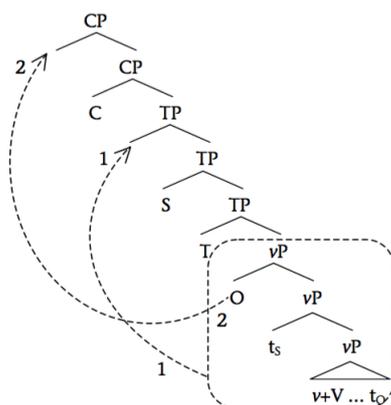
According to Dyakonova, the sentence in (165a) with the left-peripheral focus is felicitous because the concepts of *going to school* and *studying at the university* are related to each other. However, though both activities are part of the same relation-set, the fronted focus in (165b) is considered as infelicitous because of the topic shift from *Masha* to *her brother*. The example in (165b) thus implies that a fronted focus may only occur in the left-periphery of the sentence if (a) the focused constituent is D-linked to the immediately preceding sentence and (b) the sentence including the left-peripheral focus shares the same topic as the discourse context. However, the sentence with the middle field focus in (165c) is felicitous although the topic does not correspond to the topic of the discourse sentence (Dyakonova 2009: 77).

Furthermore, Dyakonova claims that D-linking allows focus preposing but does not force it. Hence, a D-linked focus may also remain in its base position. Finally, she proposes that fronted foci do not have a contrastive interpretation *per se* but only receive a contrastive interpretation if the focused element is D-linked to a multi-member set, i.e., if the context established a set consisting of at least two entities (Dyakonova 2009: 75).

5.3.2.2.5 Titov (2013)

Further evidence against Slioussar’s approach arises from Titov (2013). According to Slioussar (2007), a Russian OVS sentence is derived by two steps: Firstly, the whole *vP* is moved over the subject to one of the specifiers of TP. Secondly, the object moves out of the *vP* to [Spec, CP]. See the derivation of the OVS structure proposed by Slioussar (2007: 40) in (166).

(166)



However, though Slioussar claims that the movement of the vP to [Spec, TP] takes place so that the subject is interpreted as more salient and less accessible than any other element in the sentence, Titov (2013) shows that the verb in Russian OVS sentences is not necessarily less salient or more accessible than the subject. Consider for instance the example in (167), in which the verb (*slomali* ‘broke’) is as salient and as accessible as the subject (*deti* ‘children’).

(167) Context: What happened to the toy?

Igrushku [*slomali* *deti*]_{FOC}
 toy:ACC break:PFV.PST.3.PL child:NOM

‘(The) children broke the/a toy.’ (Titov 2013: 178)

According to Titov (2013), examples like (167) provide clear evidence against the assumption that the verb has to move along with the object. Titov’s criticism therefore does not only concern Slioussar’s IS approach, but any theory that is based on the assumption that IS-related reorderings are derived by vP movement, since they fail to derive structures with a discourse-neutral verb preceding the subject.

However, Titov suggests that this problem could be solved by assuming that subjects in Russian can be base-generated as internal arguments of the verb. Evidence which support this idea derives among others from idiom formation. As shown by Chtareva (2005), there exist a number of idiomatic expressions in Russian that consist of a verb and subject, which support the assumption that Russian subjects can be base-generated as internal arguments of the verb. Consider for instance the idioms in (168).

(168) a. *Ivana* *zajela* *sovest*’.
 Ivan:ACC eat.up:PFV.PST.3.SG.F conscience

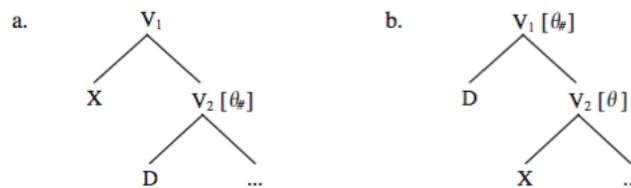
‘Ivan had a guilty conscience.’ (lit. ‘Ivan is eaten up by his conscience.’)

- b. *Ivana zamuchali somnenija.*
 Ivan:ACC torture:PFV.PST.3.PL doubt:PL
 ‘Ivan expected serious doubts.’ (lit. ‘Doubts tormented Ivan.’)
- c. *Ivana oxvatil strax.*
 Ivan:ACC seize:PFV.PST.3.SG.M fear
 ‘Ivan experienced fear.’ (lit. ‘Fear seized Ivan.’)

(Chtareva 2005)

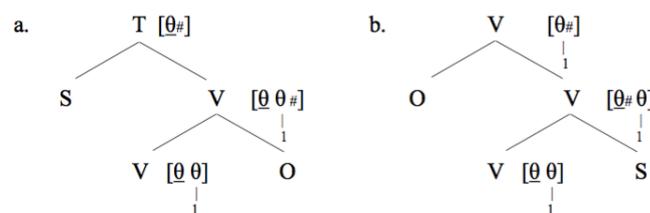
Titov’s base-generation analysis is mainly based on the idea of Neeleman and van de Koot (2008) who claimed that scrambled structures are costly because they involve late assignment of a θ -role.⁷ Compare the structures of the neutral and the scrambled order adopted from Neeleman and van de Koot (2008: 167) order in (169). The late assignment of the θ -role in (169b) leads to a less economical structure because more instances of the relevant θ -role need to be generated than in the non-scrambled structure in (169a) (Neeleman and van de Koot 2008: 167).

(169)



Titov (2013) adopts the analysis by Neeleman and van de Koot and claims that both SVO and OVS orders can be base-generated in Russian. Compare the structures in (170). However, as already claimed by Neeleman and van de Koot (2008), the scrambled structure in (170b) is less economical than the non-scrambled structure in (170a) and thus requires a formal and interpretative licensing. Consider the structures adopted from Titov (2013: 39) in (170).

(170)



⁷Neeleman and van de Koot (2008: 166f.): “ θ -role assignment is assumed to apply under direct domination, which forces copying of the θ -role to the first node above an argument [...]”

Titov's approach is based on the assumption that syntactic structures in Russian relate to information structure templates. She rejects the existence of IS features such as [F] or [T], but claims that IS interpretations are encoded at the postgrammatical level of discourse (for a similar view see Reinhart 2006). According to Titov, the interpretative licensing for OVS orders is provided by transparent mapping onto the IS-template in (171).

- (171) ARGUMENT ARGUMENT
 [+IS-prominent] » [-IS-prominent]
 (Titov 2013: 34)

The licensing of the Russian SVO and OVS structure in the examples in (172) and (173) show that the neutral SVO order can be used in a context in which the subject is prominent and the object non-prominent (172a) or in a context in which the subject and the object are equally prominent, see (172b) and (172c). By contrast, the OVS order in (173) is only felicitous in cases in which the object is prominent and the subject is non-prominent.

- (172) a. S_[+prominent] V O_[-prominent]
 b. S_[-prominent] V O_[-prominent]
 c. S_[+prominent] V O_[+prominent]
 d. * S_[-prominent] V O_[+prominent]
- (173) O_[+prominent] V S_[-prominent] (Titov 2013: 41)

According to Titov, the IS prominence of arguments is established by the binary [\pm presupposed] feature. She assumes that focus is always [-presupposed], while background is always [+presupposed]. Hence, in order to be licensed, the object in a Russian OVS sentence must be [+presupposed], while the subject must be [-presupposed].

Moreover, OVS orders in Russian require a formal license. According to Titov (2013: 45), the OVS order is only felicitous if the thematic prominence relations of the arguments can be established by other means than their structural position, i.e., either via morphological case or agreement markers. Hence, OVS structures are infelicitous whenever the thematic relations are not morphologically recoverable at PF. Consider for instance the example in (174) where the thematic relations of the two NPs (*mat'* 'mother' and *doch'* 'daughter') cannot be recovered at PF because of their ambiguous case marking (NOM/ACC). In this case, the thematic relations of the arguments result from their structural positions, i.e., the first argument receives the unmarked nominative case while the second argument receives the dependent accusative case (Titov 2013: 45).

(174) Context: What's new with mother?

Mat' *NAVESTILA* *DOCH'*.
 mother:NOM/ACC visit:PFV.PST.3.SG.F daughter-NOM/ACC

'Mother visited daughter.'
 '*Daughter visited mother.' (Titov 2013: 46)

However, the structural encoding of thematic prominence can be made visible at PF via agreement markers. This means OVS orders are felicitous if the thematically prominent argument (i.e., the subject) shows agreement with the verb. Consider for instance the subject-verb agreement in the examples in (175a) and (175b).

- (175) a. *Stakan* *pereveshivaet* *tarelki*.
 glass:NOM/ACC outweigh:3.SG plate:PL.NOM/ACC
 'The/a glass outweighs (the) plates.'
- b. *Stakan* *pereveshivajut* *tarelki*.
 glass:NOM/ACC outweigh:3.PL plate:PL.NOM/ACC
 'The/a glass is outweighed by (the) plates.' (Titov 2013: 45)

In sum, Titov's approach differs from other approaches in that she assumes that Russian OVS orders can be base-generated. However, as the base-generation analysis involves a late assignment of the θ -role, she considers OVS orders as less economical than the neutral SVO orders and thus propose that they require a formal and interpretative license.

5.3.3 Approaches to Turkish IS

This subsection presents an overview of some of the major syntactic approaches to Turkish information structure.

5.3.3.1 Cartographic approaches

5.3.3.1.1 Kural (1992)

Kural's approach to Turkish information structure is based on the assumption that Scrambling strictly interacts with focus and that an element has to appear in the immediately preverbal position in order to receive a focus interpretation. However, Kural does not assume that it is the focused constituent which moves into this position, but that it is the non-focused material which has to leave the VP and moves into a position preceding and thus hierarchically higher than the focused constituent.

Moreover, Kural claims that Turkish has to show a one-to-one mapping between S-Structure and LF focus relations. According to this approach, a Turkish sentence is only grammatical if a focused element occurs at both levels in the immediately preverbal slot. Compare for instance the examples in (176) and (177).

- (176) a. *Adam-lar_i birbir-ler-in-i_i gör-müş.*
 man-PL each.other-PL-POSS-ACC see-PST.3
 ‘The men saw each other.’
 b. **Birbirlerini_i adamlar_i t_i görmüş.* (Kural 1992: 30)
- (177) a. *Adam-lar_i birbir-ler-in-i_i dün gör-müş.*
 man-PL each.other-PL-POSS-ACC yesterday see-PST.3
 ‘The men saw each other yesterday.’
 b. *Birbirlerini_i adamlar_i t_i dün görmüş.* (Kural 1992: 38-39)

In the example in (176a) the object scrambles out of its base position (i.e., the immediately preverbal position). As a result the subject occurs in immediately preverbal position and receives a focus interpretation. However, the sentence in (176b) is considered as ungrammatical due to the mismatch between S-Structure and LF: While the object undergoes A’-movement and the subject occurs in an immediate preverbal (=focus) position at S-Structure, the reconstruction of the object at LF will change the focus information, since the object remains in an immediate preverbal position at LF. See the position of the focus at S-Structure and LF in (178).

- (178) a. at S-Structure:
 **Birbirlerini_i [IP ADAMLAR_i t_i görmüş]*
 b. at LF (after reconstruction):
 ... [IP *Adamlar_i BIRBIRLERINI_i görmüş]*

(Kural 1992: 75-76)

By contrast, the object Scrambling in the example in (177) does not change the focus information of the sentence. The adverb (*dün*) remains in the immediate preverbal position and occurs in focus position at S-Structure as well as at LF, see (179).

- (179) a. at S-Structure:
Birbirlerini_i [_{IP} adamlar_i t_i DÜN görmüş]
- b. at LF (after reconstruction):
 ... [_{IP} Adamlar_i birbirlerini_i DÜN görmüş]

(Kural 1992: 76)

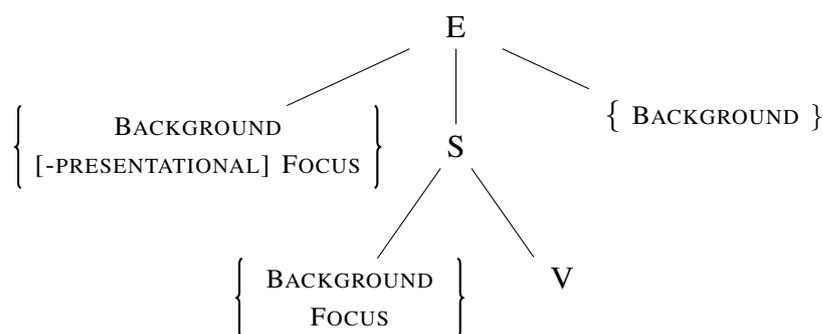
However, Kural's approach bears several problems. First of all, his analysis contrasts with approaches that have been proposed for other languages with an immediate preverbal position. Consider for instance the approach by Kiss (2002) on focus in Hungarian, in which she claims that in Hungarian the V raises to the head of the focus projection (FocP) and the focused XP moves into the specifier of FocP. Moreover, Kural's analysis is only felicitous for cases in which the focused constituent occurs immediately preverbally. However, as already discussed in Chapter 4 Turkish foci are not restricted to this position, but may also occur in other positions within the preverbal area.

5.3.3.1.2 Kılıçaslan (2004)

Another syntactic approach to Turkish information structure was developed by Kılıçaslan, who criticizes that Kural's approach cannot serve the economy criterion of the Minimalist Program since it does not satisfy the principle of *Greed* according to which an operation "cannot apply to α to enable some different element β to satisfy its properties" (Chomsky 1995: 201). This condition is obviously not fulfilled in Kural's approach, since the focused element benefits from the moving of non-focused elements, i.e., the non-focused elements are moved out of the focus domain in order to allow the focused elements to appear in the immediately preverbal slot (Kılıçaslan 2004: 726-727).

Kılıçaslan's approach of information structure is based on the assumption that Turkish does not employ any syntactic strategy to mark focus but that the frequent appearance of non-identificational foci in immediately preverbal position results from the displacement of background material (including topics). He assumes that non-identificational foci (*presentational foci* in his terminology) are restricted to the boundaries of the core clause (=S), whereas background elements, topics and identificational foci may undergo a syntactic operation of detachment from the core clause to the peripheries of the sentence. Whereas new topics as well as identificational foci may only undergo leftward detachment, already established topics may be either left- or right-detached (Kılıçaslan 2004: 759). Consider the structure in (180).

(180)



5.3.3.1.3 Öztürk (2005)

Öztürk (2005) claims that preverbal Scrambling in Turkish exhibits A- and A'-properties. Empirical evidence for this hypothesis comes from the fact that a universal quantifier in a Turkish sentence can take scope either below or above the negative scope. Compare for instance the examples in (181).

- (181) a. *Bütün çocuk-lar o test-e gir-me-di.*
 all child-PL that test-DAT take-NEG-PST
 'All children did not take that test.' (*all>not , not>all)
- b. *Bütün çocuk-lar allahtan o test-e gir-me-di-*(ler).*
 all child-PL luckily that test-DAT take-NEG-PST-PL
 'All the children luckily didn't take that test.'
 (all>not , *not>all)
- (Öztürk 2005: 170)

Öztürk assumes that Turkish lacks case-driven Agree. According to her approach, Turkish arguments receive case in their base positions. She assumes that Turkish subjects are base-generated in the specifier of AgentP, which is located above ThemeP. Moreover, she proposes that Turkish has a NegP, which is located between TP and AgentP. Whereas the quantified subject (*bütün çocuklar* 'all children') in (181a) unambiguously takes narrow scope over negation which implies that the subject is realized in its base position, the subject in (181b) unambiguously takes wide scope over negation which indicates that the subject must be scrambled into a position located higher than NegP. Evidence for this assumption results from two facts. Firstly, the subject in (181b) is preceding the adverb *allahtan* ('luckily') which is located above NegP. Secondly, by contrast to (181a), the sentence in (181b) exhibits subject-verb-Agreement which implies that the subject and the verb are in a Spec-Head agreement relation. Due to the fact that there is no reconstruction, Öztürk (2005) concludes that the subject in (181b) scrambled into an A-position, rather than into an A'-position.

Furthermore, Öztürk assumes that not only subjects but also objects may undergo A-Scrambling in Turkish. See the examples in (182). In (182a) the object takes narrow scope over the negation which leads to the assumption that the object is in its base position. By contrast, the object in (182b) unambiguously takes wide scope. As reconstruction is again not possible in this case, Öztürk (2005) suggests that the object Scrambling in (182b) is a matter of A-Scrambling.

- (182) a. *Ali bütün test-ler-e gir-me-di.*
 Ali all test-PL-DAT take-NEG-PST
 ‘Ali did not take all the tests.’ (neg>all, all*>neg)
- b. *Bütün test-ler-e Ali gir-me-di.*
 all test-PL-DAT Ali take-NEG-PST
 ‘Ali did not take all the tests.’ (all>neg, *neg>all)
- (Öztürk 2005: 171)

To sum it up, Öztürk proposes that both the subject in (181b) as well as the object in (182b) undergo A-movement into [Spec, TP]. Following the line of Miyagawa (2005), she assumes that A-movement is triggered by a Focus feature which can be either non-identificational (=informational in her terminology) or identificational and that A-movement in Turkish serves to yield a topic/subject-predication. However, Öztürk proposes that Turkish Scrambling does not only reveal A-properties but also A'-properties. Following Kural (1992), she claims that all instances where the presence of contrastive focus allows reconstruction, are the result of A'-movement, i.e., movement to the CP domain (Öztürk 2005).

5.3.3.2 Non-cartographic approaches

5.3.3.2.1 Göksel and Özsoy (2000)

Göksel and Özsoy's approach to information structure is based on the assumption that Turkish does not have a particular focus position but that the whole preverbal domain functions as a focus field and that any constituent inside this area can receive a focus interpretation (Göksel and Özsoy 2000: 6). Moreover, they claim that focus in Turkish is neither a feature nor a phrasal projection, but that it is solely indicated by stress. They draw a distinction between focal stress and sentential stress and define the focus field as the area between the position that bears focal stress and the position that includes the verbal complex (Göksel and Özsoy 2000: 1). In short, Göksel and Özsoy (2000) argue that the immediate preverbal position is not a focus position,

but simply the position for sentential stress. However, as the immediate preverbal position is part of the focus field, Turkish foci quite frequently occur in this position. Hence, the account is rather prosodically motivated, than syntactically.

5.3.3.2.2 İşsever (2003, 2007)

İşsever proposes that Turkish exhibits two focusing strategies, which are associated with different pragmatic functions: a syntactic and a prosodic focus strategy. He claims that the syntactic focus strategy is used to mark non-identificational foci (in his terminology: *presentational foci*), while the prosodic strategy is used to mark contrastive foci (İşsever 2003: 1038).

With regard to the syntactic focus marking strategy, İşsever proposes that clause-initial Scrambling in Turkish is a uniform phenomenon rather than an instance of either A- or A'-movement as proposed by Öztürk (2005). İşsever thus follows Saito (2003), who proposes a feature-selection mechanism, which can explain the A/A'-Scrambling effects shown by Öztürk (2005) without the assumption of two different types of Scrambling processes. Saito's approach is based on Chomsky's *Copy theory of movement*. He assumes that (i) every moved constituent leaves behind a copy in the derivation and (ii) feature deletion applies to the relevant copy (Saito 2003: 491). Moreover, he assumes that feature deletion is constrained by selection. This means he proposes that only selected features can retain at a copy, whereas non-selected features must be deleted. Consider for instance the example in (183).

- (183) a. Who do you think John saw?
 b. [_{CP} *who* [_{TP} *John saw who*]]
 {P,O,Đ} {P,Θ,D}

(Saito 2003: 490-491)

Saito (2003) assumes that the *wh*-phrase in the example in (183) bears three types of features: phonological features [P], an operator feature [O] which is responsible for the interpretation of *who* in [Spec, CP] as [*for which x: x a person*] and a referential feature [D] which is selected in the object position, but not in [Spec CP]. After preposing the *wh*-phrase to [Spec, CP], the D-feature of *who* gets deleted, whereas the O- and the P-features remain (Saito 2003: 490). İşsever (2007) adopted this analysis for Turkish. Consider the examples in (184).

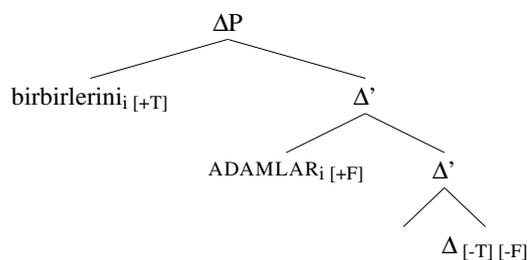
- (184) a. **Birbirlerini_i* ADAMLAR_i (*birbirlerini_i*) görmüş.
 each.other-PL-POSS-ACC man-PL.NOM see-PST.3SG
 {P,D,A} {D} {P,D,A}
 ‘The men saw each other.’
- b. *Birbirlerini_i* adamlar_i (*birbirlerini_i*) DÜN
 each.other-PL-POSS-ACC man-PL.NOM yesterday
 {P,D,A} {D} {P,D,A}
 görmüş.
 see-PST.3SG
- ‘The men saw each other yesterday.’ (İşsever 2007: 13)

The feature inventory of both sentences in (184a) and (184b) includes the same set of features: P-, D- and A-features. The A-feature of the anaphor *birbirlerini* ‘each other’ is selected in object position. It therefore remains in this position and is deleted at the higher copy. The D-feature is referential. It hence must occur in those positions where the referential properties of an item are needed. Following Chomsky (2000), İşsever (2007) assumes that the EPP-feature of heads such as T^o need a referential feature in order to check its referential properties. He proposes that the EPP-feature of T^o can check D-features of multiple DPs and suggests that the scrambled anaphor is attracted by the EPP to [Spec TP] in order to check the referential feature. He assumes that the D-feature is selected in [Spec, TP] and therefore remains in this position. Since the object-movement in both examples in (184) is an overt movement, the P-features are selected in the higher copy of the sentences and are deleted in the lower one. Moreover, İşsever argues that the presence of the A-feature in the lower copy of the anaphor shows that the sentences in (184a) and (184b) do not differ with regard to reconstruction, i.e., both sentences exhibit reconstruction effects. Assuming that the main difference between A- and A’-Scrambling is that only the latter allows reconstruction, while the former does not, İşsever (2007) concludes that Turkish does not exhibit two types of Scrambling but a uniform Scrambling process which is into a position where reconstruction is allowed. He claims that the contrast in the grammaticality between the examples in (184) can be reduced to their different F-structures. Consider the examples including topic ([T]) and focus features ([F]) in (185).

- (185) a. * *Birbir-ler-in-i_i* ADAM-LAR_i (*birbirlerini_i*) *gör-müş.*
 each.other-PL-POSS-ACC man-PL see-PST.3
 {P,D,A,T} {D,F} {P,Đ,A,T}
- b. *Birbir-ler-in-i_i* *adam-lar_i* (*birbirlerini_i*) DÜN
 each.other-PL-POSS-ACC man-PL yesterday
 {P,D,A,T} {D} {P,Đ,A,T} {F}
gör-müş.
 see-PST.3

In the example in (185a) the antecedent *adamlar* ‘the men’ carries the F-feature, whereas in (185b) the adverb *dün* ‘yesterday’ is bearing the F-feature. According to İşsever (2007), topic and focus are discursive features which can be subcategorized under the label Δ . He assumes that both features (Δ_{Top} and Δ_{Foc}) are checked by the same head Δ^0 and are licensed under the same projection ΔP . İşsever claims that the ungrammaticality of the structure in (185a) comes from *lethal ambiguity*⁸ and argues that the preposed anaphor (*birbirlerini*) cannot be linked with its copy because it shares the same numeration index and the same address as its co-indexed antecedent (*adamlar*). Consider the structure in (186).

(186) (*)



By contrast, the sentence in (185b) is fully grammatical, since the antecedent does not have a focus-feature and is thus not licensed by the same head as the topicalized anaphor (İşsever 2007: 16).

5.3.3.2.3 Şener (2010)

According to Şener, all movement operations which are related to information structure are triggered by an operator feature [OP]. He assumes that all topic and focus phrases bear an interpretable discourse feature ([Topic] or [Focus]), which is checked against the functional projections via the operation Agree. Moreover, he suggests that all functional projections and lexical items that

⁸The term lethal ambiguity was developed by McGinnis (2004: 47), who proposed that a lethal ambiguity arises in cases, “where a phrase YP undergoes A movement into a specifier of a head X, which already has a specifier ZP. If YP and ZP are coindexed, YP cannot be unambiguously linked with its copy.”

bear a [Topic] feature exhibit an uninterpretable operator feature [OP], which triggers their movement to the left periphery. Şener assumes that only topics bear the operator feature, while foci (either contrastive or not) do not exhibit this feature and therefore do not undergo movement. Consider for instance the example in (187) and the proposed derivation in (188).

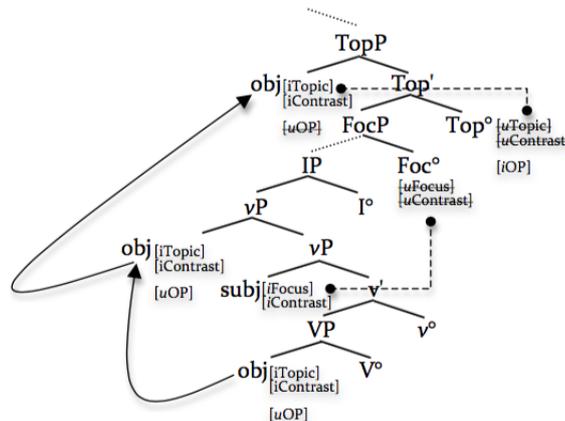
- (187) A: *What about the soup? Has anyone eaten that?*
 B: *Frankly. I don't know about the soup, but...*

Dolma-lar-dan; AYLİN t_i ye-di.
 dolma-PL-ABL Aylin eat-PST.3

‘Aylin ate from the dolmas.’

(Şener 2010: 72)

- (188)



According to Şener’s approach, the direct object (*dolmalardan* ‘dolmas’) bears the interpretable features [*iTopic*] and [*iContrast*] as well as the uninterpretable feature [*uOP*]. The [*uOP*] triggers the movement of the direct object out of its VP-internal base position in [Spec, VP] into [Spec, TopP] through the edge of vP. Being a probe in [Spec, TopP], the direct object establishes an Agree relation with the features Top° and completes the feature checking (Şener 2010: 73). By contrast to the direct object, the focused subject does not exhibit an operator feature and thus remains in its base position in [Spec, vP]. Hence, Şener’s approach is also based on the assumption that the adjacency between the verb and the focus in Turkish is derived by the movement of unfocused material, rather than by movement of focused constituents.

5.3.4 Summary

This section presented an overview of several syntactic approaches to Russian (cf. Section 5.3.2) and Turkish information structure (cf. Section 5.3.3).

It was shown that syntactic approaches to information structure can be subdivided into two groups: cartographic and non-cartographic approaches. Whereas the majority of syntactic approaches to Turkish IS is of cartographic nature, Russian approaches to information structure are predominantly non-cartographic.

Though there exist only a few cartographic approaches to Russian information structure (King 1995, Dyakonova 2009), I assume that a cartographic approach is very suitable in order to illustrate the information structural differences between Turkish and Russian. Within this section I develop a simplified approach to Turkish and Russian information structure that illustrates that the differences in the information structural possibilities of the languages relate to the different structures of the extended left-periphery. Whereas in Turkish all IS-possibilities can be felicitously derived without the existence of a focus projection (FocP), the Russian IS-possibilities require the existence of a topic and a focus projection.

5.4 A simplified syntactic approach to Turkish and Russian IS

5.4.1 IS-related movement in Russian

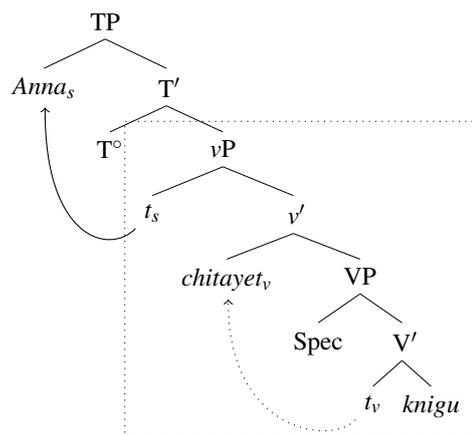
Russian is traditionally analyzed as a SVO language (cf. among others Bailyn 1995, Junghanns and Zybatow 1997, Slioussar 2007). The approach presented in the following is based on the assumption that internal arguments (i.e., objects) are base-generated inside the VP, while external arguments (i.e., subjects) are base-generated in the specifier of a light verb projection (vP) which occurs on top of the VP (cf. for instance Marantz 1984, Chomsky 1995, Kratzer 1996). Consider for instance the example from Russian and its proposed derivation in (189), which shows that the subject is base-generated in [Spec, vP], whereas the direct object is generated as an internal argument of the verb in the lower VP. There has been a lot of discussion about verb movement in Russian (see e.g., King 1995, Bailyn 1995, Junghanns and Zybatow 1997). Following Bailyn (1995) (see also Kallestinova 2007) I assume that the verb in Russian undergoes short verb movement from V° to v° . As illustrated in (189) the head of vP carries a verb feature which requires the verb to move into v° . The interpretable ϕ -features of the direct object are checked by the uninterpretable object agreement ϕ -features of vP via the operation Agree. Similarly, the interpretable ϕ -features of the

subject are checked through agreement with the interpretable ϕ -features of T° (Kallestinova 2007: 150-151). Finally, the subject moves to [Spec, TP] in order to satisfy the EPP feature of T° .

(189) Russian:

- a. *Anna chitayet knigu.*
 Anna read:IPFV.3.SG book:ACC.F
 ‘Anna reads the book.’

b.



While SVO is the basic word order, other orderings such as SOV, OVS and OSV occur quite frequently and are assumed to be depending on information structure (cf. Chapter 4). Though foci in Russian are typically associated with the clause-final position, it was shown that foci (at least in Colloquial Russian) do not necessarily occur in this position, but may also appear in the beginning of a sentence or in the middle field (cf. for instance Dyakonova 2009 in Section 5.3.2.1.2). Hence, all of the four mentioned word orders above are felicitous with subject foci as well as with object foci.

By contrast to Turkish which does not have focus movement (cf. Section 5.4.2), I assume that Russian exhibits a focus projection in the extended CP layer. However, by contrast to other languages where focus movement is obligatory accompanied by verb movement to the Foc head (cf. for instance Bródy 1990, Bródy 1995 on Hungarian), I assume that focus movement in Russian is only optionally accompanied by verb raising.

In the following I briefly present the derivation of the four different word orders (SVO, SOV, OSV and OVS) with subject and object foci in Russian. The canonical word order SVO can occur with either subject or object foci. Consider the examples in (190) and (191). Since nuclear stress is phrase-final in Russian, SVO orders typically receive an interpretation with a narrow focus on the object. Nevertheless, (190) illustrates that SVO orders are also felicitous with subject foci.

(190) Context: ‘Who is reading the book?’

[Anna]_{Foc} *chitayet knigu.*
Anna read:IPFV.3 book:ACC

‘ANNA is reading the book.’ ([S]_{Foc} VO)

(191) Context: ‘What is Anna reading?’

Anna chitayet [knigu]_{Foc}.
Anna read:IPFV.3 book:ACC

‘Anna is reading A (SPECIFIC) BOOK.’ (SV[O]_{Foc})

Moreover, subject and object foci are also felicitous with SOV orders. Consider the examples in (192) and (193).

(192) Context: ‘Who is reading the book?’

[Anna]_{Foc} *knigu chitayet.*
Anna book:ACC read:IPFV.3

‘ANNA is reading the book.’ ([S]_{Foc} OV)

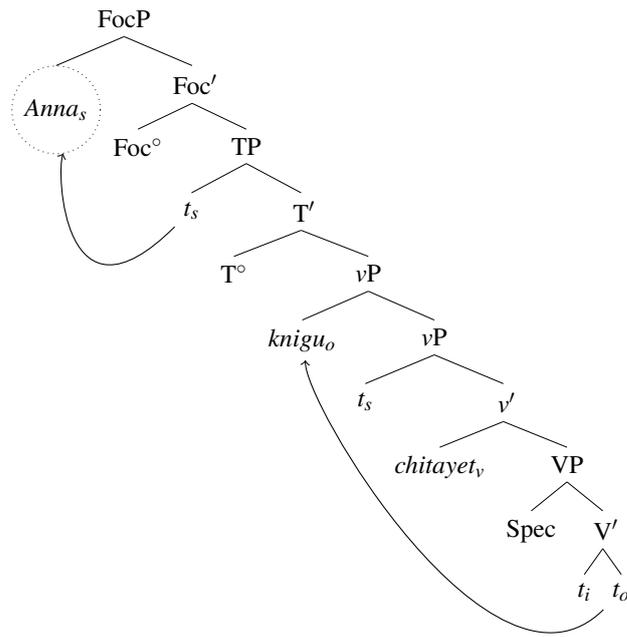
(193) Context: ‘What is Anna reading?’

Anna [knigu]_{Foc} chitayet.
Anna book:ACC read:IPFV.3

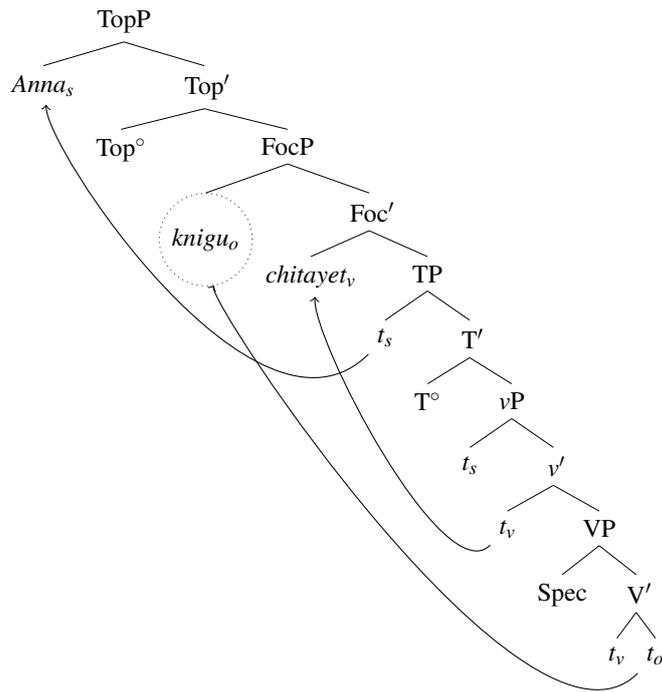
‘Anna is reading A (SPECIFIC) BOOK.’ (S[O]_{Foc} V)

Following the cartographic approach by Rizzi (1997) I assume that the [S]_{Foc}OV order in (192) is derived by subject movement to [Spec, FocP]. Following Bailyn (2012) I moreover assume that the direct object moves to the left edge of the *v*P and thus occurs in a position preceding the verb. Consider the derivation in (194). By contrast, the S[O]_{Foc}V order in (193) receives an interpretation with a topicalized subject and a focused direct object, see the derivation in (195). Following the core assumptions of a cartographic approach I assume that the subject moves to [Spec, TopP] and the object undergoes focus movement into the specifier of FocP which is accompanied by verb raising into Foc^o.

(194)



(195)



Similar to SVO and SOV orders, OVS orders in Russian may occur with subject and with object foci. Consider the examples in (196) and (197).

(196) Context: ‘Who is reading the book?’

Knigu chitayet [Anna]_{Foc}.
book:ACC read:IPFV.3 Anna

‘ANNA is reading the book.’ (OV[S]_{Foc})

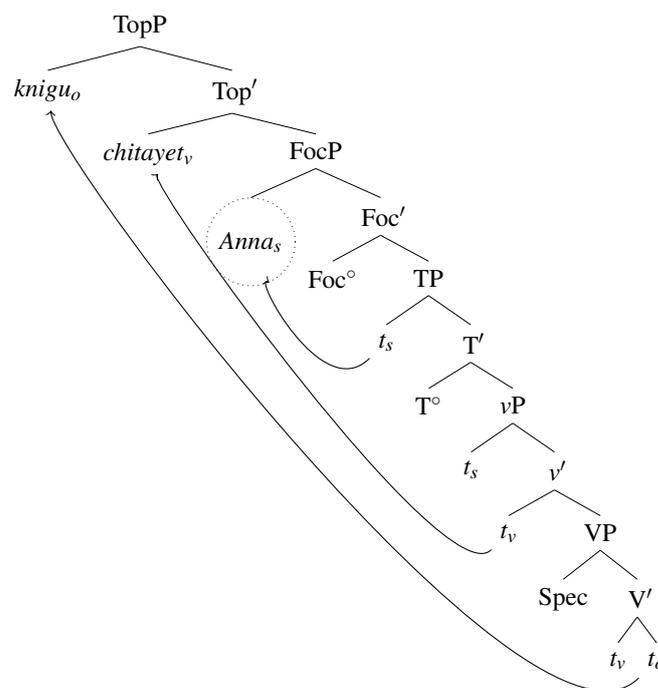
(197) Context: ‘What is Anna reading?’

[Knigu]_{Foc} chitayet Anna.
book:ACC read:IPFV.3 Anna

‘Anna is reading A (SPECIFIC) BOOK.’ ([O]_{Foc} VS)

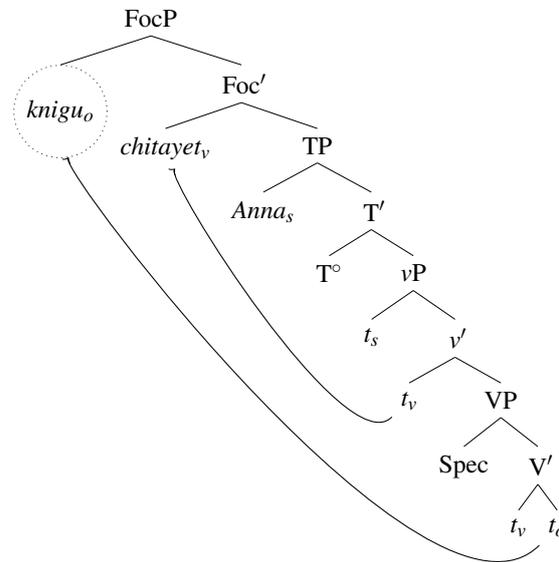
There are a lot of different assumptions about the derivation of OV[S]_{Foc} orders in Russian (cf. among others Bailyn 1995, 2004, 2010, Slioussar 2007, Dyakonova 2009). On the basis of the *Generalized Inversion account* by Bailyn (2004) I assume that the OV[S]_{Foc} order in (196) is derived as follows: The focused subject (*Anna*) moves into the specifier of the focus projection, whereas the direct object moves into the specifier of the TopP and the verb raises into the Top head such that it precedes the focused subject. Consider the derivation in (198).

(198)



As illustrated by the example in (197), OVS orders are also felicitous with object foci. Consider the derivation in (199), which shows that the $[O]_{\text{Foc}}\text{VS}$ order is derived by leftward movement of the object into $[\text{Spec}, \text{FocP}]$ which is accompanied by verb movement into the Foc head.

(199)



Finally, subject and object foci in Russian are also felicitous with OSV orders. Consider the examples in (200) and (201).

(200) Context: ‘Who is reading the book?’

Knigu [Anna]_{Foc} *chitayet*.
book:ACC Anna read:IPFV.3

‘ANNA is reading the book.’ (O[S]_{Foc}V)

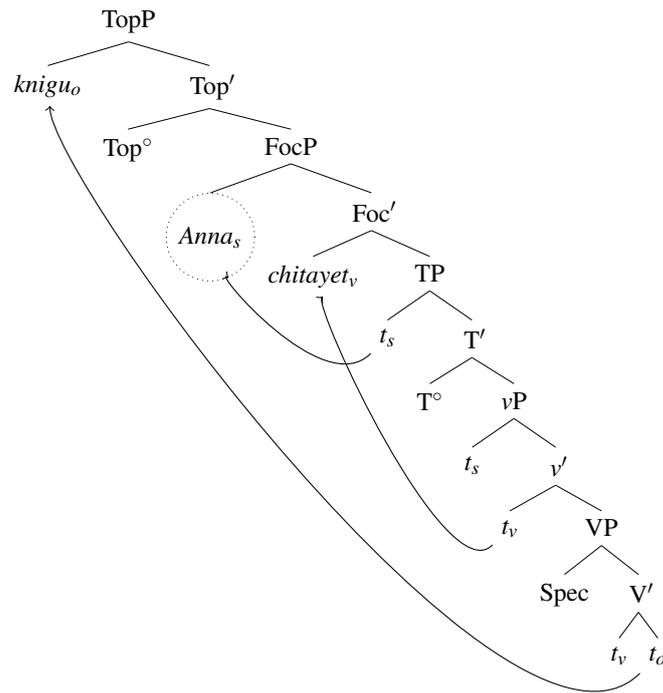
(201) Context: ‘What is Anna reading?’

[*Knigu*]_{Foc} *Anna chitayet*.
book:ACC Anna read:IPFV.3

‘Anna is reading A (SPECIFIC) BOOK.’ ([O]_{Foc}SV)

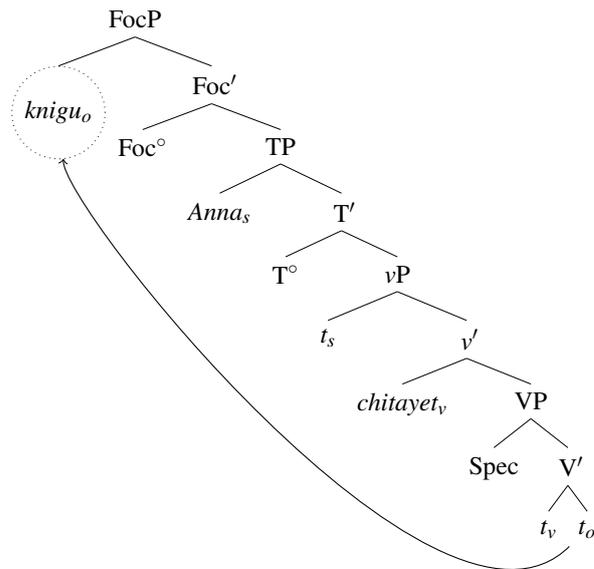
According to a cartographic approach which assumes a linear order of the topic and focus projection, the $O[S]_{\text{Foc}}\text{V}$ order with the middle field focus in (200) requires topic and focus movement. Whereas the topicalized object moves into $[\text{Spec}, \text{TopP}]$, the focused subject undergoes movement into $[\text{Spec}, \text{FocP}]$ and the verb moves into Foc° . Consider the derivation in (202).

(202)



By contrast, the derivation of the $[O]_{\text{Foc}}\text{SV}$ order with the initial object focus in (201) only requires focus movement. Consider the derivation in (203), which shows that the direct object undergoes movement into [Spec, FocP].

(203)



Taking everything into consideration, this subsection showed that the IS-possibilities of Russian are derived by topic and focus movement. Moreover, it was shown that verb fronting to the Foc head in Russian is, by contrast to other languages which exhibit focus movement (e.g., Hungarian), not obligatory. Hence, foci in Russian do not necessarily have to occur adjacent to the verb. Consider for instance the derivation of the $[O]_{\text{Foc}}\text{SV}$ order in (203).

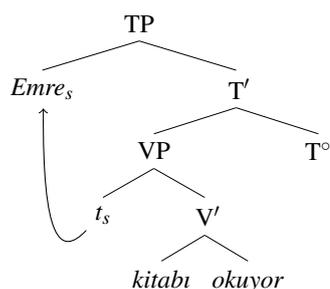
5.4.2 IS-related movement in Turkish

By contrast to Russian (cf. Section 5.4.1), Turkish does not exhibit any motivation for a $v\text{P}$ level (Öztürk 2005). Unlike languages with a $v\text{P}$ projection, accusative case in Turkish is not assigned by v° but *in situ* (cf. also Section 5.3.3.1.3). Following Öztürk (2005) I assume that the subject in Turkish is base-generated in $[\text{Spec}, \text{VP}]$. There is a lot of discussion whether subjects in Turkish have to move to $[\text{Spec}, \text{TP}]$ in order to satisfy the EPP (cf. the discussion in Öztürk 2005). For the following analysis I assume that the EPP in Turkish must be satisfied by the movement of subjects into $[\text{Spec}, \text{TP}]$ (cf. Kornfilt 1984, Kural 1993, Aygen 1998, Aygen 2002, Keleşir 2001). Such an analysis has the advantage that it involves the same derivations across languages (cf. Section 5.4.1). However, I do not have empirical evidence for the existence of this derivational step. Furthermore, I assume that the direct object is base-generated as a VP-internal argument in the VP, whereas the verb itself occupies the final position. Finally, the finite verb moves to T° in order to check its inflectional features (Chomsky 1995). However, this movement does not change the order of constituents, i.e., the verb remains in final position. Consider the example in (204).

(204) Turkish:

- a. *Emre kitab-ı oku-yor.*
 Emre book-ACC read-PROG.3
 ‘Emre is reading the book.’

b.



Though SOV is the basic word order, Turkish word order is very flexible and sensitive to information structure (cf. Chapter 4). Following Kılıçaslan (2004), I assume that IS-related movement in Turkish does not require the existence of a FocP, but that focus is derived by moving the unfocused material out of the focus domain (cf. the approach by Kılıçaslan 2004 in Section 5.3.3.1.2).

Within this subsection I discuss the felicitousness of the four most common word orders (SOV, OSV, SVO and OVS) with subject and object foci in Turkish. The focus options in Turkish are summarized in Table 5.1.

Table 5.1: Focus options in Turkish

	SOV	SVO	OSV	OVS
S _{Foc}	✓	✓	✓	
O _{Foc}	✓			✓

Table 5.1 implies that foci in Turkish (a) may only occur preverbally and (b) must occur adjacent to the verb. However, the second issue does not hold for canonical orders. Consider for instance the examples in (205) and (206), which show that SOV orders in Turkish are felicitous with both, subject and object foci.

(205) Context: ‘Who is reading the book?’

[Emre]_{Foc} kitab-ı oku-yor.
Emre book-ACC read-PROG.3

‘EMRE is reading the book.’ ([S]_{Foc}OV)

(206) Context: ‘What is Emre reading?’

Emre [kitab-ı]_{Foc} oku-yor.
Emre book-ACC read-PROG.3

‘Emre is reading A (SPECIFIC) BOOK.’ (S[O]_{Foc}V)

Since nuclear stress in canonical orders falls on the maximally embedded constituent which is the direct object in transitive sentences (cf. the *Nuclear Stress Rule* (NSR) by Chomsky and Halle 1968), SOV orders in Turkish typically receive an interpretation with a focused object (Göksel and Özsoy 2000). The [S]_{Foc}OV order with the initial subject focus in (205) can be licensed by empathic stress on the subject (Göksel and Özsoy 2000).

By contrast to SOV orders, SVO orders in Turkish are only felicitous with subject foci but not with object foci. Compare the examples in (207) and (208).

(207) Context: ‘Who is reading the book?’

[*Emre*]_{Foc} *oku-yor* *kitab-ı*.
Emre read-PROG.3 book-ACC

‘EMRE is reading the book.’ ([S]_{Foc}VO)

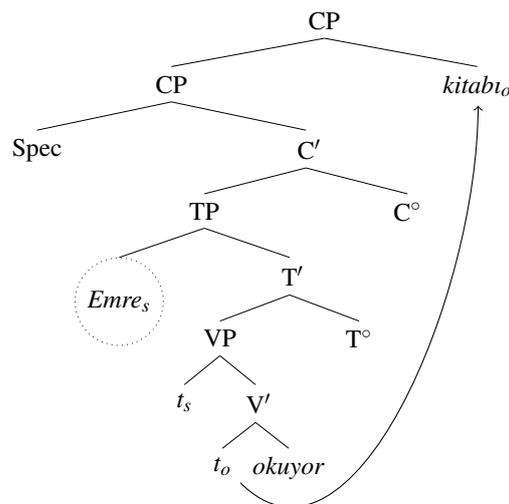
(208) Context: ‘What is Emre reading?’

**Emre oku-yor* [*kitab-ı*]_{Foc}.
Emre read-PROG.3 book-ACC

‘Emre is reading A (SPECIFIC) BOOK.’ (SV[O]_{Foc})

Following Kural (1997), I assume that postverbal elements in Turkish undergo rightward-adjunction to CP⁹. Consider for instance the derivation in (209) which illustrates that the direct object in Turkish [S]_{Foc} VO orders is right-adjoined to CP and hence receives a background interpretation.

(209)



Similar to SVO orders, Turkish OSV orders are only felicitous with subject foci. Consider the examples in (210) and (211).

(210) Context: ‘Who is reading the book?’

Kitab-ı [*Emre*]_{Foc} *oku-yor*.
book-ACC Emre read-PROG.3

‘EMRE is reading the book.’ (O[S]_{Foc}V)

⁹Consider e.g., Kural 1997, Kornfilt 2005 or Şener 2010 for arguments from binding and scopal relations showing that argument postposing in Turkish involves rightward movement.

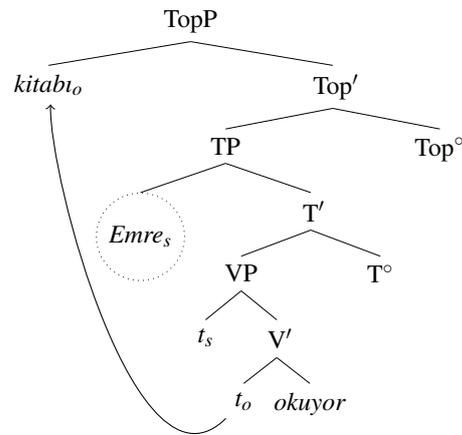
(211) Context: ‘What is Emre reading?’

*[*Kitab-t*]_{Foc} *Emre oku-yor.*
 book-ACC Emre read-PROG.3

‘Emre is reading A (SPECIFIC) BOOK.’ ([O]_{Foc}SV)

Following Kılıçaslan 2004, I assume that the O[S]_{Foc}V order in (211) is derived by object topicalization. Consider the derivation in (212) which illustrates that the topicalized object moves into [Spec, TopP].

(212)



Finally, OVS orders are only felicitous with object foci but not with subject foci. Consider the examples in (213) and (214).

(213) Context: ‘Who is reading the book?’

**Kitab-t oku-yor* [*Emre*]_{Foc}.
 book-ACC read-PROG.3 Emre

‘EMRE is reading the book.’ (OV[S]_{Foc})

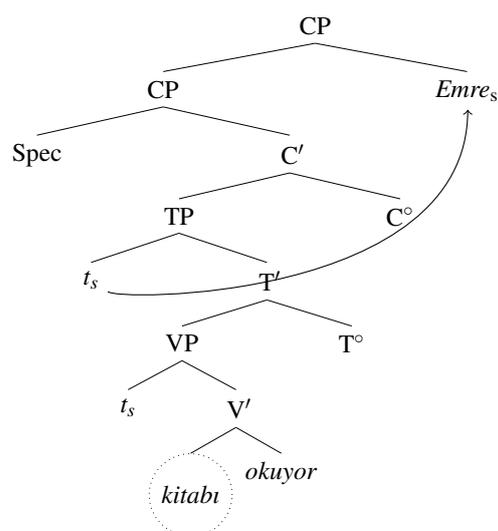
(214) Context: ‘What is Emre reading?’

[*Kitab-t*]_{Foc} *oku-yor* *Emre.*
 book-ACC read-PROG.3 Emre

‘Emre is reading A (SPECIFIC) BOOK.’ ([O]_{Foc}VS)

As illustrated in (215), the [O]_{Foc}VS order in (214) is derived by subject postposing, i.e., the subject which receives a backgrounded interpretation undergoes rightward-adjunction to CP (cf. Kural 1997).

(215)



In a nutshell, this subsection showed that Turkish does by contrast to Russian not require the existence of a FocP, but that all focus options (cf. Table 5.1) can be derived by moving topicalized elements into [Spec, TopP] and/or by rightward-adjunction of backgrounded material to CP.

5.5 Summary and conclusions

Within this chapter I compared the information structural possibilities of Russian and Turkish. Though both languages have a flexible word order which is sensitive to information structure, they crucially differ with regard to two major points. Firstly, only Russian allows postverbal foci, whereas Turkish does not. Secondly, [O]_{Foc}SV orders are possible in Russian, but not in Turkish. The first difference relates to the fact that postverbal material in Turkish is right-dislocated, whereas postverbal material in Russian undergoes leftward movement to [Spec, FocP]. The contrast between Turkish and Russian can be thus captured by the generalization that foci cannot occur in a position on the right side of the TP. The second difference can be explained by the fact that foci in Turkish non-canonical orders must occur immediately adjacent to the finite verb. By contrast, focus movement Russian is only optionally accompanied by V-fronting. Hence, foci in Russian may felicitously occur non-adjacent to the verb. The fact that Russian allows [O]_{Foc}SV orders whereas Turkish does not, can thus be attributed to the focus-verb adjacency requirement which is obligatory in Turkish but optional in Russian.

Part II

Empirical studies and syntactic analysis

Chapter 6

Focus

6.1 Introduction

The aim of this chapter is to provide an empirical analysis on the effect of focus on the structure of the clause in Standard Turkish, Russian and Caucasian Urum. The concept of focus is described in detail in Chapter 2.

Previous studies on focus revealed two asymmetries with respect to the syntactic realization of focused arguments: The first one is concerned with the FOCUS TYPE and the second one with the FOCUSED ARGUMENT. As shown in Chapter 2 there exist a number of different focus types which are used by various authors in several different ways. However, despite all diversity, the majority of researchers agree that there are at least two kinds of foci: one that merely expresses non-presupposed information and another one that expresses exhaustive identification (e.g., Halliday 1967, Rochemont 1986, Kiss 1998). According to Kiss (1998), the latter type is called *identificational focus*, while the former one is referred to as *non-identificational focus* (cf. also Chapter 2).

In the following I use the term non-identificational focus in order to refer to those kinds of foci which are typically also referred to as *information* or *presentational focus*. Hence, the non-identificational focus constituent is understood as that part of the sentence which corresponds to the answer of a *wh*-question. Consider for instance the example in (216).

- (216) A: Who was reading the book?
 B: [PEter]_{FOC} was reading the book.

By contrast, the term identificational focus is typically used in order to refer to focused constituents which involve either one or both of the features [+exhaustive] and [+contrastive] (cf. Chapter 2). However, in the studies presented in the following I concentrate on a specific subtype of identificational foci, namely *corrective foci*. This means foci that include a proposition

which was already proposed in the immediately preceding common ground and may be understood as a direct rejection of an alternative. Consider the example in (217).

- (217) A: Was Peter reading the book?
B: No, [PAUL]_{FOCCOR} was reading the book.

The aim of the studies presented in this chapter is to compare the effect of the FOCUS TYPE (non-identificational vs. corrective) and the FOCUSED ARGUMENT (subject vs. object) on the ordering preferences of the clause. Though a number of studies on different languages of the world revealed that identificational foci cross-linguistically occur more frequently with non-canonical structures than non-identificational instances of focus (cf. Skopeteas and Fanselow 2010a for an overview), the opposite has been claimed for Turkish and Russian. As shown in Chapter 5, foci in Turkish typically occur immediately preverbally, but may also occur in other positions within the preverbal field. By contrast, foci in Russian typically occur clause-finally, but may also occur in the beginning of the sentence or in immediate preverbal position. Furthermore, it has been argued for both languages that non-identificational foci show more flexibility with regard to their position than identificational foci (see e.g., Kornfilt 1997 for Turkish and Zybatow 1999 for Russian). However, most of the recent papers only dealt with instances of contrastive focus and did not investigate the effect of corrective foci.

The second asymmetry that emerges with respect to the syntactic realization of focus relates to the hierarchical position of the FOCUSED ARGUMENT. It has been observed that non-canonical structures are cross-linguistically more likely to occur if the focus is on subjects than if it is on non-subjects (Skopeteas and Fanselow 2010a).

This chapter presents two empirical studies analyzing the interaction of focus and word order in Turkish, Russian and Urum. The main aim of these studies is to answer the following research questions:

- Q1:** Is there a correlation of focus and word order in Urum?
- Q2:** How does the change in the word order from OV to a language with a free position of the verb influence the information structural possibilities of Urum?

Section 6.2 presents an elicitation task which investigates the effect of the two factors FOCUS TYPE (non-identificational vs. corrective) and FOCUSED

ARGUMENT (subject vs. object) on the linearization of arguments in speech production. Section 6.3 presents an acceptability judgment task investigating the contextual effect of focus (F-TYPE; F-ARGUMENT) on the ordering preferences of subjects and objects within target sentences. Section 6.4 compares the results of all three languages and draws the final conclusions with respect to the correlation of focus and word order in Urum and the effect of language contact.

6.2 Speech production

6.2.1 Introduction

A very popular way to examine the effect of focus on word order is the elicitation of semi-spontaneous answers to questions supported by means of visual stimuli, i.e., pictures or videos. Kallestinova (2007) for instance conducted an elicitation study on the effect of focus on the production of different word orders in Russian. The participants within her study were shown colored pictures from children books. In order to control the focal attention these pictures were presented together with different kinds of questions. For the elicitation of thematic sentences Kallestinova used broad focus questions like ‘*What happened?*’. In order to elicit discourse dependent sentences she used questions that either refer to the subject, the verb, the direct object or the indirect object. The results of the study reveal an interaction of discourse context and word order. Though the participants predominantly produced subject-initial orders, they show a strong preference to realize focused subjects in the sentence final position. In discourse independent (i.e., thematic) sentences, all speakers within the study have a clear preference for canonical word orders with the subject appearing in sentence-initial position.

Skopeteas and Fanselow (2010a) analyzed the effect of the factors FOCUS TYPE (non-identificational vs. identificational) and ARGUMENT ASYMMETRIES (subject vs. object) on the structure of the clause in American English, Québec French, Hungarian and Georgian. They presented sets of four different pictures to the participants. After a certain time the pictures disappeared and the participants were asked questions concerning the pictures. The authors manipulated the effect of the focus type and the argument asymmetries by using four different question types. In order to test the effect of non-identificational foci they used simple *wh*-questions which triggered either

a focus on (a) the subject or (b) the object, to analyze the effect of identificational foci they used questions that induce answers which involve either a contrast to (a) the subject or (b) the object. The results reveal a significant effect of the focused argument on the structure of the clause in all languages except Hungarian. Furthermore, the results indicate strong cross-linguistic differences with regard to the effect of the focus type: Whereas the factor had a significant effect on word order in Georgian and American English, it did not show any effect in Hungarian or Québec French.

The speech production study presented in this section aims to compare the effect of the two factors FOCUS TYPE (non-identificational vs. corrective) and FOCUSED ARGUMENT (subject vs. object) on the linearization of arguments in Turkish, Russian and Urum. These languages are representative for three maximally different language types: Turkish (OV), Russian (VO) and Urum, a language with free placement of the verb within the VP. On the basis of the previous observations for Turkish and Russian (cf. Chapter 4), the study investigates the following hypotheses:

- (i) Non-canonical structures occur more often with non-identificational foci than with corrective foci.
- (ii) Non-canonical structures occur more often if the focus is on subjects than if it is on objects.

6.2.2 Method

6.2.2.1 Participants

The study was conducted with 16 students from the University of Bielefeld with Standard Turkish as their native language, 16 students from the University of Bielefeld with Russian as native language as well as with 16 native speakers of Caucasian Urum in Tbilisi, Georgia. The 16 native speakers of Turkish (10 female, 6 male) ranged in age from 20 to 25 with a mean age of 22.10 years. The 16 native speakers of Russian (9 female, 7 male) ranged in age from 20 to 31 with an average of 24.93. Due to the fact that the study took place at a German university, the Russian and Turkish speakers in the study were partly bilingual to different degrees. Therefore, all participants were asked to rate the frequency with which they use their native languages on a range from 1 (=rarely) to 5 (=very frequently/several hours a day), which resulted in an average of 4.25 for the Russian speakers and 4.44 for the Turkish speakers. The 16 native speakers of Urum (9 female, 7 male) ranged in age from 16 to 73 with an average of 39.94 years. All of them

were born in Georgia and considered themselves as native speakers of Urum. However, all of them are also fluent in Georgian and Russian.

6.2.2.2 Material and design

The applied method is the elicitation of semi-spontaneous answers to several different questions. By contrast to previous elicitation studies on the effect of focus on word order, the present study minimizes the risk of too many invalid tokens due to the tendency of using pronouns instead of full lexical NPs by presenting visual stimuli with more than one entity. Within the study the participants were presented 16 target pictures, which were designed with the online comic-making tool *Pixton Comics*. All pictures were colored and depicted a scene with two animate entities (=agent), one of them involved in an action with an inanimate entity (=patient), see for instance the sample picture in Figure 6.1.



Figure 6.1: Example of visual stimuli used in elicitation task.

The experiment used a 2x2 factorial design with the factors FOCUS TYPE (two levels: non-identificational vs. corrective) and FOCUSED ARGUMENT (two levels: subject vs. object). The permutation of the levels lead to four experimental conditions, see the design in Table 6.1.

Table 6.1: Experimental design of focus-elicitation study

		F-TYPE	
		non-identificational	corrective
F-ARGUMENT	subject	N/SBJ	C/SBJ
	object	N/OBJ	C/OBJ

Each of the four conditions of the experiment was matched with one specific question type. In order to test the two non-identificational conditions (N/SBJ; N/OBJ) I used simple *wh*-questions that trigger an answer with either a narrow focus on the subject or the object. In order to examine the two corrective conditions (C/SBJ; C/OBJ) I created questions that trigger answers

which involve a correction of either the subject or the object argument. The questions were translated into Turkish, Russian and Urum and recorded by native speakers of the respective language. See (218) for the Turkish translations of the four sample questions.

(218) a. Turkish: N/SBJ, OSV

Muz-u kim yi-yor?
banana-ACC who eat-PROG[3]

‘Who is eating the banana?’

b. Turkish: N/OBJ, SOV

Adam ne yi-yor?
man what eat-PROG[3]

‘What is the man eating?’

c. Turkish: C/OBJ, SOV

Kadın muz-u yi-yor mi?
woman banana-ACC eat-PROG[3] Q

‘Is the woman eating the banana?’

d. Turkish: C/SBJ, SOV

Adam elma-yı yi-yor mi?
man apple-ACC eat-PROG[3] Q

‘Is the man eating the apple?’

The examples in (218) show that the word order of the Turkish questions is not consistent among the four conditions. This results from the fact that the most unmarked position of a *wh*-word in Turkish is the immediately preverbal position (Kornfilt 1997: 10). Hence, the most natural order for a *wh*-question with a subject focus is OSV, whereas it is SOV if the focus is on the object. By contrast, the most natural order of a question which triggers a correction of either the subject or the object is the basic order SOV. Moreover, it must be noted that all direct objects in the target questions are marked with the accusative suffix (-y)I, which can be attributed to the fact that bare direct objects in Turkish are restricted to the immediately preverbal position, whereas the position of marked direct objects is free (Erguvanlı 1984: 27). Consequently, Scrambling objects over subjects is not possible with bare objects, though it is felicitous with marked direct objects. Furthermore, the examples in (218c)-(218d) show that the corrective focus questions are formed with the particle *mi*, which is attached at the end of the questions and has scope not only over the focused argument but also over the whole question (Kornfilt 1997: 5).

For the Russian translations of the four sample questions, consider (219).

- (219) a. Russian: N/SBJ, SVO
Kto yest' banan?
 who eat:IPFV[3] banana:ACC
 'Who is eating the banana?'
- b. Russian: N/OBJ, OVS
Chto yest' muzhchina?
 what eat:IPFV[3] man
 'What is the man eating?'
- c. Russian: C/SBJ, OVS
Banan yest' zhenshchina?
 banana:ACC eat:IPFV[3] woman
 'Is the woman eating the banana?'
- d. Russian: C/OBJ, SVO
Muzhchina yest' yabloko?
 man eat:IPFV[3] apple:ACC
 'Is the man eating the apple?'

Similar to the Turkish questions, the word order of the Russian questions is not consistent among all conditions. The difference in the order of the *wh*-questions is due to the fact that the basic position of interrogative words in Russian is sentence-initial (Wade 2011: 525). By contrast, the most natural position for a corrective focused argument is considered to be the postverbal position, which leads to an OVS order for a corrective subject focus question and a SVO order for a correct object focus question.

The Urum translations of the four sample questions are finally illustrated in (220).

- (220) a. Urum: N/SBJ, SVO
Kim i-er banan-i?
 who eat-IPFV[3] banana-ACC
 'Who is eating the banana?'
- b. Urum: N/OBJ, OVS
Nä-i i-er ärgishi?
 what-ACC eat-IPFV[3] man
 'What is the man eating?'

c. Urum: C/SBJ, SVO

Ğari i-er banan-i?
 woman eat-IPFV[3] banana-ACC

‘Is the woman eating the banana?’

d. Urum: C/OBJ, SVO

Ärgishi i-er alma-yi?
 man eat-IPFV[3] apple-ACC

‘Is the man eating the apple?’

The translations of the questions were done by an Urum native speaker. It is interesting that she used verb-medial orders among all conditions, which corresponds to the Russian word order. However, though the position of the verb is similar to Russian, the orders of the questions are in turn resembling the Turkish questions. Like in Turkish, *wh*-words in Urum are generally realized left adjacent to the predicate (Skopeteas 2013: 349). Due to the fact that the native speaker used a verb-medial construction, the left-adjacent position is identical with the sentence-initial position, which explains the SVO order in the non-identificational subject focus question and the OVS order in the non-identificational object focus question. Moreover she used the canonical (SVO) order for both types of corrective focus questions.

In sum, the translations of the sample questions show that the word orders of the different questions types are not consistent within and across languages. This results from the fact that the questions should sound as natural as possible to the participants. This fact has to be kept in mind when analyzing the results.

To ensure that each of the 16 target pictures is presented to every participant with only one of the four different question types, the study used a Latin square design. Hence, every participant within the study produced a total of 16 answers, i.e., 4 answers per each condition. The experiment was conducted together with another elicitation task on topics (cf. Chapter 7). The items of both experiments thus functioned as distractors to each other. Moreover, the order of all items was pseudo-randomized for each participant. Consider Appendix A for a list of all experimental stimuli used in the focus elicitation study.

6.2.2.3 Procedure

The participants were told that the study investigates the effect of visual stimuli on speech production and that their descriptions are going to be

audio-recorded for this purpose. If they agreed to the prerequisites for attending the study, the participants were asked to go carefully through the instructions which were presented in their respective native languages. Within the instructions the participants were told that they would see a set of different pictures and picture pairs. They were instructed to pay attention to these pictures, because after five seconds the pictures disappear and they should either give an answer to a question or in case of the topic elicitation study (cf. the description of the procedure of the topic study in Section 7.2) a short description of the presented scene. The participants were requested to avoid elliptical answers such as ‘yes’ or ‘no’, but to produce full sentence answers. The stimuli were presented to the participants with the experimental software DMDX. The participants were listening to the questions through high performance headphones. The presentation stopped after every stimulus. After giving their answers, the participants had to press the space bar on the computer keyboard to proceed with the next item. Before the experiment started, four practice trials illustrated the procedure of the study. All participants completed the experiments individually. The participation was voluntary and paid. After the completion of the study, all recordings were transcribed in order to have a written record of the speakers’ descriptions.

6.2.3 Scoring

In order to be considered within the statistical analysis, the data of the participants had to meet two criteria. Firstly, the produced answers had to be syntactically complete sentences. Therefore, only answers that contained a lexically realized verb were considered as valid, while elliptical answers were excluded from the further analysis. For an answer which was excluded due to its elliptical nature, see the Turkish example in (221).

(221) Context: Is the woman lifting the chair?

Hayir, bir tane ak top-u.

no one little white ball-ACC

‘No, a little white ball.’

(Condition: C/OBJ)

Secondly, the answers had to correspond to the intended contextual conditions. Thus, all answers in the corrective condition that did not involve a correction of either the subject or the object but were mere repetitions or negations were considered as non-valid, see for instance the Urum examples in (222) and (223).

(222) Context: Is the boy catching the fish?

Ođlan dut-m-ier balđ-i.
 boy catch-NEG-IPFV[3] fish-ACC

‘The boy is not catching a fish.’ (Condition: C/OBJ)

(223) Context: Is the man reading the book?

(Xä), kniga-yi oh-ier ärgishi.
 yes book-ACC catch-IPFV[3] man

‘(Yes,) the man is reading a book.’ (Condition: C/OBJ)

All answers which met both of the aforementioned criteria were considered as valid and taken into account for the statistical analysis.

6.2.4 Results

This section presents the results of the focus elicitation study. For the statistical analysis of the data I used a generalized linear mixed effect (GLME) model with the fixed factors F-ARGUMENT (subject vs. object) and F-TYPE (non-identificational vs. corrective) and the random factors SPEAKER and ITEM (only intercepts) by using the glmer function from R’s lme4 library (Bates et al. 2015). In the next step, I compared the full model including the interaction of the two factors to a reduced model without the interaction by using likelihood ratio tests of the function anova. If the goodness of fit test revealed a significant effect of the interaction, pairwise post-hoc Tukey tests were conducted in order to investigate the differences between the conditions. If the interaction appeared to be not significant, further likelihood ratio tests compared the relative fits of the model without the interaction to (i) a model without the factor F-TYPE and (ii) a model without the factor F-ARGUMENT. For each model comparison I report the χ^2 -score, the degrees of freedom and the p -value, which indicate whether the compared models are statistically different from each other.

6.2.4.1 Turkish

The results of the Turkish participants and the distribution of word orders among the four conditions of the experiment (N/SBJ, N/OBJ, C/SBJ, C/OBJ) are reported in Table 6.2.

Table 6.2: Focus elicitation study: Valid Turkish data

	NON-IDENTIFICATIONAL				CORRECTIVE			
	SBJ		OBJ		SBJ		OBJ	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
SOV	11	22.4	43	93.5	41	73.2	43	87.8
OV	-	-	3	6.5	-	-	4	8.2
OSV	38	77.6	-	-	11	19.6	2	4.1
OVS	-	-	-	-	4	7.1	-	-
total	49	100	46	100	56	100	49	100

Table 6.2 illustrates that the Turkish speakers show a preference to realize non-identificational foci (either subject or object) immediately left-adjacent to the verb. Hence, they predominantly produce $O[S]_{\text{FOC}}V$ orders if the focus is on the subject, while they primarily produce $(S)[O]_{\text{FOC}}V$ orders if the focus is on the object. Consider for instance the examples in (224).

(224) Turkish: Item 11

a. Condition: N/SBJ

Muz-u [adam]_{FOC} *yi-yor.*
 banana-ACC man eat-PROG.3

‘THE MAN is eating the banana.’ (Tu03)

b. Condition: N/OBJ

Adam [*muz*]_{FOC} *yi-yor.*
 man banana eat-PROG.3

‘The man is eating A BANANA.’ (Tu04)

Nevertheless, the data in Table 6.2 also reveals some instances of $[S]_{\text{FOC}}OV$ orders, which indicates that Turkish foci can felicitously occur in other positions than the immediately preverbal one. With regard to the corrective focus conditions, the results show a strong preference for canonical orders ((S)OV) in both conditions. By contrast to non-identificational subject foci, which are in the majority of cases realized in the immediately preverbal slot, corrective subject foci are predominantly realized at the beginning of the sentence. Nevertheless, there are eleven answers in which the subject occurs immediately preverbally. This suggests that corrective subject foci may occur in this position, but do not need to. Compare for instance the examples in (225), which indicate that subject foci may occur either in the beginning of the sentence or immediately preverbally.

(225) Turkish: Item 11

a. Condition: C/SBJ

(Hayir,) [erkek]_{FOC} muz yi-yor.
 no boy banana eat-PROG.3

‘No, THE BOY is eating the banana.’ (Tu09)

b. Condition: C/SBJ

(Hayir,) muz-u [bir adam]_{FOC} yi-yor.
 no banana-ACC one man eat-PROG.3

‘No, THE MAN is eating the banana.’ (Tu05)

Moreover Table 6.2 shows four instances in which the corrective subject focus is realized in postverbal position. However, there is no conceivable explanation for this, since from a grammatical point of view the postverbal position can only host background elements, which means that it should not be possible to realize focused elements in this position (Kılıçaslan 2004: 727). Therefore, I assume that these four incidences result from perceptual errors.

The impact of the two factors FOCUSED ARGUMENT and FOCUS TYPE on the occurrence of OSV orders in Turkish is illustrated in Figure 6.2. Figure 6.2 shows that the answers of the Turkish speakers reveal a strong difference between non-identificational and corrective subject foci. Whereas non-identificational subject foci are preferably realized immediately preverbally ($O[S]_{FOC}V$), corrective subject foci are predominantly realized in the beginning of the sentence ($[S]_{FOC}OV$). By contrast, focused objects solely occur left-adjacent to the verb ($S[O]_{FOC}V$), which can be attributed to the fact that this position coincides with the base position of direct objects in Turkish.

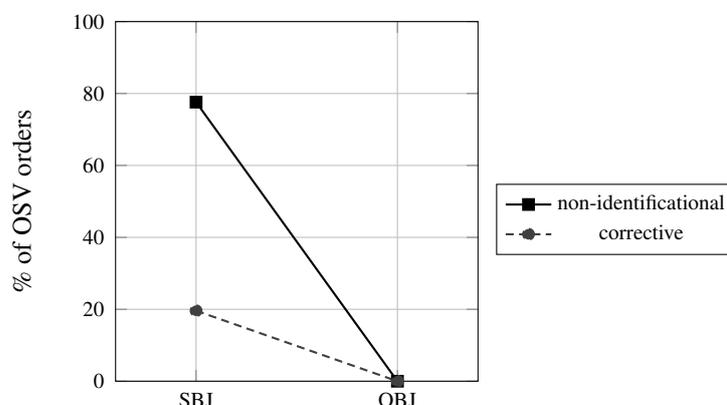


Figure 6.2: Focus elicitation study: OSV orders produced by Turkish speakers

The statistical analysis of the data reveals no significant effect of the interaction between the factors F-TYPE and F-ARGUMENT. This result is also confirmed by a model comparison, which shows that the removal of the interaction from the full model does not lead to a significant loss of information ($\chi^2(1) = 2.47, ns$). However, the likelihood ratio tests comparing the relative fits of the model without the interaction to a model without the factor F-TYPE ($\chi^2(2) = 30.71, p < .001$) and to a model without the factor F-ARGUMENT ($\chi^2(2) = 81.52, p < .001$) reveal that both factors are highly relevant in order to explain the deviance of the results. The winning model is presented in Table 6.3. The positive estimates of both factors indicate that OSV orders occur significantly more often with (a) non-identificational foci than corrective foci and with (b) subject foci than object foci.

Table 6.3: Focus elicitation study: Fixed effect estimates for Turkish OSV orders

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	-6.89	1.23	-5.57	2.43e-08***
F-TYPE	2.67	.57	4.64	3.47e-06***
F-ARGUMENT	5.12	.94	5.39	6.81e-08***

* $p < .05$; ** $p < .01$; *** $p < .001$

6.2.4.2 Russian

The valid answers of the Russian participants and their distribution among the four conditions of the experiment (N/SBJ, N/OBJ, C/SBJ, C/OBJ) are summarized in Table 6.4.

Table 6.4: Focus elicitation study: Valid Russian data

	NON-IDENTIFICATIONAL				CORRECTIVE			
	SBJ		OBJ		SBJ		OBJ	
	n	%	n	%	n	%	n	%
SVO	47	75.8	59	100	5	8.1	59	100
OVS	15	24.2	-	-	56	90.3	-	-
SOV	-	-	-	-	1	1.6	-	-
total	62	100	59	100	62	100	59	100

The data in Table 6.4 reveal that the Russian speakers show a general preference to realize non-identificational foci in the canonical SVO order. Consider for instance the examples in (226). Nevertheless, Table 6.4 shows

that there are fifteen instances with the non-identificational subject focus being realized in clause-final position (OV[S]_{Foc}).

(226) Russian, Item 11

a. Condition: N/SBJ

[*Muzhchina*]_{Foc} *yest'* *banan.*
man eat:IPFV.3.SG banana:ACC

'THE MAN is eating the banana.' (Ru03)

b. Condition: N/OBJ

Muzhchina kushayet [*banan*]_{Foc}.
man eat:IPFV.3.SG banana:ACC

'The man is eating A BANANA.' (Ru04)

With regard to the corrective conditions, the participants show a preference for clause-final foci. They predominantly produce OV[S]_{Foc} orders with subject foci and SV[O]_{Foc} orders with object foci. Compare the examples in (227). Furthermore, Table 6.4 reveals five instances of corrective subject foci with [S]_{Foc} VO orders as well one verbfinal construction ([S]_{Foc}OV), which implies that the position of corrective foci is flexible.

(227) Russian, Item 11

a. Condition: C/SBJ

(*Net,*) *banan yest'* [*muzhchina*]_{Foc}.
no banana eat:3.SG man

'No, THE MAN is eating the banana.' (Ru01)

b. Condition: C/OBJ

(*Net,*) *muzhchina yest'* [*banan*]_{Foc}.
no man eat:3.SG banana

'No, the man is eating A BANANA.' (Ru06)

The amount of OVS orders triggered by the two factors FOCUSED ARGUMENT and FOCUS TYPE is also illustrated in Figure 6.3.

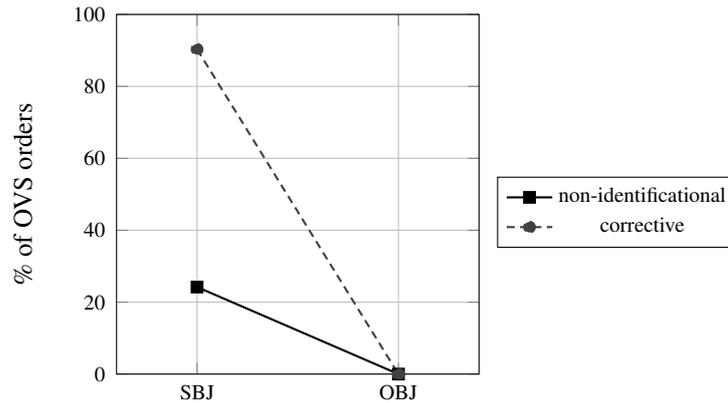


Figure 6.3: Focus elicitation study: OVS orders produced by Russian speakers

The statistical analysis of the Russian data reveals a significant effect of the interaction of the factors FOCUS TYPE and FOCUSED ARGUMENT ($p < .01$). This finding is also supported by the model comparison which shows that a model including the interaction fits significantly better to the results than a model without this interaction ($\chi^2(1) = 8.41, p < .05$). Consider the winning model in Table 6.5.

Table 6.5: Focus elicitation study: Fixed effect estimates for Russian non-canonical orders

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	-6.08	1.71	-3.55	.00037***
F-TYPE	-.02	1.47	-.01	.98506
F-ARGUMENT	10.61	2.63	4.03	5.45e-05***
F-TYPE^F-ARGUMENT	-6.8	2.58	-2.63	.00851**

* $p < .05$; ** $p < .01$; *** $p < .001$

Pairwise post-hoc Tukey tests indicate that Russian speakers produced significantly more OVS orders with (a) corrective subject foci than with corrective object foci ($p < .001$), (b) non-identificational subject foci than with non-identificational object foci ($p < .001$), and (c) corrective subject foci than with non-identificational subject foci ($p < .001$), see Table 6.6.

Table 6.6: Focus elicitation study: Pairwise post-hoc comparisons (Russian)

contrast	Estimate	SE	z value	p value
N/OBJ - C/OBJ	.027	1.47	.019	1
C/SBJ - C/OBJ	-10.61	2.63	-4.035	.0003***
N/SBJ - N/OBJ	-3.81	1.19	-3.177	.0081**
N/SBJ - C/SBJ	6.83	2.10	3.239	.0066**

* $p < .05$; ** $p < .01$; *** $p < .001$

6.2.4.3 Urum

Previous studies on Urum have shown that the word order has undergone a change from OV to a language with a free placement of the V within the VP (cf. Chapter 2). This change becomes also apparent in the descriptions of the Urum participants, consider Table 6.7¹.

Table 6.7: Focus elicitation study: Valid Urum data

	NON-IDENTIFICATIONAL				CORRECTIVE			
	SBJ		OBJ		SBJ		OBJ	
	n	%	n	%	n	%	n	%
SVO	33	60	46	83.6	41	70.7	11	57.1
OVS	16	29.1	6	10.9	15	25.9	1	4.8
SOV	3	5.5	3	5.5	-	-	7	33.3
OSV	3	5.5	-	-	2	3.4	1	4.8
total	55	100	55	100	58	100	19	100

Table 6.7 illustrates that the Urum speakers produced both verbmedial (SVO, OVS) and verbfinal (SOV, OSV) orders. However, the number of verbmedial constructions is significantly higher, which might be explained by priming effects from the context questions (cf. Section 6.2.2.2).

¹What is striking is the little number of valid constructions in the corrective object focus condition, which might probably be attributed to the little size of the objects in the context scene and that the participants simply forgot about the objects.

For the further statistical analysis, the V-medial and V-final constructions will be analyzed separately. Consider Tables 6.8 and 6.9.

Table 6.8: Focus elicitation study: Urum V-medial constructions

	NON-IDENTIFICATIONAL				CORRECTIVE			
	SBJ		OBJ		SBJ		OBJ	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
SVO	33	67.3	46	88.7	41	74.5	11	91.7
OVS	16	32.7	6	11.3	15	25.5	1	8.3
total	49	100	53	100	56	100	12	100

Table 6.9: Focus elicitation study: Urum V-final constructions

	NON-IDENTIFICATIONAL				CORRECTIVE			
	SBJ		OBJ		SBJ		OBJ	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
SOV	3	50	3	100	-	-	7	100
OSV	3	50	-	-	2	100	-	-
total	6	100	3	100	2	100	7	100

Table 6.8 shows that the Urum native speakers have a general preference for SVO orders among all four conditions. Consider for instance the examples in (228). Nevertheless, the data in Table 6.8 indicates that subject foci (both non-identificational and corrective) are more likely to occur with OVS orders than object foci.

(228) Urum, Item 10

a. Condition: N/SBJ

[Äriif]_{FOC} *oh-ier* *gazet-i.*
man read-IPFV[3] newspaper-ACC

‘THE MAN is reading the newspaper.’ (Urum08)

b. Condition: C/SBJ

Yox, [ärgishi]_{FOC} *yoll-ier* *pismo-yi.*
no man send-IPFV[3] letter-ACC

‘No, THE MAN is sending the letter.’ (Urum02)

The impact of the two factors FOCUSED ARGUMENT and FOCUS TYPE on the occurrence of OVS orders in Urum is also summarized in Figure 6.4.

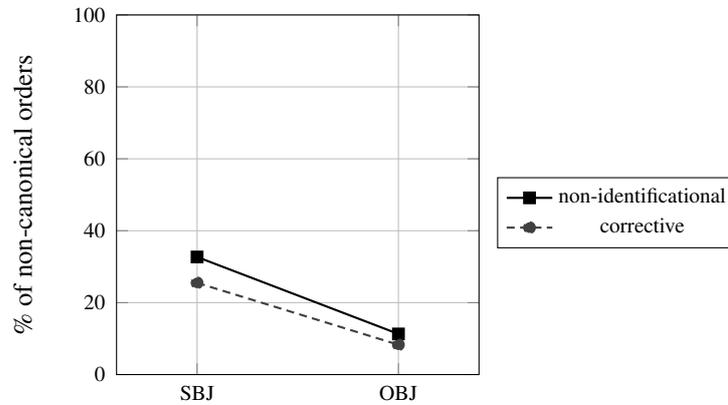


Figure 6.4: Focus elicitation study: OVS orders produced by Urum speakers

The statistical analysis of the Urum data reveals that a model including the two-way interaction of the factors F-TYPE and F-ARGUMENT is not significantly different from a model without this interaction ($\chi^2(1) = .15, ns$). Further model comparisons between a model without the interaction to a model without the factor F-TYPE ($\chi^2(2) = .75, ns$) and a model without the factor F-ARGUMENT ($\chi^2(2) = 16.16, p < .01$) show that only the factor F-ARGUMENT is relevant in order to explain the results, whereas the factor F-TYPE can be removed from the model without a significant loss of information. Consider the winning model in Table 6.10.

Table 6.10: Focus elicitation study: Fixed effect estimates for Urum OVS orders

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	-2.56	.57	-4.43	9.38e-06***
F-ARGUMENT	-1.47	.51	2.94	.00323**

* $p < .05$; ** $p < .01$; *** $p < .001$

The V-final constructions summarized in Table 6.9 reveal that subject foci induce more OSV orders than object foci. Moreover, the data in Table 6.9 show a difference between the two focus types: Whereas non-identificational subject foci induced both $[S]_{\text{Foc}}OV$ and $O[S]_{\text{Foc}}V$ orders, corrective subject foci only triggered $O[S]_{\text{Foc}}V$ orders. Moreover Table 6.9 reveals one instance of an OSV order with a corrective object focus. Consider the example in (229).

(229) Urum, Item 11, Condition: C/OBJ

[*Banan*]_{Foc} *muzhchina yest*’.
 banana man eat-IPFV[3]

‘The man is eating A BANANA.’ (Urum02)

The example in (223) is of particular interest because it implies that the position of foci in Urum is flexible, i.e., foci may not only occur postverbally (OV[S]_{Foc}) or immediately preverbally (O[S]_{Foc}V), but also in the beginning of a sentence ([O]_{Foc}SV). However, obviously the number of V-final constructions is too small in order to draw reliable results.

In sum, the results of the focus elicitation study provide evidence for the assumption that the position of foci in Urum is depending on the type of constructions that the speakers use: When using V-medial constructions, foci occur either in the beginning of the sentence or clause-finally. When using V-final constructions, foci occur either in the beginning of the sentence or immediately preverbally. The statistical analysis of the V-medial constructions shows that only the FOCUSED ARGUMENT (subject vs. object) has a significant effect on the appearance of clause-final foci in Urum, while the factor FOCUS TYPE has no significant effect. However, the factor might have an effect on the occurrence of immediately preverbal foci. However, this could not be proved due to the little amount of V-final constructions.

6.2.5 Summary and discussion

The results of the elicitation study for the three different languages can be summarized as follows:

- **Turkish:** Subject foci occur either in the beginning of the sentence ([S]_{Foc}OV) or immediately preverbally (O[S]_{Foc}V). The statistical analysis of the data indicates that OSV orders are more likely to occur with (a) subject than object foci and with (b) non-identificational foci than corrective foci.
- **Russian:** Subject foci occur either in the beginning of the sentence ([S]_{Foc}VO) or clause-finally (OV[S]_{Foc}). The statistical analysis reveals a significant interaction of the two factors F-TYPE and F-ARGUMENT. Pairwise post-hoc Tukey tests show that OVS orders in Russian are more likely to occur with (a) corrective subject than corrective object foci, (b) non-identificational subject foci than non-identificational

object foci and (c) corrective subject foci than non-identificational subject foci.

- **Urum:** Within V-medial constructions subject foci occur either in the beginning of the sentence ($[S]_{\text{Foc}} \text{VO}$) or clause-finally ($\text{OV}[S]_{\text{Foc}}$). With V-final constructions subject foci occur either in the beginning of the sentence ($[S]_{\text{Foc}} \text{OV}$) or immediately preverbally ($\text{O}[S]_{\text{Foc}} \text{V}$). The statistical analysis of the V-medial data reveals that OVS orders are more likely to occur with subject foci than with object foci. By contrast to Turkish and Russian, the Urum data does not show a significant effect of the factor FOCUS TYPE.

In a nutshell, the results showed that all three languages in the study have the possibility to express focus either *in situ* (i.e., in their base positions) or in certain *ex situ* positions. Moreover the results of the study confirmed the hypothesis that subject foci are cross-linguistically more likely to occur with non-canonical structures than object foci. However, the study also revealed some differences between the three investigated languages. Whereas foci in Turkish are restricted to the preverbal field, i.e., they occur either in the beginning of the sentence or immediately preverbally (cf. Section 6.2.4.1), foci in Russian occur either in the beginning of the sentence or clause-finally (cf. Section 6.2.4.2). By contrast, the results of the Urum elicitation task showed that foci may occur either in the beginning of the sentence, immediately preverbally or clause-finally (cf. Section 6.2.4.3). Finally, by contrast to the Turkish and Russian speakers, the Urum speakers also produced orders with the focused object in the beginning of the sentence, which implies that the position foci in Urum seems to be very flexible.

The results of the focus elicitation study are generally in line with the results found by previous production studies on the interaction of focus and word order (cf. for instance Kallestinova 2007 or Skopeteas and Fanselow 2010a who also found a significant effect of the FOCUSED ARGUMENT on the structure of the clause). Though all three languages in the study showed a significant interaction between focus and word order, the statistical analysis reveals that the effect of the focused argument was much stronger in Turkish and Russian than in Urum. This finding also supports the results by Skopeteas and Fanselow (2010a) who observed that the effect of the FOCUSED ARGUMENT on syntax differs across languages.

Furthermore, the results of the study showed that the interaction of focus and word order can be influenced by the FOCUS TYPE. Whereas non-canonical orders in Turkish (=OSV) occurred significantly more often with non-identificational foci than with corrective foci, the Russian data revealed exactly the reverse preference. This contrast is surprising, because it has been claimed for both languages that non-identificational foci are more flexible than identificational foci (see e.g., Kornfilt 1997 for Turkish; and Zybatov 1999 for Russian). The contrast between Russian and Turkish might be an artifact of priming, since the word order preferences correspond exactly to the linearization used in the context questions, i.e., Russian: N/SBJ SVO, C/SBJ OVS, Turkish: N/SBJ OSV, C/SBJ SOV. By contrast to Turkish and Russian, the statistical analysis of the Urum data did not show a significant effect of the FOCUS TYPE. This again might result from priming effects, since both the non-identificational and the corrective subject focus questions were SVO orders (cf. Section 6.2.2.2). However, since the analysis revealed a significant effect of the factor FOCUSED ARGUMENT, i.e., OVS orders occurred significantly more often with subject foci than with object foci, the general preference for SVO over OVS orders in Urum might possibly rather result from economic considerations than from priming effects. In sum, the results of the study again confirm the findings by Skopeteas and Fanselow (2010a) who showed that the correlation of FOCUS TYPE and word order differs across languages.

6.2.6 Interim conclusions

The results of the focus elicitation study are three-fold. First of all, the results confirm the assumption that there is a cross-linguistic asymmetry regarding the FOCUSED ARGUMENT, i.e., subject foci are cross-linguistically more likely to occur with non-canonical orders (OVS, OSV) than non-subject foci. Secondly, the factor FOCUS TYPE (non-identificational vs. corrective) seems to have an effect on the interaction of focus and word order in Turkish and Russian, but not in Urum. Thirdly, the Urum results revealed that the position of foci in Urum is very flexible, i.e., foci may felicitously occur either in the beginning of the sentence, in the middle field (i.e., immediately preverbally) or postverbally. However, since the number of immediately preverbal foci is very low (see Table 6.7) further investigation is needed to test the validity of this assumption.

Taking everything into consideration, the results of the focus elicitation study provide evidence to assume that the change in the word order of Urum

from OV to a language with a free position of the verb within the VP led to an extension of the informational structural possibilities of the language, i.e., whereas foci in Turkish for instance are not allowed to occur postverbally, Urum felicitously allows postverbal foci. Finally, the results of the Urum elicitation study showed that Urum also allows object foci to occur in the beginning of a sentence ($[O]_{\text{Foc}}SV$) which provides evidence to assume that foci in Urum are by contrast to Turkish not required to occur immediately adjacent to the verb.

6.3 Acceptability judgment

6.3.1 Introduction

The acceptability judgment task presented in the following pursues two major goals. Firstly, it attempts to prove whether the observed differences regarding the effect of the F-TYPE (non-identificational vs. corrective) in Turkish and Russian (cf. Section 6.2.5) are an artefact of priming. Secondly, it aims to validate the hypothesis that the interaction of syntax and information structure in Urum is influenced by language contact, by showing that Urum speakers consider both immediately preverbal and clause-final foci as equally acceptable.

The acceptability judgment task consists of two parallel experiments, which test the effect of focus on the linearization of subjects and objects in the three object languages Turkish, Russian and Urum. As there is no written variety of Urum, the study uses auditory stimuli. The investigation of the interaction of focus and word order has been subject to a number of previous acceptability studies. Keller and Alexopoulou (2001) for instance examined the effect of word order and accent placement on the realization of information structure in Standard Greek by conducting two acceptability judgment tasks. For the first experiment they used a 2x2 factorial design with the factors WORD ORDER (6 levels: SVO, OVS, VSO, VOS, SOV and OSV) and CONTEXT (5 levels: null, all focus, subject focus, object focus, and verb focus). The experimental items consisted of context questions and target sentences. Word order was manipulated within the target sentences, while the factor context was manipulated within the questions. The results of the experiment revealed a significant interaction of the two factors, which indicates that focus influences word order preferences in Standard Greek. The second experiment was designed in order to investigate the interaction

of word order, accent placement and clitic doubling. Therefore, Keller and Alexopoulou (2001) manipulated four factors: WORD ORDER (3 levels: SVO, OVS, VSO), CLITIC DOUBLING (2 levels: clitic doubled object, non-doubled object), ACCENT PLACEMENT (2 levels: accent on subject, accent on object) and CONTEXT (5 levels: null, all focus, subject focus, object focus, and verb focus). The statistical analysis of the results showed significant interactions of word order and context, clitic doubling and context as well as accent and context. Moreover, the results revealed that word order is less important for information structure in Standard Greek than clitic doubling and accent placement.

Another acceptability judgment task that used auditory stimuli was conducted by Skopeteas et al. (2009) who investigated the interaction of focus with word order and prosody in Georgian. Within the study they manipulated three different factors: CONTEXTUALITY (5 levels: all-new, subject focus, direct object focus, indirect object focus, multiple focus), WORD ORDER (4 levels: SVO, SOV, OVS, OVS) and PROSODY (2 levels: congruent, non-congruent). The context was manipulated within the questions, while the word order and the prosodic realization were manipulated within the answers. Each context question was presented with two answers having the same syntactic structure, but two different intonation patterns (congruent vs. non-congruent). The results of their study revealed significant main effects of all three manipulated factors. Furthermore, the results showed that prosodic infelicities might have an additive effect to word order infelicities, whereas prosodic felicities (i.e., congruent prosody) can override word order infelicities to a certain degree.

By contrast to other studies which used auditory stimuli, the present acceptability judgment task aims to investigate the interaction of focus and word order with the exclusion of the factor prosody. The decision to exclude prosody as a factor within the experiments is related to the by observation that prosody can override word order infelicities to a certain extent (cf. Skopeteas et al. 2009) which should be avoided in the present study, because it concentrates on the syntactic possibilities to express information structure.

6.3.2 Method

6.3.2.1 Participants

The experiments were conducted with 16 native speakers of Turkish, 16 native speakers of Russian as well as with 16 native speakers of Urum. The

Turkish native speakers (7 female, 9 male) were tested at the University of Bielefeld (Germany) and were bilingual in German and Turkish. The age of the participants ranged from 21-36 with a mean age of 27.7 years. All Turkish participants were asked to rate the frequency of using Turkish on a scale from 1 (=rarely) to 5 (=very frequently/several hours a day), which resulted in an average of 3.8. The 16 speakers of Russian and Urum were tested in Tbilisi (Georgia). They were all born in Georgia but stated that Russian or Urum, respectively, is their native language. The Russian speakers (11 female, 5 male) ranged in age from 16-54 with an average of 32.69 years. The Urum speakers (10 female, 6 male) ranged from 17-76 with a mean age of 45.5 years. All Russian speakers were bilingual in Georgian. All Urum speakers were moreover fluent in Russian and for the most part also in Georgian.

6.3.2.2 Material and design

The method used in this study is an acceptability judgment task of controlled question and answer (Q/A) pairs. The study consists of two parallel experiments: Experiment 1 investigates the effect of focus on the linearization of subjects and objects in V-medial constructions. Experiment 2 analyzes the effect of focus on the linearization of subjects and objects in V-final constructions. For each of the two experiments I used a 2x2x2 factorial design with the factors FOCUS TYPE (2 levels: non-identificational vs. corrective), FOCUSED ARGUMENT (2 levels: subject vs. object) and ARGUMENT ORDER (2 levels: canonical vs. non-canonical). Whereas the factors F-TYPE and F-ARGUMENT were manipulated in the context sentences (cf. the design in Table 6.11), the factor A-ORDER was manipulated in the target answers.

Table 6.11: Experimental design of focus acceptability judgment (context conditions)

		F-TYPE	
		non-identificational	corrective
F-ARGUMENT	subject	N/SBJ	C/SBJ
	object	N/OBJ	C/OBJ

Each experiment consisted of 16 items. The items were short sequences comprising a context sentence followed by either a question word (in case of the non-identificational conditions) or a question phrase (in case of the corrective conditions) and two answering possibilities which contained the target structures.

Each of the four context sentences was presented together with two answers, which only differ with respect to the linearization of the arguments (canonical vs. non-canonical order). Consider for instance the V-medial Turkish Q/A-pairs in (230)-(233). Please note that all direct objects in the Turkish target sentences are marked with the accusative suffix *-(y)I*, since bare objects in Turkish have to be realized immediately left-adjacent to the verb and are not allowed to occur in any other position (e.g., Kornfilt 1997).

(230) Turkish: N/SBJ

Biri taşıyor çanta-yı. Kim?
someone carry-PROG[3] bag-ACC who

‘Someone is carrying the bag. Who?’

a. *Kadın taşıyor çanta-yı.*
woman carry-PROG[3] bag-ACC

‘A woman is carrying the bag.’ (SVO)

b. *Çantayı taşıyor kadın.* (OVS)

(231) Turkish: N/OBJ

Kadın taşıyor bir şey. Ne-yi?
woman carry-PROG[3] one thing what-ACC

‘A woman is carrying something. What?’

a. *Kadın taşıyor çantayı.* (SVO)

b. *Çantayı taşıyor kadın.* (OVS)

(232) Turkish: C/SBJ

Erkek okuyor kitab-ı. Değil mi?
boy read-PROG[3] book-ACC not Q

‘A boy is reading the book. Is that true?’

a. *Hayir, kız okuyor kitab-ı.*
no girl read-PROG[3] book-ACC

‘No, a girl is reading the book.’ (SVO)

b. *Hayir, kitabı okuyor kız.* (OVS)

(233) Turkish: C/OBJ

Kız okuyor dergi-yi. Değil mi?
girl read-PROG[3] magazine-ACC not Q

‘A girl is reading the magazine. Is that true?’

a. *Hayir, kız okuyor kitabı.* (SVO)

b. *Hayir, kitabı okuyor kız.* (OVS)

For the Russian translations of the four Q/A-pairs, consider the examples in (234)-(237).

(234) Russian: N/SBJ

Kto-to nesyet sumku. Kto?
 someone carry:IPFV[3] bag:ACC.F who

‘Someone is carrying the bag. Who?’

a. *Zhenshchina nesyet sumku.*
 woman carry:IPFV[3] bag:ACC.F

‘A woman is carrying the bag.’ (SVO)

b. *Sumku nesjet zhenshchina.* (OVS)

(235) Russian: N/OBJ

Zhenshchina nesyet chto-to. Chto?
 woman carry:IPFV[3] something what

‘A woman is carrying something. What?’

a. *Zhenshchina nesjet sumku.* (SVO)

b. *Sumku nesjet zhenshchina.* (OVS)

(236) Russian: C/SBJ

Mal’chik chitayet knigu. Pravda?
 boy read:IPFV[3] book:ACC.F true

‘A boy is reading the book. Is that true?’

a. *Net, devochka chitayet knigu.*
 no girl read:IPFV[3] book:ACC.F

‘No, a girl is reading the book.’ (SVO)

b. *Net, knigu chitayet devochka.* (OVS)

(237) Russian: C/OBJ

Devochka chitayet zhurnal. Pravda?
 girl read:3.SG magazine:ACC true

‘A girl is reading the magazine. Is that true?’

a. *Net, devochka chitayet knigu.* (SVO)

b. *Net, knigu chitayet devochka.* (OVS)

For the corresponding Urum translations finally consider the examples in (238)-(241).

(238) Urum: N/SBJ

Biri gäti-rer sumka-yi. Kim?
someone carry-IPFV[3] bag-ACC who

‘Someone is carrying the bag. Who?’

a. *Ĝari gäti-rer sumka-yi.*
woman carry-IPFV[3] bag-ACC

‘A woman is carrying the bag.’ (SVO)

b. *Sumkayi gätirer ğari.* (OVS)

(239) Urum: N/OBJ

Ĝari gäti-rer bişe. Nä?
woman carry-IPFV[3] something what

‘A woman is carrying something. What?’

a. *Ĝari gätirer sumkayi.* (SVO)

b. *Sumkayi gätirer ğari.* (OVS)

(240) Urum: C/SBJ

Oĝlan oh-ier kniga-yi. Düz-dür?
boy read-IPFV[3] book-ACC true-COP

‘A boy is reading the book. Is that true?’

a. *Yox, ğız oh-ier kniga-yi.*
no girl read-IPFV[3] book-ACC

‘No, a girl is reading the book.’ (SVO)

b. *Yox, knigayi ohier ğız.* (OVS)

(241) Urum: C/OBJ

Ĝız oh-ier gazet-i. Düz-dür?
girl read-IPFV[3] newspaper-ACC true-COP

‘A girl is reading the newspaper. Is that true?’

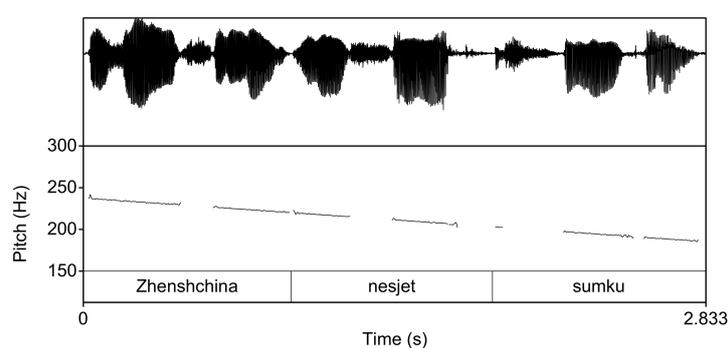
a. *Yox, ğız ohier knigayi.* (SVO)

b. *Yox, knigayi ohier ğız.* (OVS)

Due to the fact that Urum has no writing tradition the study only used auditory stimuli. The native speakers who recorded the stimuli were instructed to realize the context questions with a realistic prosodic contour, containing a pitch accent on the focused constituents. In order to reduce the effect of

prosody to a minimum, all target sentences were recorded word by word. Subsequently, all recordings were resynthesized in Praat in order to have a flat intonation contour at 235 Hz and composed to target sentences. Finally, I added a declination to the global intonation contour of the target sentences, such that the difference between the left edge of the first word and the right edge of the last word is 50 Hz. Consider for instance the pitch track of a sample stimulus in Figure 6.5.

Figure 6.5: Manipulated pitch contour of SVO target sentence (Item 02, Russian)



To ensure that every participant gets every set of targets with only one of the four possible contexts, the study used a Latin square design, yielding four questionnaire versions with 32 Q/A-pairs (8 sentences x 4 contexts). Thus, every Q/A-pair was rated by exactly four speakers. The items of the two experiments were presented together with two other experiments on the interaction of topics and word order (cf. Section 7.3). Hence, the items of the four experiments functioned as distractors to each another. The order of the items was pseudo-randomized for every participant. For a list of all experimental items used in the focus acceptability judgment task, see Appendix B.

6.3.2.3 Procedure

The procedure of the study was explained to the participants in their respective native languages. Within the instructions the participants were told that they will listen to several different Q/A-pairs, each consisting of a question followed by two continuations (A and B), which are prosodically manipulated. After listening to both continuations, the participants were asked to evaluate how good each of these responses fits to the respective context on a 5-point Likert scale from 1 (=not acceptable at all) to 5 (=fits perfectly to the preceding context). The reasons for presenting both continuations

immediately one after another are two-fold: Firstly, presenting two sentences which only differ with regard to the linearization of their arguments should minimize the risk that participants rate targets as ‘bad’ only because of their semantic contents. Secondly, the participants should concentrate on differences regarding the interpretation of the two word orders and consciously decide which answer they consider to be more appropriate in a given context.

The auditory stimuli were presented to the participants via high performance headphones with the help of the experimental software DMDX. Between each question and the answering possibilities there was a 2-second pause. To facilitate the procedure for the participants, the acceptability ratings were collected on a separate answer sheet. After every rating the participants had to press ‘space bar’ on the computer keyboard in order to listen to the next Q/A pair. The experiment started with three practice trials in order to illustrate the procedure of the study which provided the opportunity to clarify any uncertainties.

6.3.3 Results

This section presents the results of the focus acceptability judgment task. For the statistical analysis of the data I calculated a linear mixed effect (LME) model with the fixed factors F-TYPE, F-ARGUMENT and A-ORDER and the random factors SPEAKER and ITEM (only intercepts) using the lmer function from R’s lme4 library (Bates et al. 2015). In the next step, I used the likelihood ratio test of the function anova in order to compare the full model including the three-way-interaction of the factors F-TYPE, F-ARGUMENT and A-ORDER to a model without this interaction. In order to facilitate the interpretation of the results, I simplified the data for the further analysis by separating it into two data sets, one for non-identificational foci and one for corrective foci. For each of the two data sets I calculated another LME model with the fixed factors F-ARGUMENT and A-ORDER and the random factors SPEAKER and ITEM (only intercepts). The fits of the full models were compared to a model without the interaction. In cases where the model comparison reveals a significant effect of the interaction, pairwise comparisons using Tukey HSD were conducted. The effect size of the differences was calculated by using Cohen’s d which is the difference in the means of the two groups divided by the average of their standard deviations (Cohen 1988). Cohen distinguished three levels of effect size: small ($d = .2$), medium ($d = .5$) and large ($d = .8$). This implies that if the two means do not differ by at least .2 standard deviations, the difference is trivial even though it

is statistical significant. The results of the Tukey HSD and the effect sizes are only reported where the model comparisons reveal a significant interaction. In cases where the model comparisons do not reveal a significant interaction, further likelihood ratio tests were performed with reduced models in order to investigate which model fits best to the results.

6.3.3.1 Turkish

6.3.3.1.1 V-medial experiment

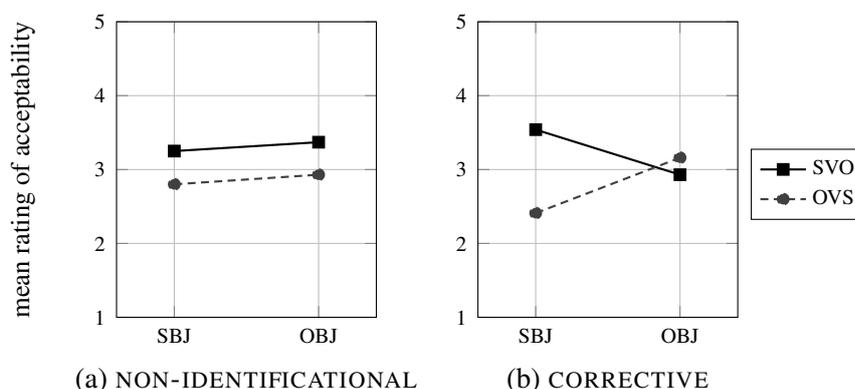
The mean acceptability ratings of the Turkish speakers for SVO and OVS orders with the four different contexts (N/SBJ, N/OBJ, C/SBJ, C/OBJ) are summarized in Table 6.12.

Table 6.12: Focus acceptability judgment task: SVO vs. OVS (Turkish)

	NON-IDENTIFICATIONAL		CORRECTIVE	
	SBJ	OBJ	SBJ	OBJ
SVO	3.25	3.37	3.54	2.93
OVS	2.8	2.93	2.41	3.16

The data in Table 6.12 reveal that Turkish speakers show a general preference for SVO over OVS orders in the non-identificational conditions, which seems to be not affected by the manipulated argument. However, in the corrective conditions the speakers show a strong preference for SVO orders with subject foci, whereas they prefer OVS orders with object foci. Consider also Figure 6.6, which illustrates the effect of the factors F-ARGUMENT (subject vs. object) and A-ORDER (SVO vs. OVS) separately for the two different focus types.

Figure 6.6: Focus acceptability judgment task: Mean ratings of Turkish speakers for SVO/OVS orders



The statistical analysis of the data shows a significant effect of the interaction of the three factors F-TYPE, F-ARGUMENT and A-ORDER. This implies that the F-ARGUMENT \times A-ORDER interaction is different for the two focus types. The significance of the interaction was moreover estimated with a log-likelihood test between models, which shows that a model including the interaction fits significantly better to the results than a model without the interaction ($\chi^2(4) = 18.04$ $p < .01$).

For the further statistical analysis I calculated two independent LME models on the acceptability ratings for the two different focus types. The LME analysis of the non-identificational focus data reveals no significant effects, neither for the interaction between the factors F-ARGUMENT and A-ORDER nor for any of the two main factors. However, the model comparison shows a small effect of the factor A-ORDER ($\chi^2(2) = 6.48$, $p < .05$), which indicates that a model including this factor can explain the deviance of the results slightly better than a model without the factor. Consider the winning model in Table 6.13. The factor F-ARGUMENT ($\chi^2(2) = .3$, *ns*) as well as the two-way interaction ($\chi^2(1) = .25$, *ns*) are not significant. This finding is also supported by the results of the pairwise post-hoc comparisons using the Tukey HSD test which imply that SVO orders are significantly preferred over OVS orders, independent from the focused argument.

Table 6.13: Focus acceptability judgment task: Fixed effect summary for Turkish OVS orders with non-identificational foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr(> t)</i>
(Intercept)	2.83	.11	23.84	<2e-16***
A-ORDER	.42	.16	2.56	.0112*

* $p < .05$; ** $p < .01$; *** $p < .001$

By contrast, the LME analysis of the corrective focus data reveals a highly significant effect of the interaction ($p < .001$). This finding is also supported by the likelihood-ratio test which reveals that a model including the interaction of the two factors F-ARGUMENT and A-ORDER ($\chi^2(1) = 17.35$, $p < .001$) fits significantly better to the results than a model without the interaction. The winning model is reported in Table 6.14.

Table 6.14: Focus acceptability judgment task: Fixed effect summary for Turkish OVS orders with corrective foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr</i> (> <i>t</i>)
(Intercept)	3.16	.16	18.75	<2e-16***
F-ARGUMENT	-.76	.23	-3.3	.00114**
A-ORDER	-.22	.24	-.92	.35803
F-ARGUMENT [^] A-ORDER	1.41	.32	4.31	2.67e-05***

* $p < .05$; ** $p < .01$; *** $p < .001$

Pairwise post-hoc comparisons using the Tukey HSD test show that (i) subject foci are significantly more acceptable with SVO than with OVS orders ($p < .001$), (ii) OVS orders are significantly more acceptable with object than with subject foci ($p < .01$), and (iii) SVO orders are more acceptable with subject than with object foci ($p < .05$). The strength of the differences are also supported by the Cohen's *d*. Consider the results for the pairwise comparisons in Table 6.15.

Table 6.15: Focus acceptability judgment task: Tukey HSD (Turkish, corrective, SVO/OVS)

contrast	diff.	SE	95% confidence interval		<i>p</i> value	Cohen <i>d</i>
			lower	upper		
SBJ.OVS - OBJ.OVS	-.75	1.20	-1.34	-.158	.0065**	-.65 (<i>M</i>)
OBJ.SVO - OBJ.OVS	-.23	1.20	-.832	.362	.7393	.21 (<i>S</i>)
SBJ.SVO - SBJ.OVS	1.11	1.20	.547	1.71	<.001***	.90 (<i>L</i>)
SBJ.SVO - OBJ.SVO	.61	1.20	.026	1.20	.0366*	.49 (<i>M</i>)

* $p < .05$; ** $p < .01$; *** $p < .001$

In sum, the results of the non-identificational data revealed no significant differences. By contrast, the statistical analysis of the corrective focus data showed that OVS orders are significantly more acceptable with object than with subject foci, whereas SVO orders are significantly more acceptable with subject than with object foci, which implies that Turkish speakers do not like postverbal foci.

6.3.3.1.2 V-final experiment

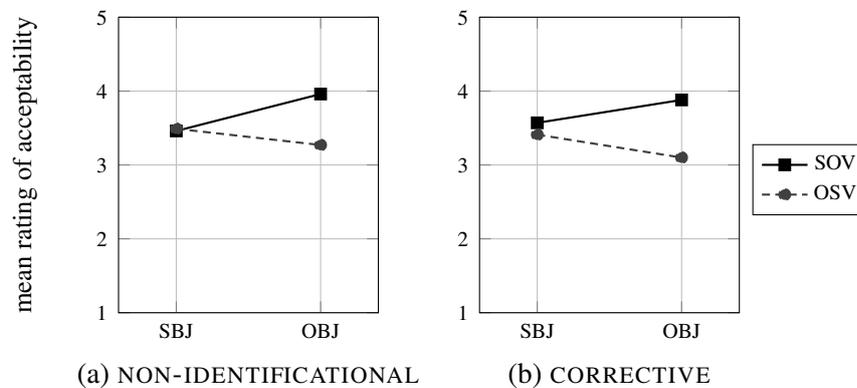
The mean acceptability ratings of the Turkish participants for SOV and OSV orders with non-identificational and corrective subject and object foci are presented in Table 6.16.

Table 6.16: Focus acceptability judgment task: SOV vs. OSV (Turkish)

	NON-IDENTIFICATIONAL		CORRECTIVE	
	SBJ	OBJ	SBJ	OBJ
SOV	3.46	3.96	3.57	3.88
OSV	3.49	3.27	3.41	3.1

The data in Table 6.16 illustrate that OSV orders in Turkish are significantly more acceptable with subject than with object foci, independent of the focus type. Consider also Figure 6.7.

Figure 6.7: Focus acceptability judgment task: Mean ratings of Turkish speakers for SOV/OSV orders



The statistical analysis of the data reveals a significant effect of the interaction of the factors F-ARGUMENT and A-ORDER ($p < 0.5$), but no effect of the three-way-interaction. This finding is also confirmed by the further analysis. The LME analysis of the non-identificational focus data reveals a significant effect of the interaction of F-ARGUMENT and A-ORDER ($p < .05$). This result is also supported by a likelihood ratio test which reveals that the removal of the interaction would lead to a significant loss of information ($\chi^2(1) = 5.99, p < .05$). The winning model is reported in Table 6.17.

Table 6.17: Focus acceptability judgment task: Fixed effect summary for Turkish OSV orders with non-identificational foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr</i> (> <i>t</i>)
(Intercept)	3.26	.14	22.65	<2e-16***
F-ARGUMENT	.24	.21	1.12	.26521
A-ORDER	.65	.2	3.26	.00168**
F-ARGUMENT [^] A-ORDER	-.74	.3	-2.44	.01635*

* $p < .05$; ** $p < .01$; *** $p < .001$

Pairwise comparisons using the Tukey HSD test moreover indicate that non-identificational object foci are significantly more acceptable with SOV than with OSV orders ($p < .01$). Consider Table 6.18.

Table 6.18: Focus acceptability judgment task: Tukey HSD (Turkish, non-identificational, SOV/OSV)

contrast	diff.	SE	95% confidence interval		<i>p</i> value	Cohen <i>d</i>
			lower	upper		
SBJ.OSV - OBJ.SOV	.22	1.13	-.312	.757	.7050	-.19
OBJ.SOV - OBJ.OSV	.68	1.13	.183	1.19	.0027**	.61 (<i>M</i>)
SBJ.SOV - SBJ.OSV	-.02	1.13	-.58	.53	.9993	-.03
SBJ.SOV - OBJ.SOV	-.49	1.13	-1.02	.036	.0781	-.48 (<i>S</i>)

* $p < .05$; ** $p < .01$; *** $p < .001$

The analysis of the corrective focus data also reveals a significant effect of the interaction of F-ARGUMENT and A-ORDER ($p < .05$). This result is confirmed by a likelihood ratio test which shows that a model including the two-way interaction fits significantly better to the results than a model without the interaction ($\chi^2(1) = 4.35$, $p < .05$). Consider also the winning model in Table 6.19.

Table 6.19: Focus acceptability judgment task: Fixed effect summary for Turkish OSV orders with corrective foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr</i> (> <i>t</i>)
(Intercept)	3.07	.15	19.93	<2e-16***
F-ARGUMENT	.3	.21	1.42	.15593
A-ORDER	.44	.21	3.55	.00046***
F-ARGUMENT [^] A-ORDER	-.64	.3	-2.07	.03905*

* $p < .05$; ** $p < .01$; *** $p < .001$

Pairwise comparisons using the Tukey HSD test reveal that object foci are significantly more acceptable with SOV than with OSV orders ($p < .01$, Cohen $d = .7$), see Table 6.20.

Table 6.20: Focus acceptability judgment task: Tukey HSD (Turkish, corrective, SOV/OSV)

contrast	diff.	SE	95% confidence interval		<i>p</i> value	Cohen <i>d</i>
			lower	upper		
SBJ.OSV - OBJ.SOV	.30	1.13	-.234	.847	.4594	.25 (<i>S</i>)
OBJ.SOV - OBJ.OSV	.77	1.13	.223	1.31	.0002**	.70 (<i>M</i>)
SBJ.SOV - SBJ.OSV	.15	1.13	-.381	.699	.8715	.14
SBJ.SOV - OBJ.SOV	-.30	1.13	-.858	.241	.4691	-.30 (<i>S</i>)

* $p < .05$; ** $p < .01$; *** $p < .001$

In sum, the statistical analysis of the V-final data implies that object foci (either non-identificational or corrective) in Turkish are significantly more acceptable with SOV than with OSV orders.

6.3.3.2 Russian

6.3.3.2.1 V-medial experiment

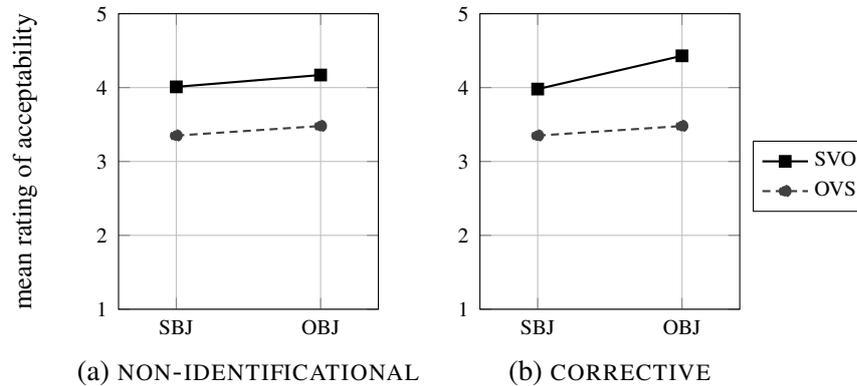
The mean acceptability ratings of the Russian native speakers given in the V-medial experiment are summarized in Table 6.21.

Table 6.21: Focus acceptability judgment task: SVO vs. OVS (Russian)

	NON-IDENTIFICATIONAL		CORRECTIVE	
	SBJ	OBJ	SBJ	OBJ
SVO	4.01	4.17	3.98	4.43
OVS	3.35	3.48	3.54	3.27

The data in Table 6.21 show that the Russian participants have a general preference for SVO over OVS orders, which is not affected by the contextual manipulations. Consider also Figure 6.8, which illustrates the effect of the factors F-ARGUMENT and A-ORDER independently for the two different FOCUS TYPES.

Figure 6.8: Focus acceptability judgment task: Mean ratings of Russian speakers for SVO/OVS orders



The statistical analysis of the Russian data reveals no significant effect of the three-way interaction. This is also confirmed by the goodness of fit test which shows that the interaction could be removed from the full model without a significant loss of information ($\chi^2(4) = 1.74, ns$). The LME analysis of the non-identificational focus data shows a significant effect of the factor A-ORDER ($p < .05$), but no effects of the factor F-ARGUMENT or the interaction of the two factors. The subsequent likelihood ratio tests confirm that a model including the factor A-ORDER fits significantly better ($\chi^2(2) = 8.58, p < .01$) to the results than a model without this factor. Whereas the factor F-ARGUMENT ($\chi^2(2) = .73, ns$) as well as the interaction of the two factors ($\chi^2(1) = .04, ns$) could be removed from the model without a significant loss of information. Consider the winning model in Table 6.22. This finding is also confirmed by post-hoc tests which reveal that SVO orders are considered as significantly more acceptable as OVS orders independent from the focused argument.

Table 6.22: Focus acceptability judgment task: Fixed effect summary for Russian OVS orders with non-identificational foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr</i> (> <i>t</i>)
(Intercept)	3.45	.16	21.32	<2e-16***
A-ORDER	.7	.22	3.1	.00361**

* $p < .05$; ** $p < .01$; *** $p < .001$

The LME analysis of the corrective focus data reveals a highly significant effect of the factor A-ORDER ($p < .001$). The significance of the factor is also confirmed by the likelihood ratio test ($\chi^2(2) = 12.86, p < .01$). By contrast, the factor F-ARGUMENT ($\chi^2(2) = 3.77, ns$) as well as the interaction ($\chi^2(1) = 2.32, ns$) could be removed from the model without any significant

information loss. Consider the winning model in Table 6.23. This finding is again confirmed by further post-hoc tests which show a general preference for SVO over OVS orders independent from the focused argument.

Table 6.23: Focus acceptability judgment task: Fixed effect summary for Russian OVS orders with corrective foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr>(> t)</i>
(Intercept)	3.48	.12	27.02	<2e-16***
A-ORDER	.69	.17	3.87	.00026***

* $p < .05$; ** $p < .01$; *** $p < .001$

In a nutshell, the statistical analysis of the Russian V-medial data only shows a significant effect of the factor A-ORDER, which implies that the ratings of the speakers were not affected by any of the information structural manipulations.

6.3.3.2.2 V-final experiment

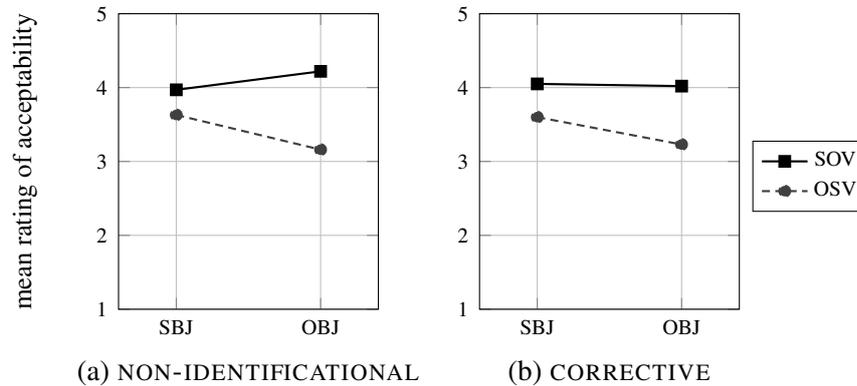
Table 6.24 summarizes the mean acceptability ratings of the Russian speakers for non-identificational and corrective subject and object foci with SOV and OSV orders.

Table 6.24: Focus acceptability judgment task: SOV vs. OSV (Russian)

	NON-IDENTIFICATIONAL		CORRECTIVE	
	SBJ	OBJ	SBJ	OBJ
SOV	3.97	4.22	4.05	4.02
OSV	3.63	3.16	3.6	3.23

The data in Table 6.24 illustrate that the Russian speakers show a little preference for SOV orders with non-identificational subject foci and a preference for OSV orders with non-identificational object foci. By contrast, they show an overall preference for SOV over OSV orders in the corrective conditions independent from the focused argument, see Figure 6.9.

Figure 6.9: Focus acceptability judgment task: Mean ratings of Russian speakers for SOV/OSV orders



The statistical analysis of the Russian V-final data reveals no significant effect of the three-way-interaction. This result is supported by the model comparison, which implies that a model including the interaction does not fit significantly better to the results than a model without this interaction ($\chi^2(4) = 5.49, ns$). However, the LME analysis of the non-identificational focus data reveals a significant effect of the interaction between the factors F-ARGUMENT and A-ORDER ($p < .05$). This is also confirmed by the likelihood ratio test which shows that a model including the interaction fits significantly better to the results than a model without the interaction ($\chi^2(1) = 4.08, p < .05$). Consider the winning model in Table 6.25.

Table 6.25: Focus acceptability judgment task: Fixed effect summary for Russian OSV orders with non-identificational foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr>(> t)</i>
(Intercept)	3.18	.2	15.32	<2e-16***
F-ARGUMENT	.46	.28	1.64	.10646
A-ORDER	1.03	.29	3.51	.00104**
F-ARGUMENT [^] A-ORDER	-.79	.39	-2	.04946*

* $p < .05$; ** $p < .01$; *** $p < .001$

Finally, pairwise post-hoc comparisons reveal that non-identificational object foci in Russian are significantly more acceptable with SOV than with OSV orders ($p < .05$). The strength of the contrast is also supported by the Cohen d ($=.81$) which shows a large effect, consider Table 6.26.

Table 6.26: Focus acceptability judgment task: Tukey HSD (Russian, non-identificational, SOV/OSV)

contrast	diff.	SE	95% confidence interval		<i>p</i> value	Cohen <i>d</i>
			lower	upper		
SBJ.OSV - OBJ.SOV	.46	1.32	-.167	1.09	.2302	.33(<i>S</i>)
OBJ.SOV - OBJ.OSV	1.05	1.32	.402	1.70	.0002**	.81 (<i>L</i>)
SBJ.SOV - SBJ.OSV	.33	1.32	-.272	.950	.4787	.25 (<i>S</i>)
SBJ.SOV - OBJ.SOV	-.24	1.32	-.880	.381	.7349	-.19

* *p* < .05; ** *p* < .01; *** *p* < .001

By contrast, the LME analysis of the corrective focus data only reveals a significant effect of the factor A-ORDER ($p < .001$), whereas the effects of the factor F-ARGUMENT and the interaction are not significant. These findings are supported by the model comparison, which shows that a model including the factor A-ORDER fits significantly better to the results than a model without the factor ($\chi^2(2) = 12.01, p < .01$), whereas the factor F-ARGUMENT ($\chi^2(2) = 2.33, ns$) as well as the interaction ($\chi^2(1) = 1.68, ns$) could be removed without a significant information loss. Consider the winning model in Table 6.27.

Table 6.27: Focus acceptability judgment task: Fixed effect summary for Russian OSV orders with corrective foci

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr</i> (> <i>t</i>)
(Intercept)	3.14	.13	24.47	<2e-16***
A-ORDER	.71	.18	3.77	.00049***

* *p* < .05; ** *p* < .01; *** *p* < .001

In sum, the statistical analysis of the non-identificational focus data shows that object foci are significantly more acceptable with SOV than with OSV orders, which implies that foci in Russian are less acceptable in the beginning of the sentence than in the middle field. By contrast, the analysis of the corrective focus data only reveals a significant effect of the factor A-ORDER (i.e., SOV over OSV).

6.3.3.3 Urum

6.3.3.3.1 V-medial experiment

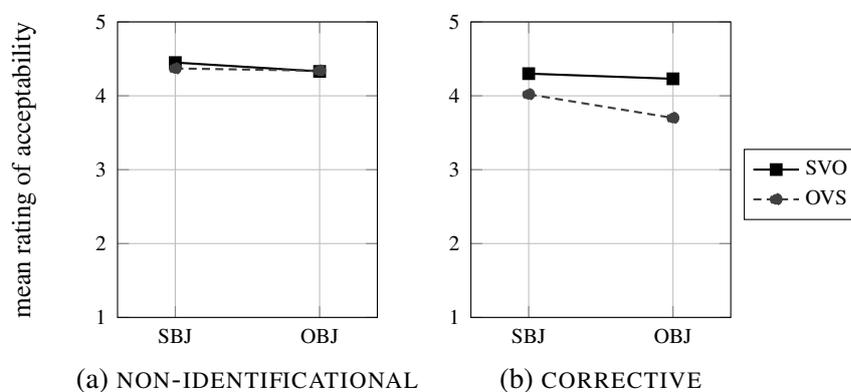
Table 6.28 reports the mean acceptability ratings of the Urum native speakers for SVO and OVS orders.

Table 6.28: Focus acceptability judgment task: SVO vs. OVS (Urum)

	NON-IDENTIFICATIONAL		CORRECTIVE	
	SBJ	OBJ	SBJ	OBJ
SVO	4.45	4.33	4.3	4.23
OVS	4.37	4.34	4.02	3.7

Table 6.28 shows no considerable differences between the acceptability of SVO and OVS orders with non-identificational subject and object foci. By contrast, the ratings given in the corrective conditions reveal a small preference for SVO over OVS orders with both subject and object foci. Consider also Figure 6.10.

Figure 6.10: Focus acceptability judgment task: Mean ratings of Urum speakers for SVO/OVS orders



The LME analysis reveals no significant three-way-interaction. This result is confirmed by the model comparison, which shows that the full model is not significantly different from the model without the interaction ($\chi^2(4) = 5.77, ns$). The LME analysis of the non-identificational data set reveals no significant effects. This is also confirmed by the model comparisons, which show that neither the removal of the interaction ($\chi^2(1) = .26, ns$) nor the removal of any of the two main factors F-ARGUMENT ($\chi^2(2) = .43, ns$) and A-ORDER ($\chi^2(2) = .6, ns$) would cause a significant loss of information.

By contrast, the LME of the corrective data set shows a small effect of the factor A-ORDER ($p < .01$). This finding is also confirmed by the

goodness of fit test which shows that a model including the factor A-ORDER ($\chi^2(2) = 7.61, p < .05$) fits significantly better to the results than a model without this factor, whereas the factor F-ARGUMENT ($\chi^2(2) = 1.95, ns$) as well as the interaction ($\chi^2(1) = 1.33, ns$) could be removed without a significant information loss. Consider the winning model in Table 6.29. This finding is also confirmed by the post-hoc tests which imply that SVO orders are generally more acceptable than OVS orders ($p < .05$) independent from the focused argument.

Table 6.29: Focus acceptability judgment task: Fixed effect summary for Urum V-medial ratings (=corrective foci)

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr(> t)</i>
(Intercept)	3.85	.11	33.19	<2e-16***
A-ORDER	.41	.16	2.502	.0131*

* $p < .05$; ** $p < .01$; *** $p < .001$

Hence, the statistical analysis of the Urum data only reveals a significant effect of the factor A-ORDER (i.e., SVO over OVS) in the corrective focus conditions.

6.3.3.2 V-final experiment

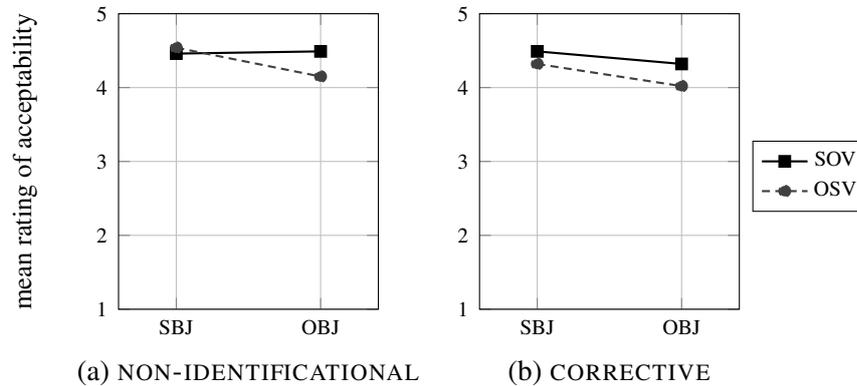
Table 6.30 presents the mean acceptability ratings of the Urum speakers for non-identificational and corrective subject and object foci with SOV and OSV orders.

Table 6.30: Focus acceptability judgment task: SOV vs. OSV (Urum)

	NON-IDENTIFICATIONAL		CORRECTIVE	
	SBJ	OBJ	SBJ	OBJ
SOV	4.46	4.49	4.49	4.32
OSV	4.54	4.15	4.21	4.02

The data in Table 6.30 show that Urum speakers consider both SOV and OSV orders as very acceptable in all four manipulated contexts. Nevertheless, OSV orders were considered as slightly more acceptable with subject than with object foci. Consider also Figure 6.11.

Figure 6.11: Focus acceptability judgment task: Mean ratings of Urum speakers for SOV/OSV orders



The LME analysis of the Urum V-final data reveals neither a significant effect of the three-way-interaction nor of any other interactions or main factors. This finding is also supported by the model comparison, which reveals that a model including the interaction is not significantly different from a model without the interaction ($\chi^2(4) = 3.76, ns$).

In order to examine if the size of the effect increases in the subparts of the experiments, the data was grouped into two data sets. Whereas the statistical analysis of the non-identificational focus data reveals no significant effects (F-ARGUMENT: $\chi^2(2) = 2.21, ns$; A-ORDER: $\chi^2(2) = 4.71, ns$; interaction: $\chi^2(1) = 1.25, ns$), the analysis of the corrective focus data shows a small effect of the factor A-ORDER ($\chi^2(2) = 4.05, p < .05$), whereas the effect of the factor F-ARGUMENT ($\chi^2(2) = 1.66, ns$) as well the effect of the interaction ($\chi^2(1) = .01, ns$) became not significant. See the winning model in Table 6.31. This finding is also confirmed by the post-hoc tests, which indicate that SOV orders are more acceptable than OSV orders ($p < .05$), independent from the focused argument (subject/object).

Table 6.31: Focus acceptability judgment task: Fixed effect summary for Turkish V-final ratings (=corrective foci)

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr(> t)</i>
(Intercept)	4.11	.1	40.79	<2e-16***
A-ORDER	.27	.14	.96	.0548

* $p < .05$; ** $p < .01$; *** $p < .001$

In sum, the statistical analysis of the V-final data only shows a very small effect of the factor A-ORDER (i.e., SOV over OSV) in the corrective focus conditions, whereas the ratings given in the non-identificational conditions were not affected by any of the information structural manipulations.

6.3.4 Summary and discussion

Though the results of the acceptability judgment task showed in the majority of cases only an effect of the factor A-ORDER, the study revealed some cross-linguistic differences regarding the interaction of focus and word order. The results of the Turkish acceptability judgment task indicated that object foci (either non-identificational or corrective) are more acceptable with SOV than with OSV orders. This result is not surprising since (a) the immediately preverbal position is the base position of Turkish direct objects and (b) foci must occur immediately adjacent to the verb. Moreover, the results of the study showed that Turkish speakers dislike SVO orders with object foci and OVS orders with subject foci, which can be attributed to the fact that the postverbal area in Turkish is reserved for background information and cannot host focused material (cf. for instance Kılıçaslan 2004).

The Russian speakers showed a general preference for SVO orders but also accepted both subject and object foci with OVS, SOV and OSV orders. By contrast to the results of the speech production study, the results of the acceptability judgment task hence indicate that object foci in Russian may not only occur with canonical orders (i.e., SVO) but may be also realized in the beginning of a sentence (i.e., [O]_{Foc} VS) or immediately preverbally (i.e., S[O]_{Foc} V). The results of the acceptability judgment task are thus in line with the assumptions by Dyakonova (2009) who argued that foci in Colloquial Russian may occur in various positions of the clause (cf. Section 5.3.2.1.2). Moreover the results of the focus acceptability judgment task confirmed the assumption that the position of foci is independent from the focus type. However, though none of the four attested word order (SVO, OVS, SOV, OSV) received a very bad rating, the Russian participants considered object foci as significantly more acceptable with SOV than with OSV orders, which might be attributed to the fact that the sentence-initial position usually hosts topicalized material (cf. also the theoretical assumptions about topic and word order in Russian in Section 4.3.2.2).

Finally, the results of the Urum acceptability judgment support the finding of the speech production study by showing that the position of foci in Urum is very flexible. Similar to Russian, the analysis of the Urum data showed that subject and object foci are felicitous with all four attested word orders (SVO, OVS, SOV, OSV). Whereas the statistical analysis of the non-identificational focus data revealed no significant effect, the analysis of the corrective focus data showed a very small effect of the factor FOCUSED ARGUMENT, i.e., subject foci are slightly more acceptable with SVO/SOV than with OVS/OSV

orders. These findings might be related to the fact that both SVO and SOV orders are considered to be canonical word orders in Urum, whereas OVS and OSV orders are derived orders (cf. also Section 3.8.2). The fact that the effect becomes only apparent in the corrective conditions might be due to the assumption that the corrective focus sentences are more difficult to parse and that the speakers show a preference for canonical orders in these cases. Nevertheless, the results of the acceptability judgment task provide further evidence for the assumption that foci in Urum are not restricted to a particular position, but may - similar to Russian - occur in various positions of the clause.

Taking everything into consideration, the findings of the present study showed less interpretable results compared to other acceptability judgment tasks on the interaction of topics and word order using auditory stimuli (cf. for instance Keller and Alexopoulou 2001 or Skopeteas and Fanselow 2010b). This fact might result from the rather unnatural prosodic manipulation of the target sentences, which might have an effect on the interpretation of word orders in a particular context. Consider for instance Skopeteas and Fanselow (2010b) who found that congruent prosody can override word order infelicities to a certain degree, whereas prosodic infelicities may have an additive effect to word order infelicities. However, the present study found exactly the reverse preference, i.e., it seems that the unnatural prosodic contour of the target sentences led to overall higher ratings as would be expected for target sentences with a felicitous prosody.

6.3.5 Interim conclusions

The acceptability judgment task presented in this section pursued two major goals. Firstly, it was conducted in order to prove whether the observed differences regarding the effect of the F-TYPE (non-identificational vs. corrective) in Turkish and Russian are an artefact of priming (cf. Section 6.2). Secondly, it aimed to provide evidence for the hypothesis that Urum speakers consider immediately preverbal and clause-final foci as equally acceptable.

With regard to the first aim, the acceptability judgments of the Russian and Turkish speakers did not show a significant effect of the factor F-TYPE. Hence, it seems that the strong effect of the factor F-TYPE in the elicitation study (cf. Section 6.2) is an artefact of priming. The results of the acceptability judgment task thus rather provide evidence for the assumption that the syntactic focusing strategies in Turkish and Russian apply to both focus types (i.e., non-identificational and corrective foci). These findings are in line with

the results of other empirical investigations on the interaction of focus and word order, which did not find a strict correlation between a particular focus position and a specific focus interpretation (e.g., Hartmann and Zimmermann 2006 or Skopeteas and Fanselow 2010a).

With regard to the second aim, the results of the acceptability judgment task revealed a cross-linguistic difference between Turkish on the one hand and Russian and Urum on the other hand. Whereas the former does not allow foci to occur in the postverbal area, foci in Russian and Urum may felicitously occur either pre- or postverbally. This finding supports the cross-linguistic observation that V-initial languages show more flexibility regarding the position of foci than V-final languages. Finally, the fact that Russian and Urum allow object foci in the beginning of the sentence ([O]_{Foc}SV) implies that foci in these two languages are not required to occur immediately adjacent to the verb.

6.4 Conclusions

The empirical studies presented in this chapter investigated the interaction of focus and word order in Turkish, Russian and Urum. The results of the studies confirmed the assumption that foci in Turkish often occur immediately preverbally. However, it was shown that foci in Turkish are not restricted to this position, but can felicitously occur in other positions within the preverbal domain. Moreover, the results confirmed the assumption that Turkish foci are not allowed to occur in the postverbal domain. Though the results of the speech production study showed a significant effect of the focus type, the results of the acceptability judgment task revealed that the syntactic focus strategies apply to both types of foci.

The results of the Russian elicitation study showed that foci in Russian typically occur clause-finally, i.e., OVS orders were considered as significantly more acceptable with subject foci than with object foci (cf. Section 6.2.4.2). However, the results of the acceptability judgment task revealed that subject and object foci are felicitous with all four of the attested word orders, which implies that the position of foci in Russian is rather flexible (cf. Section 6.3.3.2). Similar to Turkish, the results of the acceptability judgment task shows no significant difference between non-identificational and corrective foci.

Similar to Russian, the Urum results showed that foci (either subject or object) may felicitously occur with all four attested word orders. Moreover,

similar to the results found for the other two languages, the position of foci was not affected by the factor F-TYPE, which implies that both non-identificational and corrective foci may occur either *in situ* or *ex situ*. The results of the empirical studies on the correlation between focus and word order in all three languages are finally summarized in Table 6.32.

Table 6.32: Focus and word order in Turkish, Russian and Urum

	Subject			Object		
	Turkish	Russian	Urum	Turkish	Russian	Urum
SVO	✓	✓	✓		✓	✓
SOV	✓	✓	✓	✓	✓	✓
OVS		✓	✓	✓	✓	✓
OSV	✓	✓	✓		✓	✓

The results of the empirical studies summarized in Table 6.32 demonstrate that Urum crucially differs from its substrate language Turkish, where foci are not allowed to occur postverbally. Taking everything into consideration, the results of the empirical studies provide strong evidence for the assumption that the correlation of focus and word order in Urum is strongly influenced by the change in the word order (i.e, from OV to a language with a free position of the V within the VP).

Chapter 7

Topic

7.1 Introduction

This chapter investigates the correlation of topics and word order in Standard Turkish, Russian and Urum. The notion of topic belongs to the most discussed concepts of information structure (for a detailed description of the topic notion within different theoretical frameworks cf. Chapter 2). Within the empirical studies presented in this chapter topics are understood in terms of givenness. Typically, there are two classes of referents that are defined as given: (i) referents which are explicitly introduced in the given discourse context and (ii) referents that are not explicitly mentioned, but assumed to be in the shared common ground (CG) of the interlocutors (e.g., Halliday 1967, Chafe 1976, Clark and Haviland 1977, Krifka 2008). Commonly there are two ways to mark the givenness of referents. First of all, givenness can be marked by the use of anaphoric expressions (e.g., personal pronouns, clitics, demonstratives, definite articles etc.) which bear inherited givenness features as part of their lexical specification. Secondly, givenness can be marked by grammatical devices, e.g., by prosodic and/or syntactic means (Krifka 2008). According to Clark and Haviland (1977) (cf. also Clark and Clark 1977, Gundel 1988), there is a cross-linguistic preference to realize given referents before new ones, which can be attributed to language comprehension processes, i.e., ordering constituents from given to new enables the addressee to search the memory for the antecedent of the given information before adding any new information. Following Gundel (1988: 229), this strategy is called the *Given-Before-New-Principle* (cf. Chapter 2).

The empirical studies presented in this chapter investigate the interaction between topics and word order in Turkish, Russian and Urum. Following the empirical studies on focus (cf. Chapter 6), the overall goal of these studies is to answer the following research questions:

Q1: Is there a correlation of topic and word order in Urum?

Q2: How does the change in the word order from OV to a language with a free position of the verb influence the information structural possibilities of Urum?

Section 7.2 presents an elicitation study, which analyzes the effect of givenness on the linearization of (i) subjects and non-subjects and (ii) different configurations of non-subjects. Section 7.3 presents an acceptability judgment task, which investigates the effect of the T-ARGUMENT (subject vs. object) and the T-TYPE (simple vs. contrastive) on the acceptability of canonical and non-canonical orders. Section 7.4 finally compares the results of all three languages and draws the final conclusions with respect to the underlying research questions.

7.2 Speech production

7.2.1 Introduction

A very common way to manipulate the givenness of referents in experimental research is the elicitation of semi-spontaneous speech by means of non-verbal stimuli, i.e., pictures or videos. One of the first elicitation studies, which manipulated the givenness of referents by means of non-verbal stimuli was conducted by Prentice (1967). In order to investigate the effect of givenness on the order of arguments in English, Prentice used cartoons depicting simple transitive actions of either human, animate or inanimate characters (e.g., *woman kicking girl*; *soldier starting fire*; *flower pot hitting girl*). Each cartoon was paired with a cue slide which was presented before the actual cartoon and depicted one of the involved characters, i.e., either the subject or object of the target scene. The participants were shown both the cue slide and the cartoon one after another and then asked to give a short description of the scene shown in the cartoon. The results of the experiment revealed that the participants preferably produced active sentences, if the agents were given in the cue slides. Moreover, they produced significantly more passive constructions if the patients were contextually given than in cases where the agents were contextually given. In sum, the descriptions of the participants thus showed a strong preference to realize given before new arguments.

A similar design was used by MacWhinney and Bates (1978) who compared the effect of increasing newness and givenness on the use of six different sentential devices (ellipsis, pronominalization, empathic stress, indefinite

article, definite article, initialization) in English, Italian and Hungarian. The non-visual stimuli in their study consisted of sets of three pictures, which were presented one after another. The first picture depicted a simple action which was supposed to be described by the participants using either (a) an intransitive sentence, (b) a simple transitive sentence, (c) a sentence with a subject and a locative or (d) a ditransitive sentence. The second and the third picture were used to increase the newness of one of the elements and likewise to increase the givenness of the remaining elements. Consider for instance the following sample descriptions in which the object increased in newness, while the subject and the verb increased in givenness, e.g., (1) *A girl is eating an apple*; (2) *A girl is eating a cookie*; (3) *A girl is eating an ice-cream*. The results of the study showed that ellipsis decreased with increased newness in all languages, while empathic stress increased with increased newness, but only in English and Italian. Furthermore, increased givenness was predominantly marked by increased ellipsis and the use of the indefinite article. However, MacWhinney and Bates did not find a strong correlation of word order with either givenness or newness, but a number of baseline effects relating to language differences as well as to interactions of language and age.

Prat-Sala (1997) analyzed the effect of inherent (i.e., animacy) and derived accessibility (i.e., discourse saliency) on the syntactic structure in English, Brazilian Portuguese, Catalan and Spanish (see also Prat-Sala and Branigan 2000 on English and Spanish). Prat-Sala used different context stories to manipulate the discourse salience of the entities. The salient entity (either agent or patient) was always presented in the beginning and was introduced with the focusing existential structure '*There was*' and the demonstrative '*this*'. Moreover, the salient entity was preceded by multiple adjectives. The non-salient entity always followed the salient one and did not have any additional properties. All stories ended with the question '*What happened?*'. Consider (242) for a short story with a salient agent in (a) and a salient patient in (b).

- (242) a. Agent = salient entity
There was this old rusty swing standing in a playground near a scooter, swaying and creaking in the wind. What happened?
- b. Patient = salient entity
There was this old red scooter standing in a playground near a swing, with rusty wheels and scratched paint. What happened?

(Prat-Sala 1997: 172)

In order to answer the questions, the participants were shown a picture depicting both of the introduced entities involved in a transitive action. Moreover Prat-Sala manipulated the animacy of the patients by using animate and inanimate patients. The results of the study revealed a preference to realize the salient entity in a more prominent position. This means the participants produced more canonical orders if the agent was salient and more non-canonical orders if the patient was salient. Furthermore, Prat-Sala found a significant interaction between discourse saliency and animacy. Salient animate entities were more likely to appear in a prominent position than salient inanimate entities. In sum, the results showed a cross-linguistic influence of inherent (animacy) and derived accessibility (discourse saliency) on speech production.

Arnold et al. (2000) investigated the effect of newness (given vs. new) and constituent weight (simple vs. complex) on the order of constituents in English. The participants of their elicitation study worked in pairs. One participant was assigned the role of giving instructions (=director), while the other had to follow these instructions (=actor). Within the study both partners were presented cards depicting sets of three characters as well as cards depicting single objects. The heaviness of the constituents was manipulated within the objects: simple (e.g., *ball*) vs. complex (e.g., *blue spotted ball*). By contrast to the objects, the three characters were all equally complex and differed only in their colors (e.g., *yellow duck*, *orange duck*, *purple duck*). Each trial was initiated by the actor asking a question, which established either the objects or the characters as given, e.g., *What about the yellow duck, the orange duck, and the purple duck?* The newness of the constituents was controlled by cue cards given to the actors. The directors also received cue cards specifying what objects should be assigned to which character. The results of the study revealed significant main effects of both complexity and newness as well as a significant interaction between both factors.

Another elicitation study was carried out by Christianson and Ferreira (2005) who analyzed the effect of contextual accessibility of agents and patients on voice and constituent ordering in Odawa, which exhibits a tripartite alternation between active, inverse and passive verb forms. Christianson and Ferreira used black and white drawings of various transitive actions. All pictures were matched with one of the three following question types: (i) general questions (e.g., *What is happening here?*), (ii) agent-topicalizing questions (e.g., *What is the boy doing?*), (iii) patient-topicalizing questions

(e.g., *What is happening to the girl?*). The results of the study showed that the speakers predominantly used active verbs in the general and the agent-topicalizing condition, while they preferred passive verb forms in the patient-topicalizing condition. In sum, their results revealed that the numbers of inverse/passive orders in Odawa is increasing with the question types (i.e., agent question < general question < patient question). Thus, Odawa speakers behave quite similar to English speakers.

A similar design was used by Skopeteas and Fanselow (2010b) who investigated the effect of givenness of agents and patients on the linearization of arguments in twelve different languages (German, Georgian, American English, Czech, Dutch, Québec French, Greek, Hungarian, Konkani, Yucatec Maya, Prinmi and Teribe). The participants were asked to describe pairs of pictures consisting of a context and a target picture. The context picture was always shown first and introduced an individual (either the agent or the patient of the target picture). The target picture depicted a scene in which the given individual was involved in an action, which was supposed to be encoded by a transitive verb with two arguments, e.g., a given agent and a new patient or a given patient and a new agent. The descriptions of the speakers revealed three different strategies to realize given patients that differed across the languages: (i) object-fronting-strategy: Georgian, Czech, Hungarian, Konkani, Prinmi and Teribe; (ii) passivation: German, American English, Québec French, Dutch and Yucatec Maya; (iii) canonical word-order: Greek. In sum, the study showed that all languages except Greek show a general preference for *Given-before-New* orders.

Féry et al. (2010) analyzed the effect of givenness of themes (=locatum) and locatives (=locative expressions) on role choice, word order, definiteness, and prosodic structure in English, Finnish, French, Georgian, German and Mandarin Chinese. They manipulated the givenness in spatial configurations by using toy animals. Regarding the interaction of givenness and word order, the results of the study were two-fold: Firstly, the results showed a cross-linguistic effect of givenness on the order of the locatum and the locative expression, i.e., given locata generally precede locative expressions, while new locata follow locative expressions. Secondly, the results also revealed some strong cross-linguistic differences: Whereas a subset of languages (English, French and Chinese) show an overall preference across all conditions to realize the locatum before the locative expression, another subset of languages (German, Finnish and Georgian) shows the reverse preference (i.e., locative expression < locatum).

Mykhaylyk et al. (2013) examined the role of givenness on the order of patients and recipients in Russian and Ukrainian ditransitive sentences. In order to elicit the data, the participants were presented sets of three to four pictures depicting either transitive (=context pictures) or ditransitive actions (=target pictures). All pictures were presented with short stories, which introduced either the recipient or the patient of the target picture as contextually given. Each story ended with an elicitation question. The experimenters used the same materials for two participants groups: children and adults. However, the procedure was slightly different. While the children were asked to tell the stories to a hand-puppet slide-by-slide, the adults were asked to describe the pictures to the experimenter and to use the keywords and ditransitive verbs (*give* or *show*) which were presented to them together with the pictures. The results of the adults showed a significant effect of givenness on the order of constituents. This means that the participants preferred patient<recipient orders if the patient was presented in the context pictures, while they preferred recipient<patient orders if the recipient was contextually given. By contrast, the children in the study revealed a general preference to realize recipients before patients.

The present elicitation study investigates the effect of givenness on the position of arguments in Turkish, Russian and Urum. The study consists of four experiments that examine the linearization preferences between (a) subjects and non-subjects and (b) different configurations with pairs of non-subject arguments. In the case of (a) the experiments investigate the following two configurations: *agents vs. patients* and *themes vs. locatives*. The first configuration involves nominative and accusative arguments with transitive verbs, the second one nominative and oblique arguments with prepositions or locative case. The contrast between these two configurations is relevant, because it has been observed that Scrambling non-subjects over subjects is less likely with structural cases (i.e., nominative and accusative) than with inherent cases, which are (inherently) associated with certain θ -positions (i.e., prepositions and locatives) (Woolford 2006: 112). In the case of (b) the experiments examine the following configurations: *recipients vs. patients* and *instruments vs. patients*. The first configuration involves the two lower arguments of ditransitive verbs and is assumed to be expressed by a dative-accusative contrast. The second configuration analyzes the effect of givenness on the linearization preferences between adjuncts (i.e., instruments) and accusative arguments. On the basis of these assumptions, the study examines the following hypotheses:

- (i) Since scrambling non-subjects over subjects is not very likely with structural cases, the linearization of **agents and patients** is cross-linguistically assumed to be rather weakly affected by givenness.
- (ii) The linearization of **themes and locatives** is affected by givenness. Contextually given themes trigger THE<LOC orders, whereas contextually given locatives trigger LOC<THE orders.
- (iii) The linearization of **recipients vs. patients** is affected by givenness. Contextually given recipients trigger REC<PAT orders, whereas contextually given patients trigger PAT<REC orders.
- (iv) The linearization of **instruments vs. patients** is affected by givenness. Contextually given instruments trigger INS<PAT orders, whereas contextually given patients trigger PAT<INS orders.

7.2.2 Method

7.2.2.1 Participants

The study was conducted with 16 native speakers of Turkish and Russian at the University of Bielefeld as well as with 16 Urum speakers in Tbilisi, Georgia. For more detailed information about the participants, cf. Section 6.2.2.1.

7.2.2.2 Material and design

The four experiments within the study were designed in order to analyze the effect of givenness on the linearization of different arguments. The first two experiments examine the linearization preferences between subjects and non-subjects. The other two experiments analyze the linearization preferences between different configurations with pairs of non-subject arguments. Consider the experimental design in Table 7.1.

Table 7.1: Experimental design of topic-elicitation study

Experiment	CONDITION	
	A	B
agents vs. patients	AG=GIV	PAT=GIV
themes vs. locatives	THE=GIV	LOC=GIV
recipients vs. patients	REC=GIV	PAT=GIV
instruments vs. patients	INS=GIV	PAT=GIV

The givenness of the arguments was manipulated with the help of non-verbal stimuli. Each of the four experiments consisted of 16 pairs of pictures (=8 minimal pairs) which were designed with the online comic making tool

Pixton Comics. All pairs consisted of a context and a target picture. Each context picture introduced three referents (either animate: agent, patient, recipient; or inanimate: theme, locative, instrument). The target pictures displayed the same referents but depicted one of them involved in an action. Consider for instance the example of an item set used in the *agents vs. patient* experiment in Figure 7.1. Figures (a) and (b) show a picture pair with a contextually given agent ('the girl'), whereas Figures (c) and (d) show the corresponding pair with a given patient ('the apple').

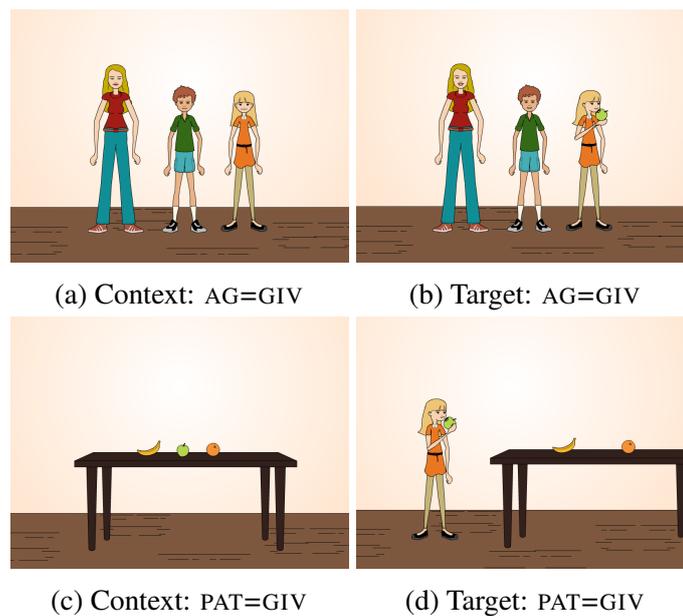


Figure 7.1: Item set used in the *agent vs. patient* experiment

The second experiment in the study manipulates the givenness of themes and locatives. Consider the minimal pairs in Figure 7.2. Figures (a) and (b) provide an example with a contextually given theme ('the bucket'), while Figures (c) and (d) show the same pair with a given locative ('the ladder').

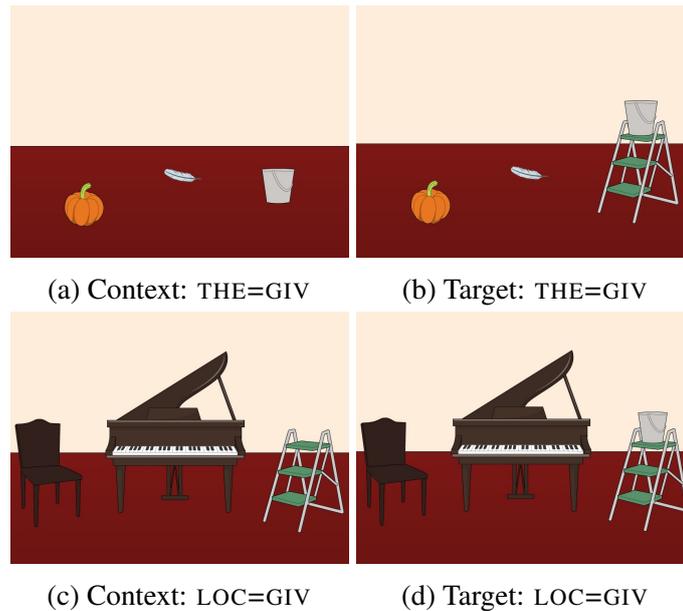


Figure 7.2: Item set used in the *theme vs. locative* experiment

The experimental items of the third experiment investigate the effect of givenness on the linearization of recipients and patients. See Figures 7.3 (a) and (b) for an item set with a contextually given recipient ('the woman'), and Figures 7.3 (c) and (d) for the corresponding item set with a contextually given patient ('the bag').

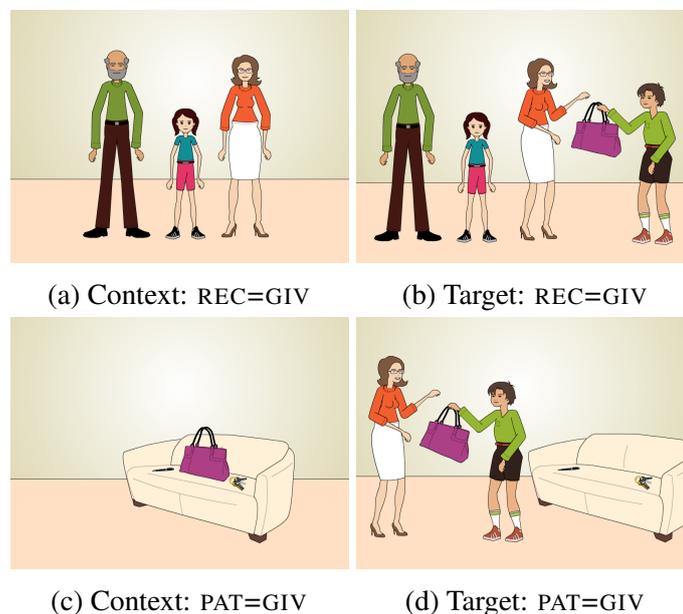


Figure 7.3: Item set used in the *recipient vs. patient* experiment

Experiment 4 manipulates the givenness of instruments and patients. Consider Figures 7.4 (a) and (b) for a picture pair with a given instrument

(‘the umbrella’) and Figures (c) and (d) for the matching minimal pair with a contextually given patient (‘the cow’).

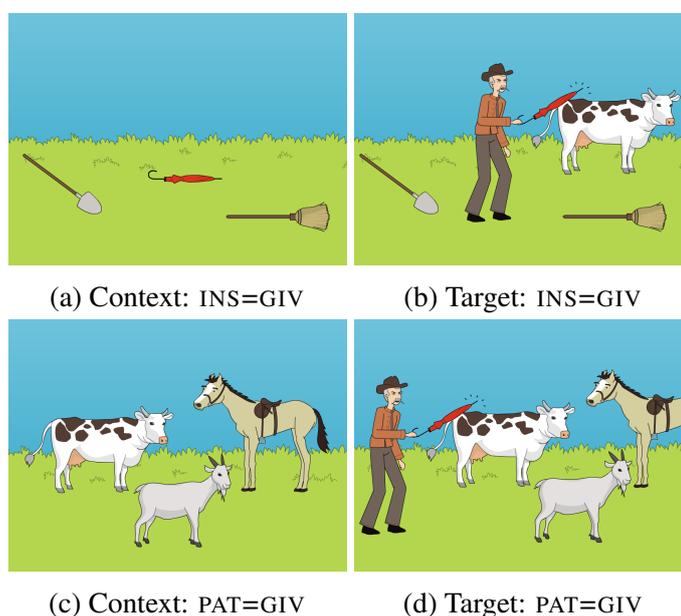


Figure 7.4: Item set used in the *instrument vs. patient* experiment

In sum, each of the four experiments consisted of eight minimal pairs. This leads to a total number of 64 (8 minimal pairs x 2 conditions x 4 experiments) picture pairs. In order to ensure that each participant get only one condition of each minimal pair, the items were assigned to two stimulus lists, each containing half of the pairs of each experiment in condition A and the other half in condition B. The experiment was conducted together with another elicitation task on focus (cf. Section 6.2). The items of the experiments thus functioned as distractors to another. Moreover, the order of the stimuli was pseudo-randomized for each participant. See Appendix C for a list of all experimental items used in the topic elicitation study.

7.2.2.3 Procedure

The participants were told that the study analyzes the effect of visual stimuli on speech-production. In the beginning, they were asked to sit down in front of a computer monitor and to read through the instructions which were written down in their native languages or in case of Urum audio-recorded. In the instructions they were told that they will see either pairs of pictures or (in case of the focus items) single pictures. In case of the pairs, the first picture was displayed on the left side of the monitor. After five seconds the picture disappeared and the participants were asked to describe the presented

scene in one sentence. After pressing space bar, the second picture occurred on the right side of the monitor. The participants were told to imagine that this scene is a continuation of the scene shown in the first picture and were asked to give a short description of the action. For the description of the procedure of the focus study, cf. Section 6.2. In order to ensure that the participants understood the instructions, four practice trials illustrated the procedure of the study. Each participant of the study completed the experiment individually. All descriptions were audio-recorded and later on transcribed in order to have a written record.

7.2.3 Scoring

For the statistical analysis the descriptions of the participants had to fulfill two criteria. Firstly, the descriptions had to contain both referents of each experiment, i.e., agent and patient, theme and locative, recipient and patient, instrument and patient. All descriptions which did not meet this criterion were considered as non-valid and excluded from further analysis. Consider for instance the Turkish target picture description in (243) which is scored as non-valid since it only contains one of the intended referents.

(243) Turkish: Exp4, Item 27, PAT=GIV

Bir kadın [örümcek]_{PAT} öldürü-yor.
a woman spider kill-PROG.3

‘A woman is killing a spider.’ (Tu04)

Secondly, only simple matrix clauses were considered as valid descriptions, whereas descriptions involving coordination or subordinate clauses were excluded from the analysis. For a target picture description which is excluded as non-valid because it involves coordination, see the Turkish example in (244).

(244) Turkish: Exp2, Item 09, PAT=GIV

Erkek [çanta-yi]_{PAT} al-di ve [kadın-a]_{REC} veri-yor.
boy bag-ACC take-PST and woman-DAT give-PROG[3]

‘The boy took the bag and is giving it to a woman.’ (Tu13)

7.2.4 Results

This section presents the results of the speech production study. For the statistical analysis of the data I calculated a generalized linear mixed effect (GLME) model with the fixed factor GIVENNESS and the random factors SPEAKER and ITEM (only intercepts) using the `glmer` function from R's `lme4` library (Bates et al. 2015). Afterwards I fitted a null model without the factor GIVENNESS to the same data set and compared the full model and the reduced model by using the likelihood ratio test of the function `anova`. This test compares the relative fits (=log-likelihoods) of the two models and examines whether the full or the reduced model fits better to the results. For each language I report the χ^2 -score, the degrees of freedom and the *p*-value of the model comparison which indicates if the factor GIVENNESS has a statistically significant effect on the linearization preferences.

7.2.4.1 Turkish

7.2.4.1.1 Subjects and Non-subjects

Agents vs. Patients

The aim of the first experiment is to investigate the effect of givenness on the linearization preferences of agents and patients. The absolute numbers and the means of the valid descriptions produced by the Turkish native speakers are summarized in Table 7.2.

Table 7.2: Turkish: *agents vs. patients*

	AG=GIV		PAT=GIV	
	<i>n</i>	%	<i>n</i>	%
AG<PAT<V	64	100	57	93.4
PAT<AG<V	-	-	4	6.6
total	64	100	61	100

Table 7.2 illustrates that the Turkish speakers only produced V-final constructions and that the participants show a strong preference for AG<PAT orders in both conditions. Consider for instance the target picture descriptions in (245).

(245) Turkish: Exp1, Item 01

a. AG=GIV

[Kız]_{AG} [bir elma]_{PAT} yi-yor.
girl one apple eat-PROG[3]

‘The girl is eating an apple.’ (Tu03)

b. PAT=GIV

[Kız]_{AG} [elma-yi]_{PAT} yi-yor.
girl apple-ACC eat-PROG[3]

‘The girl is eating the apple.’ (Tu12)

Nevertheless, Table 7.2 reveals four instances of PAT<AG orders in the patient given condition, which implies that givenness has a small effect on the linearization of agents and patients in Turkish. The overall means of the valid descriptions with PAT<AG orders are illustrated in Figure 7.5.

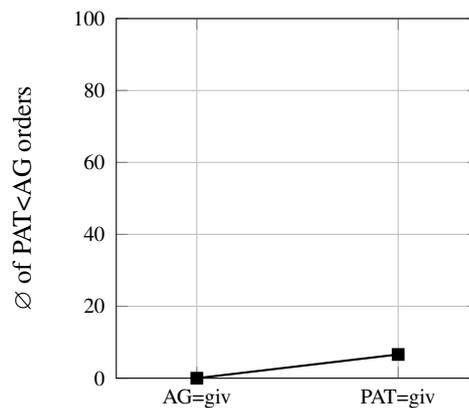


Figure 7.5: Turkish: PAT<AG linearizations

The GLME analysis reveals no significant effect of the factor GIVENNESS. However, the model comparison shows that the full model (see Table 7.3) is significantly different from the null model ($\chi^2(1) = 4.59, p < .05$) which indicates that a model including the factor GIVENNESS fits slightly better to the results than a model without the factor. The positive estimate of the factor GIVENNESS implies that PAT<AG linearizations in Turkish occur significantly more often with given patients than with given agents.

Table 7.3: Turkish: Fixed effect estimates for PAT<AG linearizations

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	-22.92	664.46	-.03	.97
GIVENNESS	19.17	664.46 ¹	.03	.98

* $p < .05$; ** $p < .01$; *** $p < .001$

¹ SE inflation occurred due to the null-values for PAT<AG orders

Themes vs. Locatives

The second experiment tests the effect of givenness on the linearization of themes and locatives. Due to the fact that non-subjects with inherent cases (e.g., locatives) can scramble easier over subjects than non-subjects with structural cases (e.g., accusatives), I expect that the speakers show a preference for THE<LOC orders in cases where the theme is contextually given and a preference for LOC<THE orders in cases where the locative is contextually given. The total numbers and the means of the valid descriptions are summarized in Table 7.4.

Table 7.4: Turkish: *themes vs. locatives*

	THE=GIV		LOC=GIV	
	<i>n</i>	%	<i>n</i>	%
THE<LOC(<V)	54	84.1	10	16.1
LOC<THE(<V)	10	15.9	52	83.9
total	63	100	62	100

Table 7.4 reveals that the order of themes and locatives in Turkish is strongly influenced by givenness, i.e., the speakers predominantly realized the contextual given referent before the new one, see for instance the examples in (246).

(246) Turkish: Exp2, Item 17

a. THE=GIV

[Çanta]_{THE} [masa-nın üst-ün-de]_{LOC}.
 bag table-GEN top-POSS.3-DAT

‘The bag [is] on the table.’ (Tu05)

b. LOC=GIV

[Masa-nın üst-ün-de]_{LOC} [bir çanta]_{THE} var.
 table-GEN top-POSS.3-DAT one bag exist

‘On the table is a bag.’ (Tu16)

The amount of LOC<THE orders triggered by the two different conditions (THE=giv, LOC=giv) is illustrated in Figure 7.6.

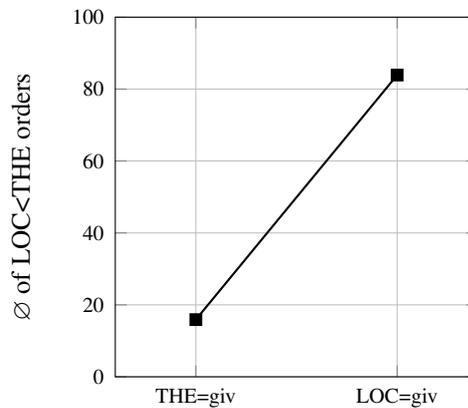


Figure 7.6: Turkish: LOC<THE linearizations

The GLME analysis of the data reveals a significant effect of the factor GIVENNESS. The model comparison confirms that the model including the factor can explain the Turkish results highly significantly better ($\chi^2(1) = 63.6$, $p = <.001$) than the null model, which indicates that the factor GIVENNESS cannot be reduced from the model without a significant loss of information. Consider the winning model in Table 7.5.

Table 7.5: Turkish: Fixed effect estimates for LOC<THE linearizations

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	1.71	.39	4.35	1.34e-05***
GIVENNESS	-3.45	.58	-5.94	2.77e-09***

* $p < .05$; ** $p < .01$; *** $p < .001$

7.2.4.1.2 Configurations with non-subject arguments

Recipients vs. Patients

The third experiment tests the effect of givenness on the linearization of recipients and patients. Since Scrambling among verbal arguments is generally less restricted than scrambling non-subjects over subjects, I assume that the order of recipients and patients highly interacts with givenness. The total number and the means of the valid descriptions of the Turkish native speakers are presented in Table 7.6.

Table 7.6: Turkish: *recipients vs. patients*

	REC=GIV		PAT=GIV	
	<i>n</i>	%	<i>n</i>	%
REC<PAT<V	42	85.7	15	28.9
PAT<REC<V	7	14.3	37	71.1
total	49	100	52	100

The data in Table 7.6 reveal a strong effect of givenness on the order of recipients and patients, i.e., the participants show a preference for REC<PAT orders if the recipient is contextually given and a preference for PAT<REC orders if the patient is contextually given. Consider for instance the examples in (247).

(247) Turkish: Exp3, Item 11

a. REC=GIV

Bir adam [çocuğ-a]_{REC} [hediye]_{PAT} ver-iyor.
 one man child-DAT present give-PROG[3]

‘A man is giving the child a present.’ (Tu03)

b. PAT=GIV

Bir adam [hediye]_{PAT} [çocuğ-a]_{REC} ver-iyor.
 one man present child-DAT give-PROG[3]

‘A man is giving the present to a child.’ (Tu06)

The means of the descriptions with PAT<REC orders triggered by the two conditions (REC=giv, PAT=giv) are also illustrated in Figure 7.7.

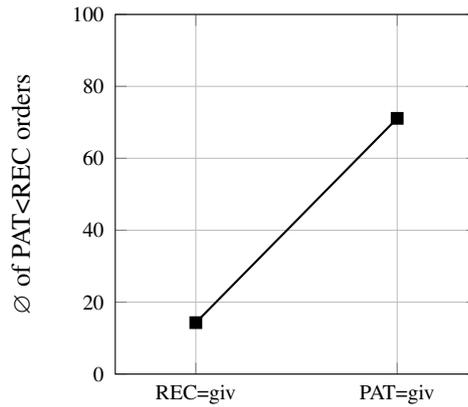


Figure 7.7: Turkish: PAT < REC linearizations

The GLME analysis reveals a significant effect of the factor GIVENNESS. The likelihood ratio test shows that the full model (see Table 7.7) fits highly significantly better ($\chi^2(1) = 37.48$, $p = <.001$) to the results than the null model. This implies that the factor GIVENNESS cannot be excluded from the model without a significant loss of information.

Table 7.7: Turkish: Fixed effect estimates for REC < PAT linearizations

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	1.09	.47	2.31	.0206*
GIVENNESS	-3.35	.72	-4.67	3e-06***

* $p < .05$; ** $p < .01$; *** $p < .001$

Instruments vs. Patients

Similar to the linearization of recipients and patients, I assume that the order of instruments and patients is depending on discourse context. The total number and the means of the valid Turkish descriptions are summarized in Table 7.8.

Table 7.8: Turkish: *instruments vs. patients*

	INS=GIV		PAT=GIV	
	n	%	n	%
INS < PAT < V	37	74	15	40.5
PAT < INS < V	13	26.3	22	59.5
total	50	100	37	100

Table 7.8 demonstrates that the Turkish speakers have a strong preference for *Given-before-New* orders. They mainly produced INS<PAT orders if the instrument was contextually given, whereas they predominantly produced PAT<INS orders if the patient was contextually given, consider the examples in (248).

(248) Turkish: Exp4, Item 25

a. INS=GIV

Adam [şemsiye-yle]_{INS} [ineğ-i]_{PAT} dövü-yor.
man umbrella-with cow-ACC beat-PROG[3]

‘A man is beating the cow with the umbrella.’ (Tu09)

b. PAT=GIV

Yaşlı bir adam [ineğ-i]_{PAT} [şemsiye-yle]_{INS} dövü-yor.
old one man cow-ACC umbrella-with beat-PROG[3]

‘An old man is beating the cow with an umbrella.’ (Tu12)

The total amount of PAT<INS orders triggered by the two different contexts (PAT=giv, INS=giv) is also summarized in Figure 7.8.

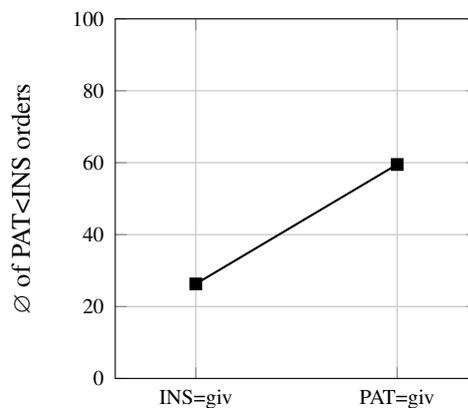


Figure 7.8: Turkish: PAT<INS linearizations

The GLME analysis shows a significant effect of the factor GIVENNESS. The likelihood ratio test reveals that the full model can explain the deviance of the results significantly better ($\chi^2(1) = 10.28, p < .01$) than a model without the factor GIVENNESS. Consider the winning model in Table 7.9.

Table 7.9: Turkish: Fixed effect estimates for PAT<INS linearizations

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	-1.1	.39	-2.87	.00470**
GIVENNESS	1.54	.55	2.79	.00522**

* $p < .05$; ** $p < .01$; *** $p < .001$

7.2.4.2 Russian

7.2.4.2.1 Subjects and Non-subjects

Agents vs. Patients

Table 7.10 summarizes the absolute numbers and the means of the valid descriptions of the Russian speakers produced in the *agents vs. patients* experiment.

Table 7.10: Russian: *agents vs. patients*

	AG=GIV		PAT=GIV	
	n	%	n	%
AG<V<PAT	53	96.4	62	100
PAT<V<AG	2	3.6	-	-
total	55	100	62	100

Table 7.10 shows that the Russian speakers only produced V-medial constructions. Similar to the Turkish speakers, they moreover show a very strong preference for AG<PAT orders in both conditions (AG=giv, PAT=giv). Consider for instance the examples in (249).

(249) Russian: Exp1, Item 01

a. AG=GIV

[*Devochka*]_{AG} *kushayet* [yabloko]_{PAT}.
girl eat:IPFV[3] apple

‘The girl is eating an apple.’ (Ru12)

b. PAT=GIV

[*Devochka*]_{AG} *kushayet* [yabloko]_{PAT}.
girl eat:IPFV[3] apple

‘The girl is eating the apple.’ (Ru13)

Moreover, Table 7.10 shows two instances of PAT<AG orders in the PAT=giv condition, which implies that given elements in Russian may not necessarily occur before new material. The means of the valid Russian descriptions with PAT<AG order are also presented in Figure 7.9.

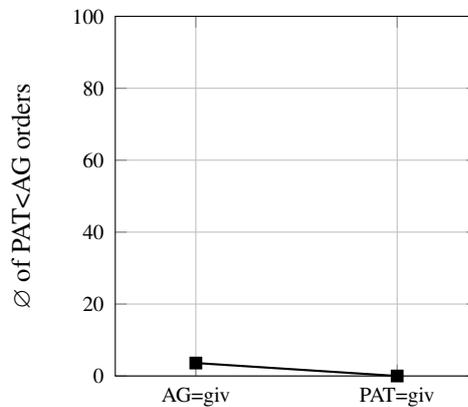


Figure 7.9: Russian: PAT<AG linearizations

The GLME analysis of the Russian data reveals no significant effect of the factor GIVENNESS. This result is also supported by the likelihood ratio test, which shows that a model including the factor GIVENNESS is not significantly different from the null model ($\chi^2(1) = 3.05$ (1), *ns*). Consider the winning null model in Table 7.11.

Table 7.11: Russian: Fixed effect estimates for PAT<AG linearizations

Fixed effects	Estimate	SE	<i>z</i> value	<i>Pr>(> z)</i>
(Intercept)	-3.23	.72	-4.55	5.38e-06***

* $p < .05$; ** $p < .01$; *** $p < .001$

Themes vs. Locatives

Table 7.12 summarizes the total numbers and the means of the valid descriptions of the Russian speakers produced in the *themes vs. locatives* experiment.

Table 7.12: Russian: *themes vs. locatives*

	THE=GIV		LOC=GIV	
	<i>n</i>	%	<i>n</i>	%
THE<V<LOC	47	83.9	21	32.8
LOC<V<THE	9	16.1	43	67.2
total	56	100	64	100

The data in Table 7.12 reveal that the descriptions of the Russian speakers are strongly influenced by givenness. Similar to the Turkish speakers, the Russian participants predominantly realized the contextual given referent (either theme or locative) before the new one, see the examples in (250).

(250) Russian: Exp2, Item 17

a. THE=GIV

[*Sumka*]_{THE} *stoit* [*na stole*]_{LOC}.
 bag stand:IPFV[3] on table:PREP

‘The bag is on the table.’

(Ru10)

b. LOC=GIV

[*Na stole*]_{LOC} *lezhit* [*sumka*]_{THE}.
 on table:PREP lie:IPFV[3] bag

‘On the table is a bag.’

(Ru11)

The amount of LOC<THE orders produced in both conditions (THE=giv, LOC=giv) is represented in Figure 7.10.

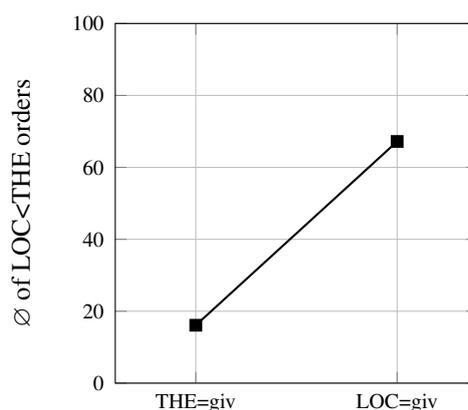


Figure 7.10: Russian: LOC<THE linearizations

The statistical analysis reveals a highly significant effect of the factor GIVENNESS. The model comparison shows that the full model (see Table 7.13) is significantly different from the null model, which implies that the

factor GIVENNESS is highly relevant ($\chi^2(1) = 51.61, p < .001$) for the results and cannot be excluded from the full model without a significant loss of information.

Table 7.13: Russian: Fixed effect estimates for LOC<THE linearizations

Fixed effects	Estimate	SE	<i>z</i> value	<i>Pr</i> (> <i>z</i>)
(Intercept)	1.25	.61	2.02	.043*
GIVENNESS	-4.08	.8	-5.05	4.24e-07***

* $p < .05$; ** $p < .01$; *** $p < .001$

7.2.4.2.2 Configurations with non-subject arguments

Recipients vs. Patients

The total number and the means of the Russian descriptions produced in the *recipients vs. patients* experiment are given in Table 7.14.

Table 7.14: Russian: *recipients vs. patients*

	REC=GIV		PAT=GIV	
	<i>n</i>	%	<i>n</i>	%
V<REC<PAT	34	64.2	12	20
V<PAT<REC	19	35.8	48	80
total	53	100	60	100

Similar to the descriptions of the Turkish participants, the descriptions of the Russian speakers are predominantly ordered from given to new. Consider the examples in (251).

(251) Russian: Exp3, Item 11

a. REC=GIV

Muzhchina dayet [malchiku]_{REC} [podarok]_{PAT}.
man give:IPFV[3] boy:DAT present:ACC

‘A man is giving the child a present.’ (Ru10)

b. PAT=GIV

Muzhchina dayet [podarok]_{PAT} [malchiku]_{REC}.
man give:IPFV[3] present:ACC boy:DAT

‘A man is giving the present to a child.’ (Ru11)

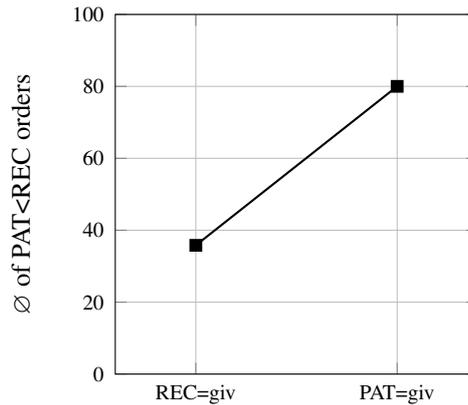


Figure 7.11: Russian: PAT<REC linearizations

The means of PAT<REC orders triggered by both contextual manipulations (PAT=giv, REC=giv) are illustrated in Figure 7.11.

The GLME analysis reveals a significant effect of the factor GIVENNESS. This result is also supported by the model comparison, which shows that a model including GIVENNESS fits highly significantly better ($\chi^2(1) = 25.11, p < .001$) to the data than a model without this factor.

Table 7.15: Russian: Fixed effect estimates for REC<PAT linearizations

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	1.98	.61	3.24	.00119**
GIVENNESS	-2.61	.63	-4.12	3.76e-05***

* $p < .05$; ** $p < .01$; *** $p < .001$

Instruments vs. Patients

Table 7.16 summarizes the total numbers and the means of the valid Russian descriptions produced in the experiment that tested the effect of givenness on the order of instrument and patients.

Table 7.16: Russian: *instruments vs. patients*

	INS=GIV		PAT=GIV	
	n	%	n	%
V<INS<PAT	16	53.3	9	28.1
V<PAT<INS	14	46.7	23	71.9
total	30	100	32	100

Table 7.16 illustrates that the Russian descriptions are influenced by givenness, consider for instance the examples in (252). However, though the Russian speakers show a strong preference for PAT<INS orders with given patients, the size of the preference for INS<PAT orders with given instruments is rather small.

(252) Russian: Exp4, Item 25

a. INS=GIV

Muzhchina b'yet [s zontikom]_{INS} [korovu]_{PAT}.
 man beat:IPFV[3] with umbrella:INS cow:ACC.F

‘A man is beating the cow with the umbrella.’ (Ru08)

b. PAT=GIV

Muzhchina b'yet [korovu]_{PAT} [s zontikom]_{INS}.
 man beat-IPFV[3] cow:ACC.F with umbrella:INS

‘An old man is beating the cow with an umbrella.’ (Ru09)

The mean values of descriptions with PAT<INS orders produced by the Russian participants in both conditions (PAT=giv, INS=giv) are summarized in Figure 7.12.

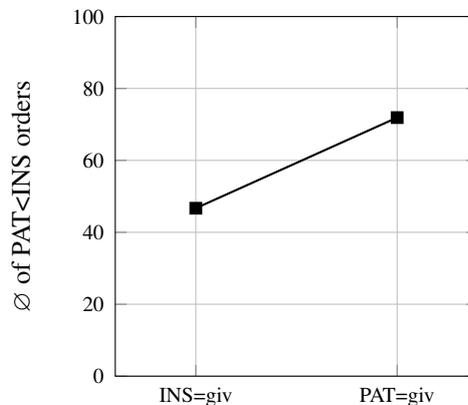


Figure 7.12: Russian: INS<PAT linearizations

The GLME analysis only reveals a marginal significant effect of the factor GIVENNESS ($p = .05$). However, a likelihood ratio test between the full model and a model without the factor GIVENNESS shows that a model including GIVENNESS fits significantly better ($\chi^2(1) = 3.87, p < .05$) to the data than a model without the factor, see the winning model in Table 7.17.

Table 7.17: Russian: Fixed effect estimates for PAT<INS linearizations

	Estimate	SE	z value	Pr(> z)
(Intercept)	-.13	.38	-.35	.7234
GIVENNESS	1.09	.56	1.93	.0532

* $p < .05$; ** $p < .01$; *** $p < .001$

7.2.4.3 Urum

7.2.4.3.1 Subjects and Non-subjects

Agents vs. Patients

The number of the valid Urum descriptions produced in the two contextual manipulations of the first experiment (AG=giv, PAT=giv) are summarized in Table 7.18.

Table 7.18: Urum: *agents vs. patients*

		AG=GIV		PAT=GIV	
		<i>n</i>	%	<i>n</i>	%
AG<PAT	V<AG<PAT	41	70.7	46	78
	AG<PAT<V	16	27.6	11	18.6
PAT<AG	PAT<AG<V	1	1.7	2	3.4
total		58	100	59	100

The data in Table 7.18 show that Urum speakers produced both V-final and V-medial constructions. Similar to the Turkish and Russian participants, the Urum speakers reveal a very strong preference for AG<PAT orders independent from the contextual manipulation. Consider for instance the Urum target picture descriptions in (253).

(253) Urum: Exp1, Item 01

a. AG=GIV

[*Ĝiz*]_{AG} *i-er* [*alma*]_{PAT}.
 girl eat-IPFV[3] apple

‘The girl is eating an apple.’

(Urum11)

b. PAT=GIV

[*Ĝiz*]_{AG} *i-er* [*alma-yi*]_{PAT}.
 girl eat-IPFV[3] apple-ACC

‘A girl is eating the apple.’

(Urum06)

The total amount of PAT<AG orders produced in both conditions is also illustrated in Figure 7.13.

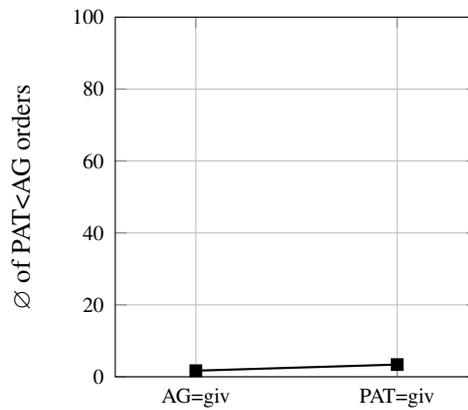


Figure 7.13: Urum: PAT<AG linearizations

The GLME analysis of the Urum data shows no significant effect of the factor GIVENNESS. This finding is also supported by the goodness of fit test, which confirms that the removal of the factor from the full model does not cause a significant loss of information ($\chi^2(1) = .31, ns$). The winning model is reported in Table 7.19.

Table 7.19: Urum: Fixed effect estimates for PAT<AG linearizations

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	-3.9	.88	-4.46	8.04e-06***

* $p < .05$; ** $p < .01$; *** $p < .001$

Themes vs. Locatives

Table 7.20 presents the total numbers and means of the valid Urum descriptions produced in the *themes vs. locatives* experiment.

Table 7.20: Urum: *themes vs. locatives*

		THE=GIV		LOC=GIV	
		<i>n</i>	%	<i>n</i>	%
THE<LOC	THE<LOC<V	13	24.5	2	3.5
	THE<V<LOC	15	28.3	5	8.7
LOC<THE	LOC<THE<V	17	32.1	27	47.4
	LOC<V<THE	8	15.1	23	40.4
total		53	100	57	100

Table 7.20 reveals that the descriptions of the Urum speakers are affected by givenness, consider for instance the examples in (254). However, the effect is much stronger with given locatives than with given themes. Whereas contextual given locatives induced much more LOC<THE orders than THE<LOC orders, contextual given themes frequently occurred with both orders.

(254) Urum: Exp2, Item 17

a. THE=GIV

[*Sumka*]_{THE} *dur-ier* [*stol-da*]_{LOC}.
 bag stay-IPFV[3] table-LOC

‘The bag is on the table.’ (Urum08)

b. LOC=GIV

[*Stol-un üst-ün-de*]_{LOC} *dur-ier* [*sumka*]_{THE}
 table-GEN top-POSS.3-DAT stay-IPFV[3] bag

‘On the table is a bag.’ (Urum11)

The number of LOC<THE orders produced by the Urum participants in the two conditions (THE=giv, LOC=giv) is also illustrated in Figure 7.14.

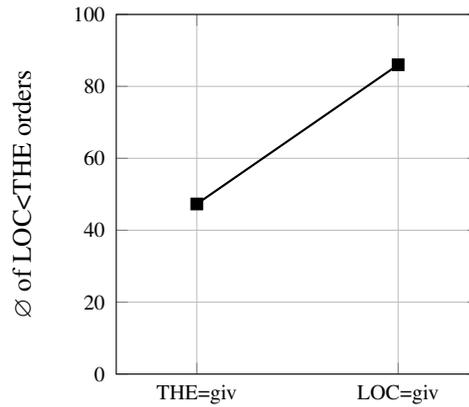


Figure 7.14: Urum: LOC<THE linearizations

The GLME analysis of the Urum descriptions shows that the factor GIVENNESS has a strong effect on the occurrence of LOC<THE orders. This finding is also confirmed by the model comparison, which indicates that the factor GIVENNESS cannot be removed from the full model without a significant information loss ($\chi^2(1) = 19.59, p < .001$). Consider the winning model in Table 7.21.

Table 7.21: Urum: Fixed effect estimates for LOC<THE linearizations

Fixed effects	Estimate	SE	z value	$Pr(> z)$
(Intercept)	1.83	.4	4.55	5.18e-06***
GIVENNESS	-1.95	.48	-4	6.23e-05***

* $p < .05$; ** $p < .01$; *** $p < .001$

7.2.4.3.2 Configurations with non-subject arguments

Recipients vs. Patients

Table 7.22 provides an overview of the REC<PAT and PAT<REC descriptions of the Urum speakers triggered by the two contextual manipulations (REC=giv, PAT=giv).

Table 7.22: Urum: recipients vs. patients

		REC=GIV		PAT=GIV	
		<i>n</i>	%	<i>n</i>	%
	V<REC<PAT	21	42.8	21	38.2
REC<PAT	REC<V<PAT	8	16.3	10	18.2
	REC<PAT<V	4	8.2	5	9.1
	V<PAT<REC	12	24.5	8	14.5
PAT<REC	PAT<V<REC	3	6.1	11	20
	PAT<REC<V	1	2.1	-	-
total		49	100	55	100

The data in Table 7.22 illustrates that the position of the verb in Urum is very flexible. Whereas the Turkish speakers in the experiment only produced V-final orders and the Russian speakers only produced V-initial orders, Urum speakers also produced orders with the verb occurring in-between the two arguments (X<V<Y). Moreover the descriptions of the Urum speakers reveal by contrast to Turkish and Russian a general preference for REC<PAT orders independent from the contextual manipulations. Consider for instance the examples in (255).

(255) Urum: Exp3, Item 11

a. REC=GIV

Äriř ver-ier [çocuğ-a]_{REC} [podarok]_{PAT}.
man give-IPFV[3] child-DAT present

‘A man is giving the child a present.’ (Urum17)

b. PAT=GIV

Oğlan ver-ier [çocuğ-a]_{REC} [podarok]_{PAT}.
boy give-IPFV[3] child-DAT present

‘A boy is giving a child the present.’ (Urum09)

Nevertheless, as illustrated in Figure 7.15 about thirty percent of the Urum descriptions in each of the two conditions (PAT=giv, REC=giv) follow the PAT<REC linearization.

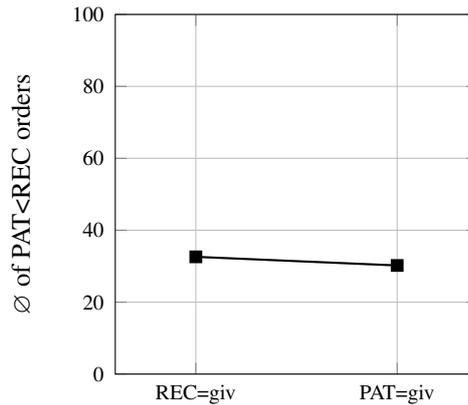


Figure 7.15: Urum: PAT<REC linearizations

The GLME analysis of the Urum data shows no significant effect of the factor GIVENNESS. This finding is also confirmed by the likelihood ratio test, which reveals that the factor can be removed from the full model without causing any significant loss of information ($\chi^2(1) = .02, ns$). The winning model is reported in Table 7.23.

Table 7.23: Urum: Fixed effect estimates for PAT<REC linearizations

Fixed effects	Estimate	SE	z value	Pr(> z)
(Intercept)	-1.32	.61	-2.16	.0303*

* $p < .05$; ** $p < .01$; *** $p < .001$

Instruments vs. Patients

Table 7.24 gives an overview of the valid Urum descriptions triggered by the two contextual manipulations of the last experiment (INS=giv, PAT=giv).

Table 7.24: Urum: *instruments vs. patients*

		INS=GIV		PAT=GIV	
		n	%	n	%
INS<PAT	V<INS<PAT	3	10	2	9.1
	INS<V<PAT	15	50	9	40.9
	INS<PAT<V	2	6.7	3	13.6
PAT<INS	V<PAT<INS	6	20	5	22.7
	PAT<V<INS	4	13.3	2	9.1
	PAT<INS<V	-	-	1	4.6
total		30	100	22	100

Similar to the results of the third experiment, the data in Table 7.24 illustrate that Urum speakers not only produce V-initial (like Russian speakers) and V-final orders (like Turkish speakers), but quite frequently produce orders with the verb being realized between the instrument and the patient. By contrast to Turkish and Russian, the Urum descriptions moreover reveal a strong preference for INS<PAT orders, which seems to be not affected by the contextual manipulations. Consider also the examples in (256).

(256) Urum: Exp4, Item 25

a. INS=GIV

Ärgishi [zontik-inan]_{INS} vur-ier [inäg-i]_{PAT}.
man umbrella-INS beat-IPFV[3] cow-ACC

‘A man is beating the cow with the umbrella.’ (Urum05)

b. PAT=GIV

Ärüf [zontik-inan]_{INS} vur-ier [inäg-i]_{PAT}.
man umbrella-INS beat-IPFV[3] cow-ACC

‘A man is beating the cow with an umbrella.’ (Urum02)

Nevertheless, Figure 7.16 indicates that more than 35 percent of the Urum descriptions in both conditions (PAT=giv, INS=giv) follow the PAT<INS linearization which indicates that word order in Urum is very flexible.

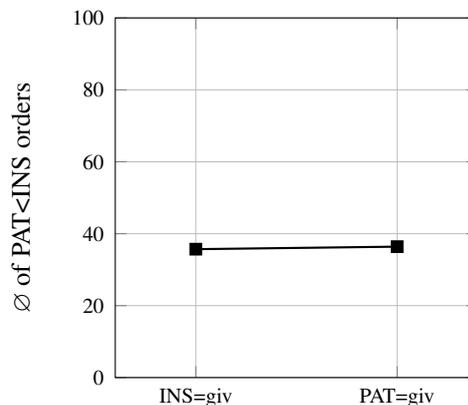


Figure 7.16: Urum: INS<PAT linearizations

The GLME analysis of the Urum data shows no significant effect of the factor GIVENNESS. This result is also confirmed by the likelihood ratio test between the full model and a model without the factor GIVENNESS which reveals that the factor is not relevant for the results and could be excluded from the model without a significant information loss ($\chi^2(1) = .06, ns$). The winning model is presented in Table 7.25.

Table 7.25: Urum: Fixed effect estimates for PAT<INS linearizations

Fixed effects	Estimate	SE	<i>z</i> value	<i>Pr</i> (> <i>z</i>)
(Intercept)	-.61	.46	-1.32	.185

* $p < .05$; ** $p < .01$; *** $p < .001$

7.2.5 Summary and discussion

The results of the speech production study revealed several interesting findings. First of all, the results showed a strong cross-linguistic preference to realize agents in the beginning of a sentence. Nevertheless, the participants showed other strategies to mark the givenness of patients, as for instance the use of anaphoric devices (e.g., definite articles, demonstratives, the Turkish accusative suffix (-*y*)*I*). Similar results were also found by other researchers, who manipulated the givenness of agents and patients by the help of visual stimuli. Consider for instance the study by MacWhinney and Bates (1978) who found that givenness correlates with increased ellipsis and the use of indefinite articles but has no effect on word order. However, the results contradict the findings by Prat-Sala (1997), Prat-Sala and Branigan (2000) and Skopeteas and Fanselow (2010b) who showed that discourse given patients cross-linguistically led to a higher amount of patient-initial orders. Nevertheless, the results by Skopeteas and Fanselow (2010b) revealed that only three out of twelve attested languages prefer patient<agent over agent<patient orders in contexts with a contextually given patient, while all other languages show an overall preference for agent<patient orders even in the patient-given condition.

By contrast to the results of the first experiment, the results of the second experiment showed a significant effect of givenness on the linearization preferences of themes and locatives in all three languages, which supports the assumption that Scrambling non-subjects over subjects is cross-linguistically more likely with non-accusative arguments than with accusative arguments (cf. Woolford 2006,). Moreover, the results also confirm the findings by Féry et al. (2010) who found a strong cross-linguistic effect of givenness on the order of themes and locatives.

Whereas the two experiments on subjects and non-subjects revealed strong similarities between the three languages under investigation, the results of the experiments on different configurations of non-subject arguments

(*recipients vs. patients* and *instruments vs. patients*) showed a major difference between Turkish and Russian on the one hand and Urum on the other hand. While the descriptions of the Turkish and Russian participants followed the *Given-Before-New-Principle* (Gundel 1988), the descriptions of the Urum speakers revealed a general preference for REC<PAT and INS<PAT orders independent from the contextual manipulations. This finding is of particular interest, because it provides some insights into the current change of the language. The fact that Urum speakers prefer REC<PAT and INS<PAT orders independent from the discourse context provides evidence for the assumption that these word orders are basic configurations in Urum. According to the cross-linguistic observation that patients tend to appear closer to the verb than non-patients, these basic configurations are very typical for verbfinal languages (cf. also the descriptions of the Turkish and Russian speakers in Sections 7.2.4.2 and 7.2.4.1). However, the Urum speakers predominantly produced constructions with the verb either preceding the REC<PAT or INS<PAT orders or in-between the recipient/instrument and the patient (cf. Section 7.2.4.3). The results of the *recipient vs. patient* and *instrument vs. patient* experiment thus reveal some interesting parallels to the findings by Mykhaylyk et al. (2013) who investigated the effect of givenness on the linearization preferences of recipients and patients in Russian and Ukrainian adults and children. Whereas the descriptions of the adults showed a significant effect of givenness on the order of constituents, i.e., all participants showed a preference for PAT<REC orders if the patient was contextually given and vice versa, the children showed a general preference for REC<PAT orders independent from the contextually given entity. The results of the present study hence indicate that Urum speakers show similar strategies to children, who are assumed to require the pragmatic principle of *Given-before-New* at a later developmental stage (cf. Mykhaylyk et al. 2013).

7.2.6 Interim conclusions

Taking everything into consideration, the results of the elicitation study revealed a strong correlation between givenness and word order in Turkish and Russian except for the first experiment (*agents vs. patients*). By contrast, the descriptions of the Urum speakers were generally less affected by givenness. Whereas the descriptions in the *theme vs. locative* experiment revealed a significant effect of givenness and word order, the Urum speakers showed a general preference for AG<PAT, REC<PAT and INS<PAT orders independent

from the contextual manipulations. Quite similar results were observed in studies with children (cf. for instance the study by Mykhaylyk et al. 2013). Hence, the finding that the descriptions of the Urum speakers in sentences involving more than one non-subject were not affected by givenness might possibly relate to the fact that Urum speakers are by contrast to Russian and Turkish speakers not literate in their native language.

7.3 Acceptability judgment

7.3.1 Introduction

The aim of the acceptability judgment study presented in this section is to examine the effect of givenness on the linearization of subjects and objects in Turkish, Russian and Urum. A very common way to analyze the interaction of givenness and word order within an acceptability judgment task is the use of Q/A-pairs. Consider for instance Šimík et al. (2014) who analyzed the impact of givenness on the position of direct objects in Czech with respect to three other clausal constituents: subjects, verbs and a VP-modifying prepositional phrase. Within the study they conducted two different experiments with auditory stimuli. The aim of the first experiment was to analyze the acceptable positions of direct objects in all-new contexts. The experiment used a 2x2 factorial design and manipulated the referentiality of the direct object (2 levels: referential vs. non-referential) and its position within the sentence (four levels: s-initial, s-second, s-third, s-final). The items were short dialogues consisting of a context question and a target answer, whereby the sentential stress was always on the final element. The results of the experiment revealed significant main effects for both factors (i.e., referentiality and position of the object) as well as a significant interaction between the factors. To be more precise, the results showed that direct objects in Czech all-new contexts can felicitously occur in s-final or s-third position, whereas the acceptability for sentences with the direct objects in s-initial or s-second position significantly decreased. Furthermore, the analysis revealed that the decrease in the acceptability is higher for non-referential than for referential objects. The second experiment in the study analyzed the effect of givenness on the structure of the clause. Similar to the first experiment, Šimík et al. (2014) manipulated the positions of the direct objects. Furthermore, they manipulated the givenness of the subject (2 levels: given vs. new), whereas the direct objects were always given in the context sentences and the verb

and the prepositional phrases of the targets were always new. In order to avoid an effect from the s-initial position, all target sentences started with the words *protože prý* ‘because allegedly’. The statistical analysis of the second experiment showed a significant main effect of the object position, i.e., given objects at the right edge of the clause were considered as infelicitous. The authors conclude that the tendency for given direct objects to scramble out of their base positions follows from the tendency to realize sentence stress clause finally.

Šimík and Wierzba (2015) conducted two acceptability judgment tasks on the effect of givenness, presupposition and prosody on Czech word order. The first experiment analyzed the impact of definiteness on Scrambling. The study used a 2x2x2 factorial design and manipulated the factors WORD ORDER (2 levels: VO vs. OV), SENTENCE STRESS (2 levels: verb stress vs. direct object stress) and DEFINITENESS (2 levels: definite vs. indefinite object NP). The experimental items consisted of short dialogues including a context sentence and a response, which contained the target structures. The factor DEFINITENESS was manipulated within the contexts by introducing either a definite or an indefinite object. The target structures always consisted of a transitive verb and a bare object and varied in word order and sentence stress. The results of the study showed a significant main effect for all three factors. Moreover, the results revealed a significant interaction of word order and stress as well as an interaction of word order and definiteness. However, Šimík and Wierzba (2015) did neither find a significant interaction between stress and definiteness nor between all three factors. The second experiment tested the acceptability of given elements in non-final positions. The study used a 2x2 factorial design, manipulating the DEFINITENESS of objects (2 levels: indefinite vs. definite) and the GIVENNESS of prepositional phrases (2 levels: given vs. new). The experimental items consisted of several Q/A pairs. All target structures contained a discourse-new transitive verb, a given direct object that immediately followed the verb and either a given or a new prepositional phrase in the s-final position. The results of the study showed a significant main effect of the givenness of the prepositional phrase and a marginally significant main effect of the definiteness of the objects. However, there was no significant interaction between the two factors.

The purpose of the acceptability judgment study presented in this section is to analyze the effect of givenness (i.e., topicalization) on the linearization of subjects and objects in Turkish, Russian and Urum with the exclusion of prosody. The study consists of two parallel experiments: Experiment 1

investigates the effect of givenness on the order of subjects and objects in V-medial constructions. Experiment 2 analyzes the impact of givenness on the linearization of subjects and objects in V-final constructions. Moreover, each of the experiments tested the effect of two different TOPIC TYPES (simple vs. contrastive). Though the results of the elicitation study (cf. Section 7.2.4) reveal a very strong cross-linguistic preference for AG<PAT orders independent from the contextual manipulations, I assume that object-initial orders (i.e., OVS, OSV) become generally more acceptable in contexts with contextual given objects. Furthermore, I suggest that the results of the study will show some cross-linguistic differences between the three languages. Whereas topics in Turkish are expected to be not allowed to intervene between the focus and a verb and are assumed to be most acceptable either in the beginning of the sentence or after the verb, topics in Russian are considered to be least felicitous postverbally, since this position usually hosts focused material (cf. the theoretical assumptions about topics in Turkish and Russian in Chapter 4).

7.3.2 Method

7.3.2.1 Participants

The experiments were conducted with 16 native speakers of Turkish, 16 native speakers of Russian and 16 native speakers of Urum. For further details about the participants of the study, cf. Section 6.3.2.1.

7.3.2.2 Material and design

The acceptability judgment task consists of two parallel experiments. The first one analyzes the effect of givenness on the position of subjects and objects in V-medial constructions (i.e., SVO vs. OVS), the second one investigates the effect of givenness on the position of subjects and objects in V-final constructions (i.e., SOV vs. OSV). For each experiment a 2x2x2 factorial design with the factors TOPIC TYPE (2 levels: simple vs. contrastive), TOPIC ARGUMENT (2 levels: subject vs. object) and ARGUMENT ORDER (2 levels: canonical vs. non-canonical) was used. Whereas the factors T-TYPE and T-ARGUMENT were manipulated in the contexts (cf. the experimental design in Table 6.11), the factor A-ORDER was manipulated in the targets.

Table 7.26: Experimental design of topic acceptability judgment
(context conditions)

		T-TYPE	
		simple	contrastive
T-ARGUMENT	subject	S/SBJ	C/SBJ
	object	S/OBJ	C/OBJ

Each experiment contained 16 items. Each item consisted of one context sentence and two target sentences, one with the canonical S<O linearization, the other one with the scrambled O<S order, whereby the V-medial contexts were always matched with V-medial targets (i.e., SVO, OVS) and the V-final contexts were always presented with V-final targets (i.e., SOV, OSV). However, as the contexts in the simple topic condition do not contain a lexical verb, the same context sentences were used in the V-medial and in the V-final experiment. Consider the examples in (257)-(260) for the four conditions of an item used in the Turkish V-medial experiment¹.

(257) Turkish: S/SBJ

Mutfak-ta kadın ve kız.
kitchen-LOC woman and girl

‘In the kitchen (there are) a woman and a girl.’

- a. *Kız yi-yor elma-yi.*
girl eat-PROG[3] apple-ACC
‘The girl is eating the apple.’ (SVO)
- b. *Elmayı yiyor kız.* (OVS)

(258) Turkish: S/OBJ

Masa-nın üst-ün-de elma ve muz.
table-GEN top-POSS.3-DAT apple and banana

‘On the table (there are) an apple and a banana.’

- a. *Kız yiyor elmayı.* (SVO)
- b. *Elmayı yiyor kız.* (OVS)

¹Please note that all direct objects in the Turkish target structures are marked with the accusative suffix *-(y)I* in order to avoid any syntactic restrictions which might result from the presence of bare objects.

(259) Turkish: C/SBJ

Büyükanne oku-yor kırmızı kitab-ı. Ve mavi kitap?
 grandmother read-PRO[3] red book-ACC and blue book

‘The grandmother is reading the red book. And the blue book?’

a. *Dede oku-yor mavi kitab-ı.*
 grandfather read-PROG[3] blue book-ACC

‘The grandfather is reading the blue book.’ (SVO)

b. *Mavi kitabı okuyor dede.* (OVS)

(260) Turkish: C/OBJ

Büyükanne oku-yor kırmızı kitab-ı. Ve dede?
 grandmother read-PROG.3 red book-ACC and grandfather

‘The grandmother is reading the red book. And the grandfather?’

a. *Dede okuyor mavi kitabı.* (SVO)

b. *Mavi kitabı okuyor dede.* (OVS)

The sentences in the examples in (259) and (260) are considered as contrastive topics, because the topic introduced in the context sentences indicates that there is an alternative which is mentioned by the contrastive topic in the answers (cf. also the definition of the different topics types in Section 2.4.2).

For the Russian translations of the same item set, see the examples in (261)-(264).

(261) Russian: S/SBJ

Na kukhne zhenshchina i devochka.
 in kitchen:PREP woman and girl

‘In the kitchen (there are) a woman and a girl.’

a. *Devochka yest yabloko.*
 girl eat:IPFV[3] apple

‘The girl eats the apple.’ (SVO)

b. *Yabloko yest devochka.* (OVS)

(262) Russian: S/SBJ

Na stole yabloko i banan.
on table:PREP apple and banana

‘On the table (there are) an apple and a banana.’

a. *Devochka yest yabloko.* (SVO)

b. *Yabloko yest devochka.* (OVS)

(263) Russian: C/SBJ

Babushka chitayet krasnuyu knigu. A sinyaya
grandmother read:IPFV[3] red:ACC.F book:ACC.F and blue
kniga?
book

‘The grandmother reads the red book. And the blue book?’

a. *Dedushka chitayet sinyuyu knigu.*
grandfather read:IPFV[3] blue:ACC.F book:ACC.F

‘The grandfather reads the blue book.’ (SVO)

b. *Sinyuyu knigu chitayet dedushka.* (OVS)

(264) Russian: C/OBJ

Babushka chitayet krasnuyu knigu. A dedushka?
grandmother read:IPFV[3] red:ACC.F book:ACC.F and grandfather

‘The grandmother reads the red book. And the grandfather?’

a. *Dedushka chitayet sinyuyu knigu.* (SVO)

b. *Sinyuyu knigu chitayet dedushka.* (OVS)

For the Urum translations finally consider the examples in (265)-(268).

(265) Urum: S/SBJ

Kukhnya-da ğari-nän ğız.
kitchen-LOC woman-INS girl

‘In the kitchen (there are) a woman and a girl.’

a. *Ğız i-er alma-yi.*
girl eat-IPFV[3] apple-ACC

‘The girl eats the apple.’ (SVO)

b. *Almayi ier ğız.* (OVS)

(266) Urum: S/OBJ

Stol-un üst-ün-dä alma-yi-nan banan.
 table-GEN top-POSS.3-DAT apple-ACC-INS banana

‘On the table (there are) an apple and a banana.’

a. *Ğız ier almayi.* (SVO)

b. *Almayi ier ğız.* (OVS)

(267) Urum: C/SBJ

Äbä oh-ier ğırmızı kniga-yi. Ya gög kniga?
 grandmother read-IPFV[3] red book-ACC and blue book

‘The grandmother is reading a/the red book. And the blue book?’

a. *Dädä oh-ier gög kniga-yi.*
 grandfather read-IPFV[3] blue book-ACC

‘The grandfather is reading the a/blue book.’ (SVO)

b. *Gög knigayi ohier dädä.* (OVS)

(268) Urum: C/OBJ

Äbä oh-ier ğırmızı kniga-yi. Ya dädä?
 grandmother read-IPFV[3] red book-ACC and grandfather

‘The grandmother is reading a/the red book. And the grandfather?’

a. *Dädä ohier gög knigayi.* (SVO)

b. *Gög knigayi ohier dädä.* (OVS)

All items were recorded by native speakers of the respective languages. In order to avoid an effect of prosody, the intonation of the target sentences was manipulated in Praat. Therefore, all arguments were recorded separately and resynthesized. As a result, all words had a flat intonation contour at 235 Hertz (Hz) before they were composed to target sentences. In order to generate a more natural prosodic structure, I finally added a declination to the global intonation contour of the target sentences, such that the difference between the left edge of the first word and the right edge of the last word is 50 Hz (cf. also the manipulation of the targets in the focus acceptability judgment task in Section 6.3). Thus, all targets had a continuously falling intonation contour from 235 Hz to 185 Hz. See Appendix D for a list of the experimental items used in the topic acceptability judgment task.

7.3.2.3 Procedure

Similar to the acceptability judgment task on focus (cf. Section 6.3), all context sentences were presented together with the two target answers immediately one after another. After listening to both alternatives, the participants were asked to rate the acceptability of both targets as a possible continuation of the context sentence on a 5-point Likert scale from 1 (*=not acceptable at all*) to 5 (*=fits perfectly to the preceding context*). The decision to ask the participants to rate the acceptability of the responses after listening to both alternatives results from several pretests, which showed that without giving alternatives some speakers rated sentences as not acceptable because they considered them as semantically odd, whereas others consistently rated both target structures as equally acceptable. By presenting both alternatives immediately one after another the participants were supposed to think about potential differences in the interpretation of the two variants, which should encourage them to develop a preference for one or the other alternative.

The four conditions of each context sentence (cf. the experimental design in Table 7.26) were distributed on four different questionnaire versions by using a Latin square design. Hence, each of the four conditions (S/SBJ, C/SBJ, S/OBJ, C/OBJ) was rated by exactly four speakers. The topic experiments were conducted together with the acceptability judgment task on focus (cf. Section 6.3). Thus, the items of the four experiments functioned as distractors to each other. In total, every participant had to rate 64 Q/A pairs (4 experiments x 4 conditions x 4 item sets). Furthermore, the order of the items was pseudo-randomized within the different questionnaire versions. For a more detailed description of the procedure of the acceptability judgment task, consider Section 6.3.2.3.

7.3.3 Results

This section presents the results of the acceptability judgment task. In order to analyze the statistical significance of the data, I used a linear mixed effect (LME) analysis with the three fixed factors T-TYPE, T-ARGUMENT and A-ORDER and the random factors SPEAKER and ITEM (only intercepts) using the lmer function from R's lme4 library (Bates et al. 2015). Subsequently, I compared the full model to a reduced model without the interaction of the three factors and to the null model (including only the intercept and the random factors) using the likelihood ratio test of the function anova. For the

further analysis I simplified the data by breaking it down by the factor T-TYPE. For each of the two data sets I calculated an independent LME analysis with the fixed factors T-ARGUMENT and A-ORDER and the random factors SPEAKER and ITEM (only intercepts). The full models were compared to a reduced model, i.e., a model without the interaction of the two factors. If the model comparison revealed a significant effect of the two-way-interaction, pairwise comparisons using Tukey HSD tests were conducted in order to examine which contrasts are significantly different. In order to calculate the effect size of the contrasts I used Cohen's *d* (Cohen 1988). The results of the Tukey HSD and the effect sizes are only reported if the model comparisons reveal a significant interaction. If the model comparisons did not reveal a significant interaction, the models were further reduced in order to analyze if the factors T-ARGUMENT and A-ORDER have a significant main effect.

7.3.3.1 Turkish

7.3.3.1.1 V-medial experiment

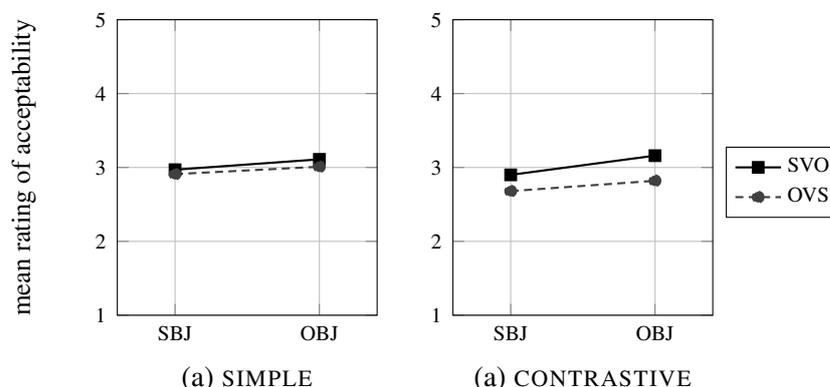
The mean acceptability ratings of the Turkish natives speakers given for SVO and OVS orders following the four different contexts (S/SBJ, S/OBJ, C/SBJ, C/OBJ) are summarized in Table 7.27.

Table 7.27: Topic acceptability judgment task: SVO vs. OVS (Turkish)

	SIMPLE		CONTRASTIVE	
	SBJ	OBJ	SBJ	OBJ
SVO	2.97	3.11	2.9	3.16
OVS	2.91	3.01	2.68	2.82

Table 7.27 illustrates that the Turkish speakers show a general preference for SVO over OVS orders among all conditions. Nevertheless, the results indicate that OVS orders received higher ratings with topicalized objects (both in the simple and the contrastive conditions) than with topicalized subjects. Consider also Figure 7.17 which illustrates the effect of the T-ARGUMENT (subject vs. objects) and the A-ORDER (SVO vs. OVS) separately for the two different topic types (simple vs. contrastive).

Figure 7.17: Topic acceptability judgment task: Mean ratings of Turkish speakers for SVO/OVS orders



The LME analysis of the data reveals no significant effect of the three-way-interaction. This finding is also confirmed by a model comparison between the full model and a model without the interaction, which indicates that a model including the interaction of the factors T-TYPE, T-ARGUMENT and A-ORDER is not significantly different from a model without this interaction ($\chi^2(4) = .94, ns$). For the further statistical analysis I calculated two independent LME models for the acceptability judgments of the simple and the contrastive topic data. However, neither the model comparisons of the simple topic data nor the model comparisons of the contrastive topic data yield any significant interaction (simple: $\chi^2(1) = .01, ns$; contrastive: $\chi^2(1) = .01, ns$) or any significant main effects (simple: A-ORDER $\chi^2(2) = .41, ns$, T-ARGUMENT $\chi^2(2) = 1.02, ns$; contrastive: A-ORDER $\chi^2(2) = 1.33, ns$, T-ARGUMENT $\chi^2(2) = .61, ns$). This indicates that the Turkish results cannot be explained by any of the manipulated factors.

7.3.3.1.2 V-final experiment

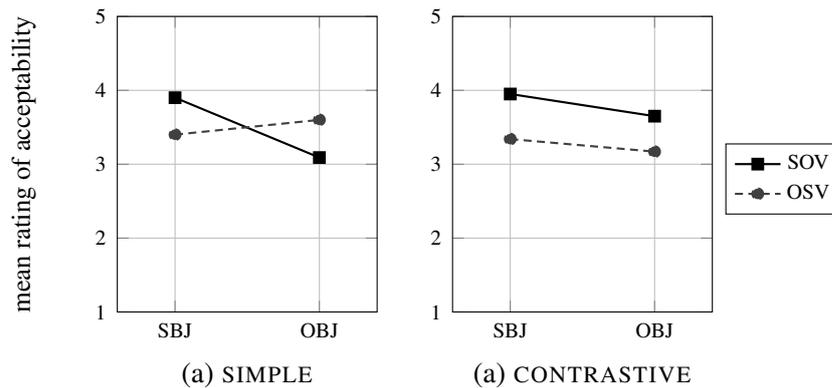
By contrast to the V-medial experiment, the results of the V-final experiment show some considerable effects. Consider Table 7.28 for an overview of the mean acceptability ratings of the Turkish participants given for SOV and OSV orders.

Table 7.28: Topic acceptability judgment task: SOV vs. OSV (Turkish)

	SIMPLE		CONTRASTIVE	
	SBJ	OBJ	SBJ	OBJ
SOV	3.9	3.09	3.95	3.65
OSV	3.4	3.6	3.34	3.17

The results in Table 7.28 reveal that the Turkish speakers in the simple topic experiment prefer SOV orders when the subject is topicalized, whereas they prefer OSV orders when the object is topicalized. By contrast, the ratings given in the contrastive conditions reveal a general preference for SOV orders in both contextual manipulations. Consider also the Figures in 7.18.

Figure 7.18: Topic acceptability judgment task: Mean ratings of Turkish speakers for SOV/OSV orders



The LME analysis of the Turkish V-final data does not show a significant effect of the three-way-interaction ($p = .09$). However, the model comparison between the full model and a model without the interaction of the three factors reveals that a model including the interaction fits significantly better to results than a model without the interaction ($\chi^2(4) = 15.23$ $p < .05$). This implies that the T-ARGUMENT \times A-ORDER interaction is different for the two topic types. This finding is also confirmed by the further analysis. The LME analysis of the simple topic data reveals a significant effect of the interaction of the two factors T-ARGUMENT and A-ORDER ($p < .05$). The subsequent model comparison confirms that the interaction cannot be excluded from the full model without a significant loss of information ($\chi^2(1) = 6.86$ $p < .05$). The winning model is presented in Table 7.29.

Table 7.29: Topic acceptability judgment task: Fixed effect summary for Turkish V-final ratings (=simple topics)

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr</i> (> <i>t</i>)
(Intercept)	3.59	.15	23.86	<2e-16***
T-ARGUMENT	-.19	.27	-.73	.4668
A-ORDER	.5	.21	-2.37	.0240*
T-ARGUMENT [^] A-ORDER	1	.38	2.61	.0102*

* $p < .05$; ** $p < .01$; *** $p < .001$

Pairwise post-hoc Tukey tests indicate that SOV orders are significantly more acceptable with subject foci than with object foci ($p < .05$). The effect of the contrast is also supported by the Cohen d which reveals a large effect size, consider Table 7.30.

Table 7.30: Topic acceptability judgment task: Tukey HSD (Turkish, simple, SOV/OSV)

contrast	diff.	SE	95% confidence interval		p value	Cohen d
			lower	upper		
SBJ.OSV - OBJ.SOV	-.19	1.02	-.905	.513	.8898	-.21 (S)
OBJ.SOV - OBJ.OSV	-.51	1.02	-1.05	.037	.0775	-.47 (S)
SBJ.SOV - SBJ.OSV	.50	1.02	-.340	1.34	.4119	.59 (M)
SBJ.SOV - OBJ.SOV	.81	1.02	.105	1.52	.0174*	.80 (L)

* $p < .05$; ** $p < .01$; *** $p < .001$

By contrast, the LME analysis of the contrastive topic data only shows a significant main effect of the factor A-ORDER ($p < .05$). This result is also confirmed by the goodness of fit test, which reveals that the factor A-ORDER is highly relevant in order to explain the results ($\chi^2(2) = 11.99$, $p < .001$), whereas the factor T-ARGUMENT ($\chi^2(2) = 2.51$, ns) as well as the interaction of the two factors ($\chi^2(1) = .21$, ns) could be removed from the full model without a significant loss of information. The winning model is presented in Table 7.31.

Table 7.31: Topic acceptability judgment task: Fixed effect summary for Turkish V-final ratings (=contrastive topics)

Coefficients	Estimate	SE	t value	$Pr(> t)$
(Intercept)	3.25	.1	29.68	<2e-16***
A-ORDER	.53	.15	3.52	.00005***

* $p < .05$; ** $p < .01$; *** $p < .001$

7.3.3.2 Russian

7.3.3.2.1 V-medial experiment

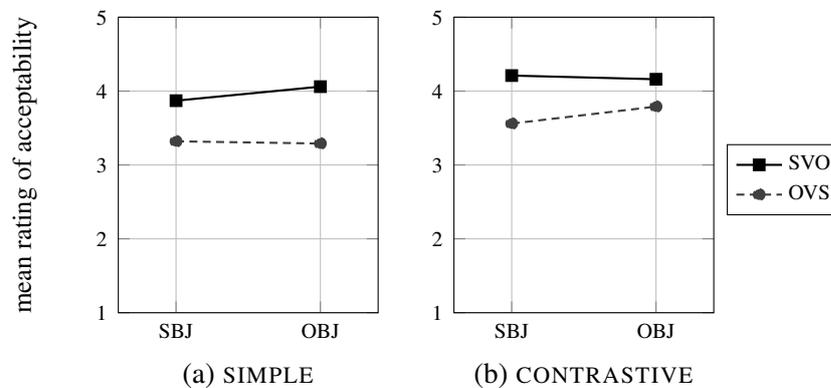
Table 7.32 summarizes the mean acceptability ratings of the Russian speakers given in the V-medial experiment.

Table 7.32: Topic acceptability judgment task: SVO vs. OVS (Russian)

	SIMPLE		CONTRASTIVE	
	SBJ	OBJ	SBJ	OBJ
SVO	3.87	4.06	4.21	4.16
OVS	3.32	3.29	3.56	3.79

The data in Table 7.32 reveal that the Russian speakers show a strong preference for SVO over OVS orders, which seems to be independent from the contextual manipulations. Consider also Figure 7.19.

Figure 7.19: Topic acceptability judgment task: Mean ratings of Russian speakers for SVO/OVS orders



The LME analysis of the data reveals no significant effect of the three-way-interaction. This result is confirmed by the likelihood ratio test, which implies that the full model is not significantly different from a model without the three-way-interaction ($\chi^2(4) = 1.46, ns$). The LME analysis of the ratings given in the simple conditions shows a significant effect of the factor A-ORDER ($p < .05$) but no effect of the factor T-ARGUMENT or of the interaction between the two factors. These results are supported by the likelihood ratio tests, which reveal that a model including the factor A-ORDER ($\chi^2(2) = 8.83, p < .05$) can explain the results significantly better than a model without this factor, whereas the factor T-ARGUMENT ($\chi^2(2) = .52, ns$) as well as the interaction ($\chi^2(1) = .49, ns$) could be excluded from the model without a significant loss of information. The winning model is reported in Table 7.33.

Table 7.33: Topic acceptability judgment task: Fixed effect summary for Russian V-medial ratings (=simple topics)

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr(> t)</i>
(Intercept)	3.29	.15	21.67	<2e-16***
A-ORDER	.63	.21	2.98	.004**

* $p < .05$; ** $p < .01$; *** $p < .001$

By contrast, the LME analysis of the acceptability ratings given in the contrastive conditions does not show any significant effect, neither for the interaction nor for any of the two main factors. However, the results of the model comparisons reveal that a model including the factor A-ORDER ($\chi^2(2) = 6.17$, $p < .05$) fits slightly better to the results than a model without the factor, whereas the factors T-ARGUMENT ($\chi^2(2) = 1.03$, *ns*) as well as the interaction of both factors ($\chi^2(1) = .19$, *ns*) could be removed without any significant information loss.

7.3.3.2.2 V-final experiment

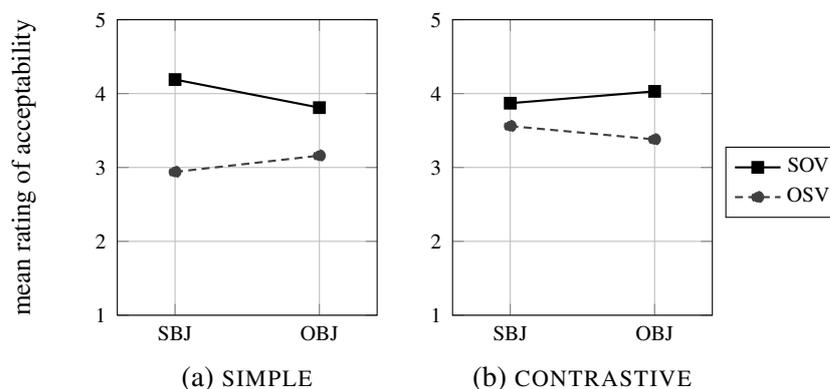
Table 7.34 presents the mean ratings of the Russian participants given in the V-final experiment.

Table 7.34: Topic acceptability judgment task: SOV vs. OSV (Russian)

	SIMPLE		CONTRASTIVE	
	SBJ	OBJ	SBJ	OBJ
SOV	4.19	3.81	3.87	4.03
OSV	2.94	3.19	3.56	3.38

Table 7.34 reveals that the Russian speakers show a general preference for SOV over OSV orders. Moreover, the results show a difference between simple and contrastive topicalized subjects. Whereas simple topics are more acceptable with SOV than with OSV orders, topicalized subjects in the contrastive condition were considered as quite acceptable with OSV orders. Compare the Figures in 7.20.

Figure 7.20: Topic acceptability judgment task: Mean ratings of Russian speakers for SOV/OSV orders



The LME analysis of the Russian acceptability judgments given in the V-final experiment shows a significant effect of the three-way-interaction between the factors T-TYPE, T-ARGUMENT and A-ORDER ($p < .05$). However, the model comparison only reveals a very marginal significant effect of the three-way-interaction ($\chi^2(4) = 8.14, p = .08$), which implies that there are significant differences between the ratings given for the simple and the contrastive topic conditions.

The LME analysis of the simple topic data reveals a significant main effect of the factor A-ORDER ($p < .05$). Consider the winning model in Table 7.35. The significance of the factor is also confirmed by the model comparison which reveals that a model including the factor A-ORDER fits marginally better to the deviance of the results than a model without the interaction ($\chi^2(2) = 26.11, p < .001$).

Table 7.35: Topic acceptability judgment task: Fixed effect summary for Russian V-final ratings (=simple topics)

Coefficients	Estimate	SE	t value	$Pr(> t)$
(Intercept)	3.18	.17	18.69	$<2e-16$ ***
A-ORDER	.62	.24	2.59	.0101*

* $p < .05$; ** $p < .01$; *** $p < .001$

By contrast, the LME analysis of the contrastive topic data only reveals a significant main effect of the factor A-ORDER ($p < .01$), whereas the factor T-ARGUMENT and the interaction between the factors became not significant. The winning model is reported in Table 7.36. The finding is moreover supported by the subsequent likelihood ratio tests, which indicate that the removal of the factor A-ORDER from the full model would lead to a significant loss of information ($\chi^2(2) = 8.4, p < .01$), whereas the factor

T-ARGUMENT ($\chi^2(2) = .02, ns$) and the interaction ($\chi^2(1) = .96, ns$) could be removed without any significant information loss.

Table 7.36: Topic acceptability judgment task: Fixed effect summary for Russian V-final ratings (=contrastive topics)

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr(> t)</i>
(Intercept)	3.44	.11	29.17	<2e-16***
A-ORDER	.51	.16	3.07	.00243**

* $p < .05$; ** $p < .01$; *** $p < .001$

In sum, the statistical analysis of the Russian data show that neither the ratings given in the V-medial experiment nor the ratings given in the V-final experiment show any significant effect of the IS-manipulated factors T-TYPE or T-ARGUMENT.

7.3.3.3 Urum

7.3.3.3.1 V-medial constructions

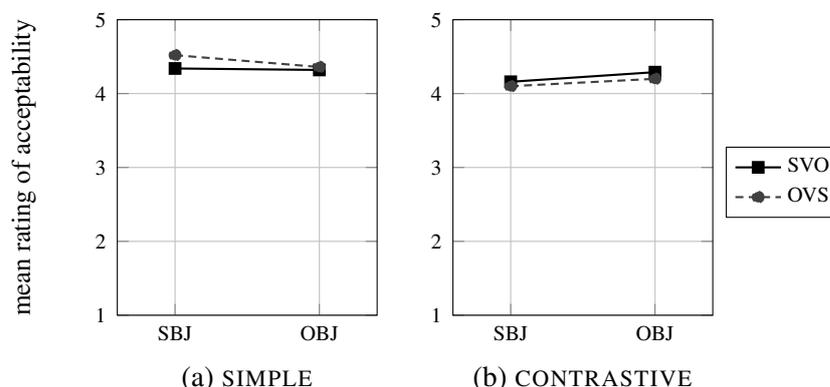
This subsection presents the statistical analysis of the Urum acceptability judgment task. Table 7.37 summarizes the mean ratings of the Urum participants given in the V-medial experiment.

Table 7.37: Topic acceptability judgment task: SVO vs. OVS (Urum)

	SIMPLE		CONTRASTIVE	
	SBJ	OBJ	SBJ	OBJ
SVO	4.34	4.32	4.16	4.29
OVS	4.52	4.36	4.1	4.2

The data in Table 7.37 show only very subtle differences between the acceptability ratings for SVO and OVS orders, which seem to be neither affected by the TOPIC TYPE (simple vs. contrastive) nor by the TOPICALIZED ARGUMENT (subject vs. object). Compare also the Figures in 7.21.

Figure 7.21: Topic acceptability judgment task: Mean ratings of Urum speakers for SVO/OVS orders



The statistical analysis of the data shows no significant effect of the three-way-interaction. This finding is also supported by the likelihood ratio test, which reveals that a model including the interaction of the factors T-TYPE, T-ARGUMENT and A-ORDER does not fit better to the results than a model without the interaction ($\chi^2(4) = 1.69$, *ns*). Moreover neither the model comparison of the simple topic data nor the likelihood ratio tests of the contrastive topic data yield any significant interaction (simple: $\chi^2(1) = .14$, *ns*; contrastive: $\chi^2(1) = .01$, *ns*) nor any significant main effects (simple: A-ORDER $\chi^2(2) = .05$, *ns*, T-ARGUMENT $\chi^2(2) = .11$, *ns*; contrastive: A-ORDER $\chi^2(2) = 1.32$, *ns*, T-ARGUMENT $\chi^2(2) = .6$, *ns*).

7.3.3.3.2 V-final constructions

The mean ratings of the Urum participants given in the V-final experiment are finally presented in Table 7.38.

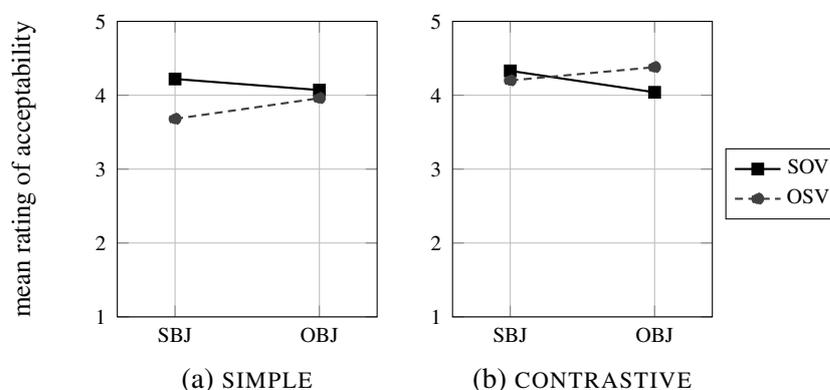
Table 7.38: Topic acceptability judgment task: SOV vs. OSV (Urum)

	SIMPLE		CONTRASTIVE	
	SBJ	OBJ	SBJ	OBJ
SOV	4.22	4.07	4.33	4.04
OSV	3.68	3.96	4.2	4.38

Table 7.38 illustrates that the Urum speakers show a general preference for SOV over OSV orders in the simple topic conditions. Nevertheless, the ratings for OSV orders are slightly higher for topicalized objects than for topicalized subjects. By contrast, the ratings given in the contrastive conditions show a small preference for SOV orders with topicalized subjects

and vice versa a little preference for OSV orders with topicalized objects. Consider Figure 7.22.

Figure 7.22: Topic acceptability judgment task: Mean ratings of Urum speakers for SOV/OSV orders



The LME analysis of the Urum data reveals no significant effect of the interaction between the factors T-TYPE, T-ARGUMENT and A-ORDER. This finding is also supported by the model comparison, which reveals that a model including the three-way-interaction does not fit significantly better to the results than a model without the interaction ($\chi^2(4) = 9.28, ns$).

The LME model of the simple topic data does not show any significant effect. However, the model comparisons imply that the removal of the factor A-ORDER from the full model would lead to a significant loss of information ($\chi^2(2) = 2.27, p < .05$), whereas both the factor T-ARGUMENT ($\chi^2(2) = .21, ns$) as well as the interaction of the two factors ($\chi^2(1) = 2.27, ns$) could be removed without any significant information loss. The winning model is presented in Table 7.39.

Table 7.39: Topic acceptability judgment task: Fixed effect summary for Urum V-final ratings (=simple topics)

Coefficients	Estimate	SE	<i>t</i> value	<i>Pr(> t)</i>
(Intercept)	3.82	.09	38.53	<2e-16***
A-ORDER	.31	.14	2.21	.0311*

* $p < .05$; ** $p < .01$; *** $p < .001$

By contrast, the LME analysis of the contrastive topic data does not show any significant effect, neither for the interaction nor for any of the two main factors. This finding is also confirmed by the subsequent model comparisons (interaction: $\chi^2(1) = 3.21, ns$; T-ARGUMENT: $\chi^2(2) = .17, ns$; A-ORDER: $\chi^2(2) = 3.82, ns$). Hence, the differences between the ratings given in the contrastive conditions cannot be explained by any of the manipulated factors.

7.3.4 Summary and discussion

By contrast to other acceptability judgment task who found a correlation of givenness and word order (cf. Šimík et al. 2014, Šimík and Wierzba 2015), the results of the present acceptability judgment task only reveal a few interpretable results regarding the interaction of topics and word order, which might possibly relate to the unnatural prosodic manipulation of the target sentences. The relevant results for the three investigated languages can be summarized as follows:

- **Turkish:**

- (i) *V-medial experiment*: The statistical analysis showed no significant effects, neither for the interaction nor for the two main factors, which implies that the Turkish V-medial results cannot be explained by any of the manipulated factors.
- (ii) *V-final experiment*: The statistical analysis showed a significant difference between the ratings given in the simple and the contrastive topic conditions. The simple topic data revealed a significant interaction of the two factors T-ARGUMENT and A-ORDER, i.e., topicalized subjects were significantly more acceptable with SOV orders and topicalized objects were more acceptable with OSV orders. By contrast, the analysis of the contrastive topic data only revealed a significant effect of the A-ORDER (i.e., SOV over OSV).

- **Russian:**

- (i) *V-medial experiment*: The statistical analysis showed a significant main effect of the factor A-ORDER (i.e., SVO over OVS), but no IS-dependent effects.
- (ii) *V-final experiment*: The statistical analysis revealed a marginal significant two-way-interaction of the factors T-ARGUMENT and A-ORDER. However, post-hoc Tukey tests showed that both topicalized subjects and topicalized objects are significantly more acceptable with SOV than with OSV orders. Likewise, the analysis of the contrastive topic data only showed a significant main effect of the factor A-ORDER (i.e., SOV over OSV).

- **Urum:**

- (i) *V-medial experiment*: The statistical analysis did not reveal any significant effect, neither for the interaction nor for the two main factors.

- (ii) *V-final experiment*: The statistical analysis revealed a small main effect of the factor A-ORDER (i.e., SOV over OSV), but no further effects.

In a nutshell, the results of the Turkish acceptability judgment task confirmed the assumption that topics in Turkish can either occur in the beginning of the sentence or postverbally (i.e., SVO and OVS orders were considered as equally acceptable with topicalized subject and objects). Moreover the finding that Turkish speakers showed a preference for SOV over OSV orders with topicalized subjects and a preference for OSV over SOV orders with topicalized objects provides empirical evidence to the assumption that topics in Turkish occur either before the focus (i.e., in the left-periphery of the sentence) or after the verb (i.e., in the right-periphery of the sentence) (cf. the theoretical assumptions about information structure and word order in Turkish in Chapter 5).

The results of the Russian acceptability judgment task revealed a significant preference for SVO over OVS orders and SOV over OSV orders independent from the topicalized argument, which implies that topics do not necessarily have to occur in the beginning of a sentence but are also acceptable in immediately preverbal and even in postverbal position, which is typically considered to host focused material (cf. the theoretical assumptions about information structure and word order in Russian in Chapter 5).

Finally, the results of the Urum speakers showed that topics in Urum can similar to foci felicitously occur either in the beginning of the sentence, immediately preverbally or postverbally. The Urum results thus rather resemble the results of the Russian speakers than the results of the Turkish speakers, who dislike immediately preverbal topics.

7.3.5 Interim conclusions

Taking everything into consideration, the results of the topic acceptability judgment task showed that word order in all three investigated languages is very flexible. However, a clear interaction of word order and topicalization was only found in the Turkish V-final experiment, i.e., topicalized subjects were significantly more acceptable with SOV orders than with OSV orders, whereas topicalized objects were more acceptable with OSV orders than with SOV orders. Nevertheless, the ratings given in the V-final experiment indicate that topics in Turkish can felicitously occur in the right-periphery of the sentence. By contrast, the Russian speakers showed a clear preference

for subject<object linearizations independent from the topicalized argument, which implies that topics in Russian do not necessarily have to occur in the beginning of the sentence, but may also occur immediately preverbally (S[O]_{Top}V) or even postverbally (SV[O]_{Top}). Finally, the Urum results revealed that topics in Urum may occur either in the beginning of the sentence, immediately preverbally or postverbally. From a cross-linguistic point of view, the acceptability judgment task shows that the position of topics is freer in Urum and Russian than in Turkish. Moreover, the results of the acceptability judgment task showed that the position of topics is independent from the topic type.

7.4 Conclusions

The empirical studies presented in this chapter used two different methods in order to investigate the interaction between topics (i.e., contextually given arguments) and word order in Turkish, Russian and Urum.

The results of the topic elicitation study showed a strong cross-linguistic preference for AG<PAT orders independent from the contextual manipulations (cf. Section 7.2). Apart from the first experiment, the results of the other three experiments (i.e., *themes vs. locatives*, *recipients vs. patients*, *instruments vs. patients*) revealed a strong interaction of givenness and word order in Turkish and Russian. These findings confirm the observation that Scrambling subjects over non-subjects is less likely with structural cases than with inherent cases (Woolford 2006). By contrast, the descriptions of the Urum speakers only showed a significant effect of givenness in the *theme vs. locative* experiment. In the other three experiments the speakers showed a general preference for AG<PAT, REC<PAT and INS<PAT orders.

The interaction between topics and word order was further investigated in the acceptability judgment task (cf. Section 7.3). The results of the study revealed that topics in Turkish (both simple or contrastive) are most acceptable either in the left-periphery (i.e., in the beginning of the sentence) or in the right-periphery of the clause (i.e., postverbally). By contrast, the results for Russian and Urum showed that topics can felicitously occur either in the beginning of the sentence, immediately preverbally or postverbally.

In sum, the results of the empirical studies showed that Urum crucially differs from its substrate language Turkish, where topics have to occur either left- or right-peripheral. Moreover the results of the speech production study revealed some interesting findings with respect to the structure of

the Urum VP. Whereas Russian speakers only produced V-initial orders and Turkish only produced V-final orders, the descriptions of the Urum speakers revealed substantial variation with respect to the position of the verb. Consider especially the results of the *recipient vs. patient* and the *instrument vs. patient* experiment, which revealed that Urum speakers do not only produce V-initial and V-final orders, but also constructions with the verb occurring in-between the two arguments. Consider for instance the examples in (269). Whereas the structure (269a) results from a regressive directionality and is typical for a head-final language (like Turkish), the structure in (269b) results from a progressive directionality and is typically for head-initial language (like Russian). By contrast, the structure in (269c) is flexible regarding its directionality: it is head-initial in the lowest part of the subtree and head-final in the higher part of the tree. According to Haider (2012) structures like in (269c) are unique to so-called languages of the *third type*, i.e., languages that are un(der)specified with regard to the directionality of the verbal heads.

(269) a. head-final structure:

[Ärgishi [ğız-a [kniga-yi ver-di]]]
 man girl-DAT book-ACC give-PST.3SG

‘The man gave the girl a/the book.’ (IO<DO<V)

b. head-initial structure:

[Ärgishi [verdi_i [ğıza [e_i knigayi]]] (V<IO<DO)

c. T3 structure:

[Ärgishi [ğıza [verdi knigayi]]] (IO<V<DO)

The fact that Urum allows head-final and head-initial structures as well as structures like in (269c) that were neither found in Russian nor in Turkish (cf. the results of the speech production study in Section 7.2.4) implies that Urum did not undergo a change from OV to VO but rather a change from OV to a language with a flexible directionality of the verb. This finding is very crucial for the structural analysis of the correlation of syntax and information structure in Urum in the final part of this dissertation.

Chapter 8

The syntax of focus and topic in Urum

8.1 Introduction

The results of the empirical studies presented in Chapter 6 and 7 revealed two major differences with regard to the interaction of information structure and word order in the three investigated languages. The crucial differences can be summarized as follows: Firstly, whereas foci in Turkish may only occur in the preverbal domain, foci in Russian and Urum may occur either in the beginning of the sentence, immediately preverbally or postverbally. Secondly, Russian and Urum allow $[O]_{\text{Foc}}\text{SV}$ orders, whereas Turkish does not. The first difference can be captured by the cross-linguistic generalization that foci may not occur on the right-side of the TP (cf. the simplified approach to Turkish information structure in Chapter 4). The second difference relates to the fact that Turkish is subject to the verb-adjacency requirement¹, whereas Russian and Urum seem to be not. Hence, foci in Russian and Urum may felicitously occur in a position not immediately adjacent to the verb. With regard to the interaction of topics and word order, the results of the empirical studies revealed that topics in Turkish either occupy the left- or the right-periphery of a sentence, whereas topics in Russian and Urum may also occur in the middle field. This finding can also be attributed to the verb-adjacency requirement of Turkish, which forces unfocused material to move outside the immediately preverbal domain. Though Urum information structure show a lot of similarities to Russian, the results of the empirical studies imply that the position of topics and foci in Urum seems to be even more flexible than in Russian.

¹Please note that the focus-verb adjacency in Turkish is not the result of focus movement, but rather results from topic movement, i.e., movement of unfocused material out of the focus domain (cf. Göksel and Özsoy 2000).

The aim of this chapter is to provide a syntactic analysis on the interaction of word order and information structure in Urum. Section 8.2 deals with canonical word orders in Urum and discusses the base position of arguments, which is very crucial for the syntactic analysis. Section 8.3 deals with the question whether topics and foci in Urum undergo movement or not and examines the problems of the implementation of a cartographic approach. Section 8.4 finally presents a syntactic approach to Urum information structure that is based on two core assumptions: Firstly, it assumes that Urum has optional focus and topic movement which allows for the availability of *in situ* topics and foci. Secondly, it assumes that topic movement in Urum targets two different structural positions. Section 8.5 provides the final summary and the conclusions.

8.2 Base position of arguments

The results of the empirical studies in Chapter 6 and 7 revealed some interesting differences between Turkish on the one hand and Urum and Russian on the other hand. The most significant difference regarding the information structural possibilities of the languages is that foci in Turkish are restricted to the preverbal area, whereas foci in Russian and Urum may felicitously occur postverbally. The contrast between Turkish and Russian is related to the different syntactic structures of the language. Whereas postverbal material in Turkish is right-adjoined to TP and thus occurs in a clause-external position (cf. Section 5.4.2), postverbal material in Russian undergoes leftward movement in the extended left-periphery and hence remains inside the core clause (cf. Section 5.4.1). The differences in the information structural possibilities relate to the fact that Turkish has a verb-final VP whereas Russian has a verb-initial VP. On the basis of these assumption, this section claims that the flexibility of the information structural notions in Urum results from the underspecified directionality of the verbal head, which allows Urum to combine the information structural possibilities of OV (=Turkish) and VO (=Russian) languages (cf. also the discussion in Section 7.4).

Evidence in order to analyze Urum as a language with a variable V-positioning rather than as a V-final or V-initial language comes among others from focus projection (Selkirk 1984, Selkirk 1995). Consider Selkirk's principles of focus projection in (270).

- (270) a. Basic Focus Rule: An accented word is F-marked.
 b. Focus Projection:
 i. F-marking of the head of a phrase licenses the F-marking of the phrase;
 ii. F-marking of an internal argument of a head licenses the F-marking of the head.

According to the Basic Focus Rule in (270a) the word that bears the main stress of a sentence is considered as focus marked. Main stress in canonical orders (=nuclear stress) is assigned to the most deeply embedded complement in the VP (cf. the *Nuclear Stress Rule* (NSR) by Chomsky and Halle 1968 and also Cinque 1993). Hence, nuclear stress in a transitive sentence falls on the object, regardless of whether the language is verb-final or verb-initial. Consider for instance the examples from Russian and Turkish in (271) and (272) (nuclear stress is indicated by underlining).

(271) Russian:

Anna [*chitayet* *knigu*]_{VP}.
 Anna read:IPFV.3.SG book:ACC.F

‘Anna reads the book.’

(272) Turkish:

Anna [*kitab-ı* *oku-yor*]_{VP}.
 Anna book-ACC read-PROG.3

‘Anna is reading the book.’

According to the principles of focus projection in (270b) and (270c) only heads or internal arguments of a head can project focus. Hence, a direct object can only project its focus feature onto higher constituents if it is part of the VP. Consider for instance the illustrative examples from Russian in (273) and (274). Whereas the SVO order in (273) is ambiguous and allows either a narrow or a broad focus reading, the scrambled SOV order in (274) only allows an interpretation with a narrow focus on the direct object (*knigu* ‘book’) (cf. also Kondrashova 1996, Kallestinova 2007).

- (273) Context: ‘What is Anna reading?’ / ‘What is Anna doing?’ /
‘What’s happening?’

[Anna [chitayet [knigu]_{FOC}]_{FOC}]_{FOC}.
Anna read:IPFV.3.SG book:ACC.F

‘Anna reads the book.’

- (274) Context: ‘What is Anna reading?’ / *‘What is Anna doing?’ /
*‘What’s happening?’

Anna [knigu]_{FOC} chitayet.
Anna book:ACC.F read:IPFV.3.SG

‘Anna reads THE BOOK.’

By contrast, focus projection in Turkish is only possible if the direct object is in immediately preverbal position (cf. Vallduví and Engdahl 1996, Kılıçaslan 2004). Consider for instance the illustrative example from Turkish in (275) which shows that the direct object in canonical orders can project its focus feature to the VP or the whole sentence.

- (275) Context: ‘What is Anna reading?’ / ‘What is Anna doing?’
/ ‘What’s happening?’

[Anna [[kitab-ı]_{FOC} oku-yor]_{FOC}]_{FOC}.
Anna book-ACC read-PROG.3

‘Anna is reading the book.’

In Urum, however, focus projection is possible from VO as well as from OV constructions. Consider the examples in (276) which provide evidence for the assumption that both SVO and SOV are canonical word orders in Urum.

- (276) Context: ‘What is Anna reading?’ / ‘What is Anna doing?’
/ ‘What’s happening?’

a. SVO

[Anna [oh-ier [kniga-yi]_{FOC}]_{FOC}]_{FOC}.
Anna read-IPFV[3] book-ACC

‘Anna is reading the book.’

b. SOV

[Anna [[kniga-yi]_{FOC} oh-ier]_{FOC}]_{FOC}.
Anna book-ACC read-PROG.3

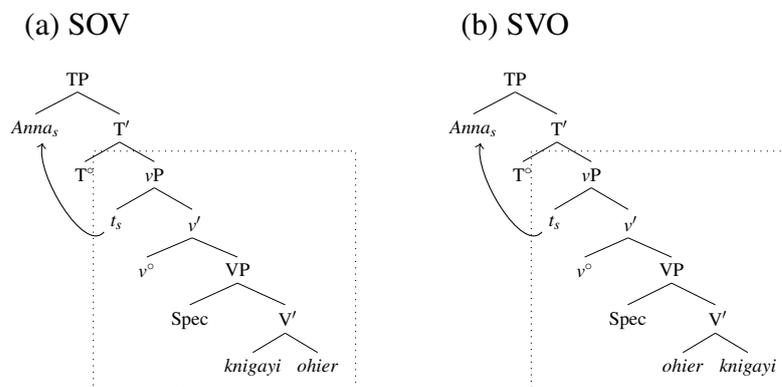
‘Anna is reading the book.’

Further evidence for the assumption that Urum exhibits two canonical word orders comes from VP-topicalization. Consider for instance the examples in (277) which illustrate that both the V-initial as well as the V-final VP can be felicitously moved to the beginning of the sentence yielding an interpretation with a topicalized VP.

- (277) VP-topicalization in Urum:
- a. [_{VP} *Oh-ier kniga-yi*]_i *Anna t_i*.
read-IPFV[3] book-ACC Anna
 - b. [_{VP} *Kniga-yi oh-ier*]_i *Anna t_i*.
book-ACC read-IPFV[3] Anna
'Book-reading, Anna is doing (it).'

Taking everything into consideration, the fact that Urum allows focus projection from V-initial and from V-final VPs as well as the evidence from VP topicalization confirm the assumption that Urum did not undergo a change from OV to VO, but a change from OV to a language with a free position of the verb within the VP. Consider for instance the derivation of the SOV and the SVO order in (278). As proposed for Russian, I assume that the subject is base generated in [Spec, vP] and raises to the specifier of TP in order to check its nominative case and to satisfy the EPP feature of T° (cf. Section 5.4.1 for the derivation of canonical orders in Russian). Moreover I assume that the direct object is generated as an internal argument of the verb in the lower VP. Since Urum is unspecified with regard to the directionality of the verb, I assume that the verb can occur either left- (278b) or right-adjacent (278a) to the direct object. By contrast to the subject which has to move out of its base position in order to receive nominative case, the direct object which bears accusative case in Urum receives its case from the lexical verb and remains inside the VP.

(278)



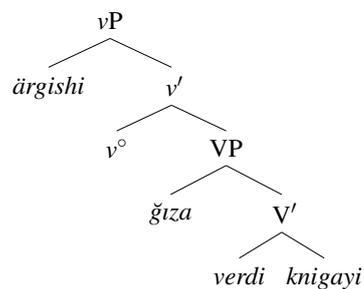
The flexibility of the verb becomes particularly apparent in ditransitive constructions. Consider for instance the examples in (279)-(281), which show that the verb in Urum can either occur as an internal argument left- (279) or right-adjacent to the verb in the lower VP (280) or undergo fronting to the head of the upper vP (281) (cf. also Section 3.8.2).

(279) a. IO<V<DO:

[Ärgishi [ğız-a [ver-di kniga-yi]]]
man girl-DAT give-PST.3SG book-ACC

‘The man gave the girl a/the book.’

b.

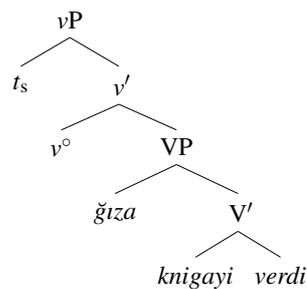


(280) a. IO<DO<V:

[Ärgishi [ğız-a [kniga-yi ver-di]]]
man girl-DAT book-ACC give-PST.3SG

‘The man gave the girl a/the book.’

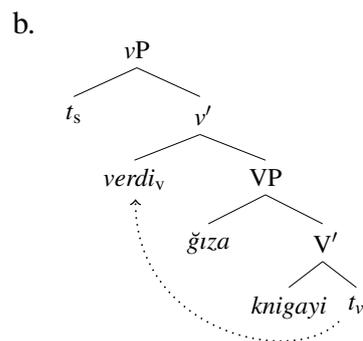
b.



(281) a. V<IO<DO:

[Ärgishi [verdi_i [ğız-a [e_i kniga-yi]]]
man give-PST.3SG girl-DAT book-ACC

‘The man gave the girl a/the book.’



8.3 Problems with a cartographic approach

As discussed in detail in Chapter 5, cartographic approaches are based on the core assumption that there exist designated functional positions in the structure of the clause, where all topicalized and focused arguments have to move to in order to receive their discourse interpretation. The most influential cartographic approach to information structure was developed by Rizzi (1997). He argues for the existence of a unique functional focus projection (FocP) in the extended CP which is surrounded by multiple topic projections (TopPs) (cf. also Section ??). According to Rizzi, the focus projection as well as the topic projections are only activated when needed. Since both TopPs are optional, he moreover does not predict a fixed order of foci and topics. Whereas Rizzi's approach thus allows topics either to precede or to follow a focused argument, Benincá and Poletto (2004) (cf. also Benincá 2001) claim that the order of topics and foci is fixed. Although the approach by Benincá and Poletto (2004) holds true for languages with a fixed topic<focus order (as for instance Hungarian), it cannot explain the observed variation in the order of topics and foci in Urum (cf. the results of the empirical studies in Section 6 and 7). One approach that tried to capture the flexibility in the order of topics and foci is the approach by Neeleman and van de Koot (2008), who relate the linearization of topics and foci to mapping-rules that operate between syntax and information structure (cf. also Section ??). With respect to the empirical findings for Urum (cf. Chapter 6 and 7), Neeleman and van de Koot's mapping approach makes several correct predictions. For instance it can explain that in the canonical word orders (i.e., SVO and SOV) foci may either follow or precede topics. Moreover it correctly predicts that topicalized objects may precede foci ($[O]_{\text{Top}}[S]_{\text{Foc}}V$, $[O]_{\text{Top}}V[S]_{\text{Foc}}$). However, their approach rejects orders with a moved focus in front of a topic, which are totally felicitous in Urum (e.g., $[O]_{\text{Foc}}[S]_{\text{Top}}V$, $[O]_{\text{Foc}}V[S]_{\text{Top}}$). Hence, though Neeleman and van de Koot's approach can

account for the variable order of topics and foci in Urum canonical orders, it struggles to explain the observed variation of the order of topics and foci in scrambled orders.

8.4 An alternative approach to Urum IS

The previous section revealed that neither a cartographic approach nor the alternative mapping approach by Neeleman and van de Koot (2008) can account for the variable order of topics and foci in non-canonical orders in Urum. This section presents an alternative approach to Urum information structure that is based on two major assumptions: Firstly, it assumes that topic and focus movement in Urum is optional, which allows for *in-situ* topics and *in-situ* foci. Secondly, it assumes that IS-related movement can target different structural positions.

Following Rizzi's split-CP approach I assume that the Urum C-domain consists of particular functional projections for topics (TopP) and foci (FocP). Consider the hierarchy of functional projections in the extended Urum CP in (282). Whereas there is only one focus projection, the topic projection which precedes the focus projection can be iterated. Hence, Urum only allows one focus, but multiple topics (cf. Benincá 2001, Benincá and Poletto 2004 on Italian).

(282) [TopP* [TopP* [FocP [TP]]]]

Following the core assumptions of a cartographic approach I assume that information structural movement is feature driven. However, by contrast to a strict cartographic approach according to which all topicalized and focused elements have to move to TopP or FocP in order to receive their discourse interpretation, the approach presented in the following that both topic and focus movement are optional and operate independent from each other. Hence, a focus can felicitously move across an *in-situ* topic, which allows the occurrence of focus < topic orders.

8.4.1 Focus movement

The results of the empirical studies on focus (cf. Chapter 6) revealed that both subject and object foci in Urum can felicitously occur with all four attested word orders (i.e., SOV, SVO, OSV and OVS). Consider for instance the example in (283) where the context question triggers an answer with

a narrow focus on the subject and the example in (284) where the context question triggers an answer with a narrow focus on the direct object *knigayi* ‘book’.

(283) Context: ‘Who is reading a book?’

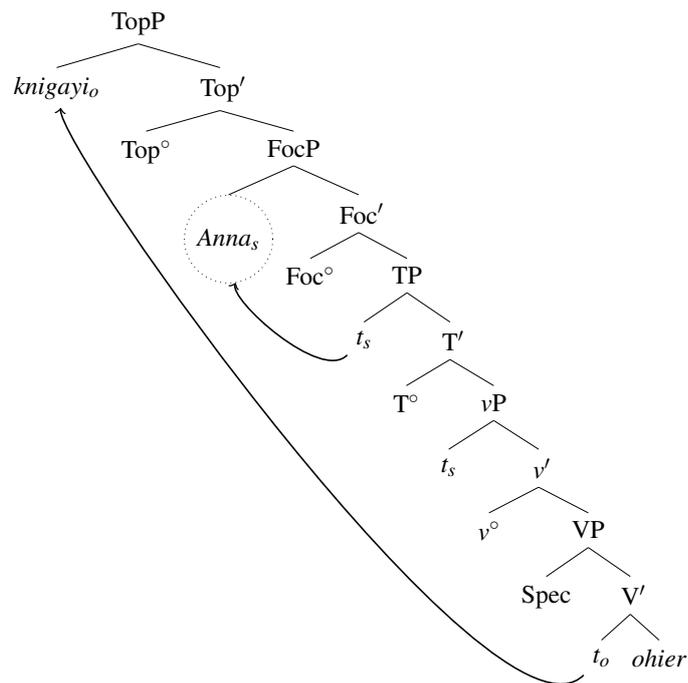
- | | | |
|----|--|-------------------------|
| a. | [Anna] _{Foc} <i>kniga-yi oh-ier.</i>
Anna book-ACC read-IPFV[3]
‘ANNA is reading the book.’ | ([S] _{Foc} OV) |
| b. | [Anna] _{Foc} <i>ohier knigayi.</i> | ([S]VO _{Foc}) |
| c. | <i>Knigayi</i> [Anna] _{Foc} <i>ohier.</i> | (O[S] _{Foc} V) |
| d. | <i>Knigayi ohier</i> [Anna] _{Foc} . | (OV[S] _{Foc}) |

(284) Context: ‘What is Anna reading?’

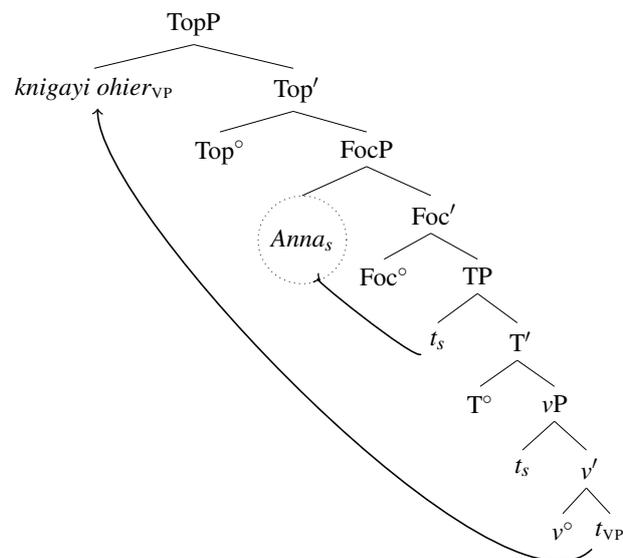
- | | | |
|----|--|-------------------------|
| a. | <i>Anna</i> [<i>kniga-yi</i>] _{Foc} <i>oh-ier.</i>
Anna book-ACC read-IPFV[3]
‘Anna is reading THE BOOK.’ | (S[O] _{Foc} V) |
| b. | <i>Anna ohier</i> [<i>knigayi</i>] _{Foc} . | (SV[O] _{Foc}) |
| c. | [<i>Knigayi</i>] _{Foc} <i>Anna ohier.</i> | ([O] _{Foc} SV) |
| d. | [<i>Knigayi</i>] _{Foc} <i>ohier Anna.</i> | ([O] _{Foc} VS) |

Nevertheless, the results of the focus elicitation task indicated that foci in Urum are most likely to occur with SOV and SVO orders independent from the focused argument. This finding can be attributed to the fact that these orders are considered as basic word orders in Urum (cf. Section 8.2). Hence, I assume that the subjects in the examples in (283a) and (283b) as well as the objects in the examples in (284a) and (284b) are focused *in situ* (i.e., in their base positions).

By contrast I suggest that the immediately preverbal and the postverbal subject foci in the examples in (283c) and (283d) are derived by movement. Consider for instance the derivation in (285) which shows that O[S]_{Foc}V orders result from topic and focus movement. Whereas the focused subject moves into the specifier of the focus projection, the direct object moves out of the VP into the higher [Spec, TopP]. Hence, Urum O[S]_{Foc}V orders typically receive an interpretation with a focused subject and a topicalized object (e.g., ‘The book, ANNA is reading (it).’).

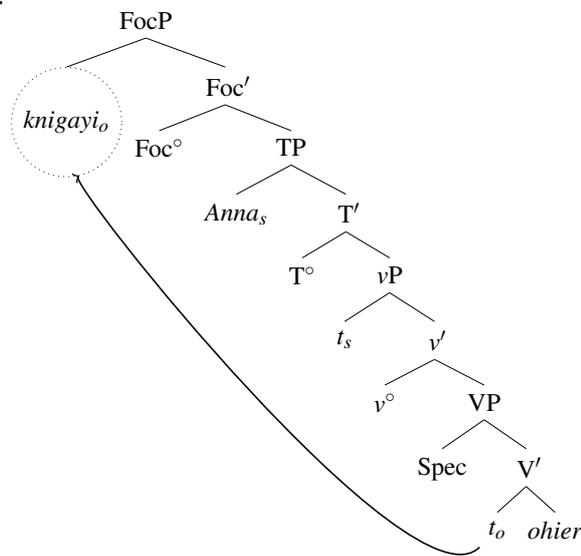
(285) O[S]_{Foc}V:

Similar to the derivation of the O[S]_{Foc}V order, I assume that the postverbal subject focus in the example in (283d) is derived by focus and topic movement. Consider the derivation in (286) which shows that the focused subject undergoes movement into [Spec, FocP], whereas the VP undergoes fronting to [Spec, TopP] such that it precedes the focused subject. Thus, Urum OV[S]_{Foc} orders typically receive an interpretation with a focused subject and a topicalized VP (e.g., ‘Book-reading, ANNA is doing (it).’).

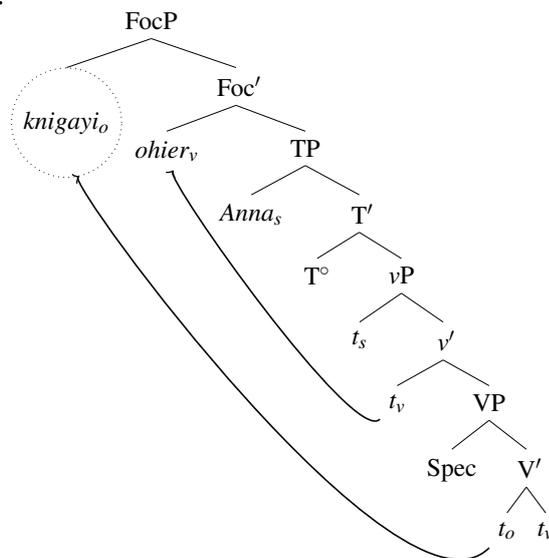
(286) OV[S]_{Foc}:

Furthermore, the examples in (284) indicate that Urum allows object foci to occur in the beginning of a sentence. The object-initial orders in (284c) and (284d) are derived by object fronting. Consider for instance the derivation of the $[O]_{\text{Foc}}\text{SV}$ order in (287) which illustrates that the focused object undergoes movement into $[\text{Spec}, \text{FocP}]$. Moreover the $[O]_{\text{Foc}}\text{VS}$ order in (284d) implies that focus movement in Urum can be accompanied by verb fronting. Consider the derivation in (288) which shows that the focused object undergoes movement into $[\text{Spec}, \text{FocP}]$, whereas the verb moves into Foc° .

(287) $[O]_{\text{Foc}}\text{SV}$:



(288) $[O]_{\text{Foc}}\text{VS}$:



In sum., this subsection shows that subjects and objects in Urum can be either focused *in situ* (i.e., in their canonical positions) or by leftward movement into the specifier of the focus projection. The structural positions of Urum foci are finally summarized in Table 8.1.

Table 8.1: Structural positions of foci in Urum

F-argument	Order	Structural position
subject	[S] _{Foc} OV	<i>in situ</i>
	[S] _{Foc} VO	<i>in situ</i>
	O[S] _{Foc} V	S moves to [Spec, FocP]
	OV[S] _{Foc}	S moves to [Spec, FocP]
object	S[O] _{Foc} V	<i>in situ</i>
	SV[O] _{Foc}	<i>in situ</i>
	[O] _{Foc} SV	O moves to [Spec, FocP]
	[O] _{Foc} VS	O moves to [Spec, FocP], V moves to Foc ^o

8.4.2 Topic movement

Similar to foci, topics in Urum may occur in various positions of the clause. From a cross-linguistic point of view the most natural position for topics is the sentence-initial position. However, the results of the empirical studies showed that topics in Urum may also occur in the immediately preverbally or postverbally (cf. Chapter 7). As proposed for Turkish, I assume that the possibility to have postverbal topics relates to the fact that topics may be part of the background. To be more precise, I assume that postverbal topics in Urum differ from preverbal topics in that the postverbal topic constituent must have been established in the discourse context, whereas new information topics are restricted to the preverbal field (cf. also Kılıçaslan 2004 on postverbal topics in Turkish). Finally, as also proposed for Turkish (cf. for instance Kural 1997, Kornfilt 2005, Şener 2010), I assume that pre- and postverbal topics occupy different structural positions.

8.4.2.1 Preverbal topics

Similar to focus movement, topic movement in Urum is optional. Hence, subjects and objects can be felicitously topicalized *in situ*. Consider for instance the examples in (289) and (290)

(289) *in situ* subject topics

- a. [Gız]_{Top} alma-yi i-er.
 girl apple-ACC eat-IPFV[3]
 ‘As for the girl, she is eating an apple.’ ([S]_{Top}OV)
- b. [Gız]_{Top} ier almayi.
 ([S]_{Top}VO)

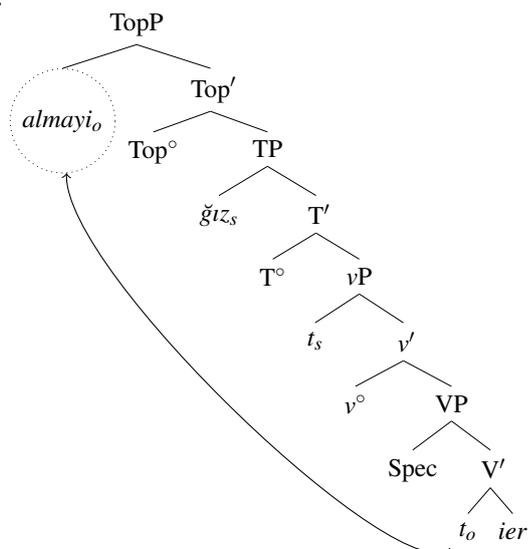
(290) *in situ* object topics

- a. Gız [alma-yi]_{Top} i-er.
 girl apple-ACC eat-IPFV[3]
 ‘As for apple, the girl is eating it.’ (S[O]_{Top}V)
- b. Gız ier [alma-yi]_{Top}.
 (SV[O]_{Top})

However, topicalized objects in Urum may also occur in the beginning of a sentence. Consider for instance the examples in (291).

- (291) a. [Alma-yi]_{Top} gız i-er.
 apple-ACC girl eat-IPFV[3]
 ‘As for apple, the girl is eating it.’ ([O]_{Top}SV)
- b. [Almayi]_{Top} ier gız.
 ([O]_{Top}VS)

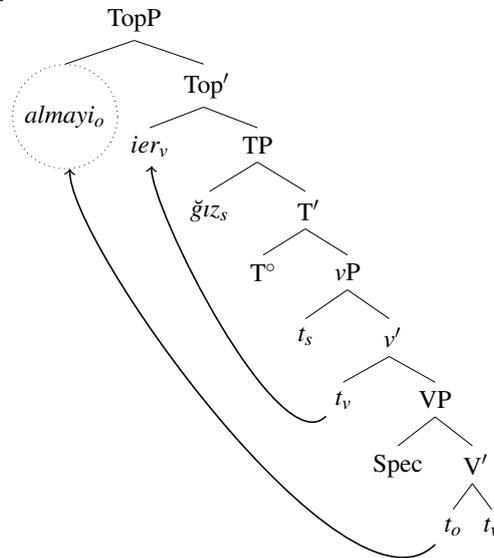
By contrast to postverbal topics (cf. Section 8.4.2.2), I assume that preverbal topics undergo leftward movement to [Spec, TopP]. Consider for instance the derivation of the [O]_{Top}SV order in (292) where the direct object moves into the specifier of the topic projection.

(292) [O]_{Top}SV:

By contrast to the [O]_{Top}SV order, the [O]_{Top}VS order in (291b) requires two movement steps: Firstly, the direct object moves into [Spec, TopP].

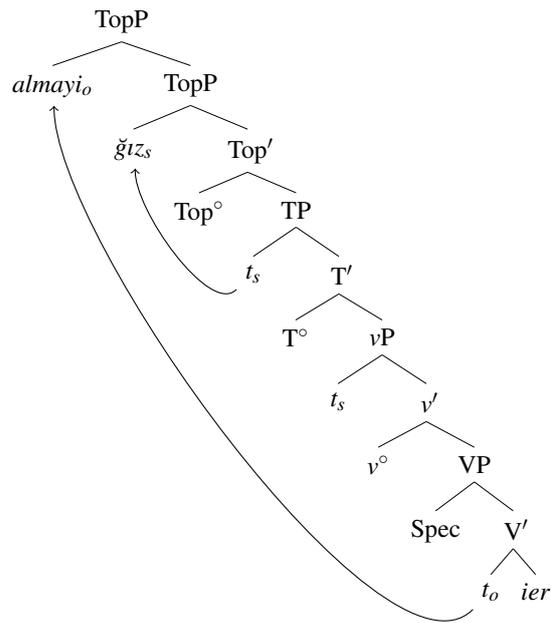
Secondly, the verb raises into the Top head (cf. also Bailyn 2004 on Russian). Consider the derivation in (293).

(293) [O]_{Top}VS:



However, topics in Urum may not only occur sentence-initially, but also in the middle field. Consider for instance the example in (294) which shows that topicalized subjects in Urum may only follow a direct object in constructions with multiple topics. Consider also the derivation in (295), which illustrates that the object undergoes movement to the outer [Spec, TopP], while the subject moves into the inner [Spec, TopP].

(294) [Alma-yi]_{Top} [ğiz]_{Top} ier.
 apple-ACC girl eat-IPFV[3]
 ‘As for apple and as for the girl, she is eating it.’ ([O]_{Top}[S]_{Top}V)

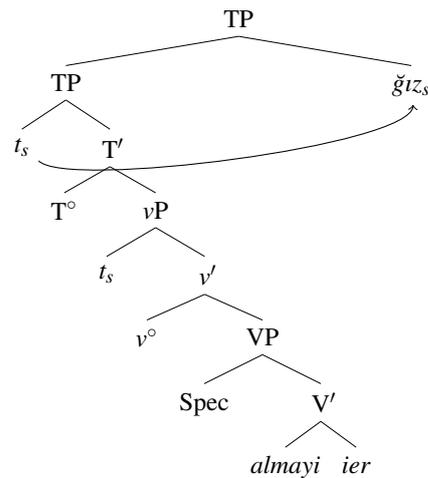
(295) [O]_{Top}[S]_{Top}V:

8.4.2.2 Postverbal topics

Similar to Turkish, Urum also allows postverbal topics. Consider for instance the example in (296). By contrast to preverbal topics which undergo leftward movement, I assume that postverbal topics are part of the background and undergo rightward adjunction to a clause-external position (cf. e.g., Kural 1997, Kornfilt 2005 or Şener 2010 on postverbal arguments in Turkish). Consider the derivation of the $OV[S]_{Top}$ order in (297) which shows that the topicalized subject is right-adjoined to TP.

(296) *Alma-yi i-er [ğız]_{Top}.*
 apple-ACC eat-IPFV[3] girl
 ‘She is eating an apple, the girl.’ (OV[S]_{Top})

(297)



8.4.2.3 Summary

Taking everything into consideration, this subsection showed that topics in Urum can be either topicalized *in situ* or in certain *ex situ* positions. Whereas preverbal moved topics undergo leftward movement into [Spec, TopP], postverbal topics undergo rightward-adjunction to TP. Consider the overview of the structural positions of Urum topics given in Table 8.2.

Table 8.2: Structural positions of topics in Urum

T-argument	Order	Structural position
subject	[S] _{Top} OV	<i>in situ</i>
	[S] _{Top} VO	<i>in situ</i>
	[O] _{Top} [S] _{Top} V	[Spec, TopP]
	OV[S] _{Top}	right-adjoined to TP
object	S[O] _{Top} V	<i>in situ</i>
	SV[O] _{Top}	<i>in situ</i>
	[O] _{Top} SV	[Spec, TopP]
	[O] _{Top} VS	[Spec, TopP]

8.4.3 Interim summary

The aim of this section was to provide a syntactic approach to Urum information structure, which can account for the variable order of topics and foci in Urum. It was shown that arguments (i.e., subjects and objects) in Urum can be either focused *in situ* or by movement into [Spec, FocP] (cf. Section 8.4.1). Furthermore, it was demonstrated that Urum has optional topic movement that targets different structural positions (cf. Section 8.4.2). Whereas preverbal topics undergo movement into [Spec, TopP], postverbal

topics are right-adjoined to TP. Finally, the approach assumes that the two movement operations are independent from each other, which allows the occurrence focus < topic orders.

8.5 Conclusions

This chapter aims to provide a syntactic approach to Urum information structure. Section 8.2 discussed the base position of arguments in Urum and claimed that the flexibility in the information structural possibilities of Urum are related to the free position of the verb within the VP, which allows Urum to combine the information structural possibilities of OV and VO languages. Section 8.3 discussed the problems of the implementation of a cartographic approach and showed that neither a strict cartographic approach nor the mapping approach by Neeleman and van de Koot (2008) can explain the variable order of topics and foci in Urum. Though Neeleman and van de Koot's approach assumes that the order of *in situ* topics and foci is free, it predicts that foci may not move across topics. However, the empirical findings presented in Chapter 6 and 7 revealed that Urum allows orders with a moved focus preceding a topic (i.e., [O]_{Foc}V[S]_{Top} and [O]_{Foc}[S]_{Top}V). Section 8.4 finally presented an alternative approach to Urum information structure which is based on two core assumptions. First of all, it assumes that Urum has optional focus and topic movement which allows for *in situ* topics and *in-situ* foci. Moreover it is based on the assumption that topic movement in Urum targets two different structural positions. Whereas preverbal topics undergo leftward movement to [Spec, TopP], postverbal topics are considered to be part of the background and are thus right-adjoined to TP. Finally, focus and topic movement are assumed to operate independent from each other. Hence, a focused constituent can felicitously move across an *in situ* topic, which explains the felicitousness of focus < topic orders.

Chapter 9

Conclusions

9.1 Summary

This dissertation deals with the information structure in Caucasian Urum and analyzed the interaction of focus and topic with word order in comparison to Turkish and Russian. Chapter 2 introduced the term information structure and discussed the relevant IS-notions of focus and topic and their linguistic expressions in different languages of the world.

Chapter 3 provided a brief grammatical description of Caucasian Urum. The first part of the chapter presented a short sketch of the history of the Urum speakers and focuses on the contact situation. The second part of the chapter provided information on the lexicon, the phonology, the morphology and the syntax of the language. One crucial characteristic of Urum is the free position of the verb within the verb phrase. This feature is very important for the investigation of syntax and information structure and distinguishes Urum from its substrate language Turkish, which is head-final and its contact language Russian, which is considered to be head-initial.

Chapter 4 summarized the syntactic properties of Turkish and Russian and discussed the derivation of canonical and non-canonical orders in both languages. Chapter 5 dealt with the correlation of syntax and information structure in Turkish and Russian. The first part of this chapter presented an overview of the relevant syntactic approaches to Turkish and Russian information structure. The second part of the chapter provided a simplified syntactic approach that aimed to show the structural differences of the language with respect to their information structural possibilities. Thereby, it was shown that Turkish and Russian crucially differ with regard to two points: (i) Whereas foci in Russian can occur either pre- or postverbally, foci in Turkish may not occur in the postverbal domain; (ii) Foci in Turkish must occur adjacent to the verb, whereas foci in Russian may occur separated from the verb. The differences in (i) can be attributed to the fact that

postverbal material in Turkish occurs outside the TP and thus captured by the simple generalization that elements outside the TP cannot be focused. The differences in (ii) can be explained by the fact that focus movement in Russian is only optionally accompanied by V-fronting. Finally, it was shown that Turkish and Russian crucially differ with respect to the assumptions about the structure of the left-periphery. Whereas in Turkish all focus options can be derived without a focus projection, Russian inevitably requires the existence of a FocP.

Chapter 6 and 7 reported the empirical studies. Chapter 6 analyzed the interaction of focus and word order in Turkish, Russian and Urum. Chapter 7 was concerned with the interaction between topics (here defined as contextually given elements) and word order in the three object languages. Each chapter presented a speech elicitation study and an acceptability judgment task. In sum, the results of the empirical studies confirmed the theoretical assumption that foci in Turkish may occur either in the beginning of the sentence or immediately preverbally. With regard to topics, the results revealed that Turkish speakers show a preference for sentence-initial topics. However, the results showed that topics in Turkish are also felicitous in the postverbal domain. The results of the Russian speech production study revealed that Russian speakers prefer to realize foci either in their base positions ($[S]_{\text{Foc}} \text{VO}$, $\text{SV}[O]_{\text{Foc}}$) or clause-finally ($\text{OV}[S]_{\text{Foc}}$). However, the results of the acceptability judgment task showed that foci in Russian can also occur preverbally ($\text{O}[S]_{\text{Foc}} \text{V}$), $\text{S}[O]_{\text{Foc}} \text{V}$). With regard to topics, the results revealed a general preference for SVO over OVS and SOV over OSV orders independent from the topicalized argument. Furthermore, the results of the Urum speakers revealed that the order of foci and topics in Urum is flexible and foci may either precede or follow topics. Moreover it was shown that the position of topics and foci in all three languages is independent from the focus/topic type. Finally, the results of the speech production study on topics provided some interesting findings regarding the head-directionality of Urum. Whereas the Turkish speakers only produced V-final orders and the Russian speakers only produced V-medial orders, the descriptions of the Urum speakers implied that Urum is unspecified regarding its head-directionality, i.e., the verb in Urum double object constructions may either follow, precede or occur in-between the two arguments.

Chapter 8 presented the final analysis. The aim of this chapter was to provide a syntactic approach to Urum information structure, which can account for the flexible order of topics and foci in Urum. Within the first part

of the chapter I argued that the ‘free’ positions of IS-notions in Urum are related to the fact that Urum exhibits a free position of the verb within the VP, which allows the language to combine all information structural possibilities of H-final and H-initial languages. The second part of the chapter contained the syntactic analysis. It was claimed that Urum has optional focus and topic movement, which allows both foci and topics to occur either *in situ* or in certain *ex situ* positions. Whereas moved foci undergo leftward movement into [Spec, FocP], topic movement targets two different structural positions: Preverbal topics undergo leftward movement to [Spec, TopP], postverbal topics are considered to be part of the background and undergo rightward-adjunction to TP.

9.2 The role of language contact

The flexible positions of information structural notions in Urum are considered to result from the fact that Urum is a language of the third type which allows the verb to move freely within VP. However, one crucial question which is still unsolved is whether the free position of the verb results from Russian language contact. One argument in favor for this assumption is that quite similar findings as for Urum were also reported for several other Turkic languages that are spoken in contact with non-verbfinal languages (cf. e.g., Matras and Tufan 2007 for Macedonian Turkish or Menz 1999, Menz 2013 for Gagauz). However, by contrast to Urum the amount of VO constructions in Gagauz is considerably higher than the number of OV constructions. Moreover, Menz 2013 argues that Gagauz has undergone a word order change from OV to VO, which also evoked a change in the position for the focused argument, i.e., a change from the immediately preverbal position to the postverbal position (Menz 2013: 61), the results of the empirical studies on Urum showed that foci in Urum may felicitously occur in both positions. Hence, it seems that the change in the word order in Urum from OV to a language with a free position of the verb led to an extension of the information structural possibilities of the language (e.g., the possibility to have postverbal foci) rather than to a change of the information structural possibilities as for instance claimed by Menz (2013) for Gagauz in contact with Russian. Similar findings were also observed by other case studies, which found that information structure in high-contact settings quite often lead to contact-induced adjustments and additions of the information structural means rather than to the replacement of existing possibilities (see

e.g., Aikhenvald 2010 on focus marking strategies in Tariana in contact with Tucano or Adamou 2016 on focus marking strategies in Thrace Romani in contact with Turkish and Greek).

Moreover it must be taken into consideration that not only Urum but several other North East Anatolian varieties show a great flexibility regarding the verb position (see e.g., Brendemoen 2002 on the dialects spoken in the areas of Trabzon). Hence the flexibility in the verb position and the accompanying flexibility in the information structure of Urum might be very a characteristic feature of Anatolian Turkish dialects. Furthermore, spoken languages generally show a lot more variation than written languages. This is for instance also confirmed by the results of the acceptability study in Chapter 6, which revealed that speakers of Standard Turkish accept postverbal foci in spoken language to some degree, though they are said to be ungrammatical from a normative point of view (e.g., Kornfilt 1997). Hence, the flexibility in the verb position of Urum may not necessarily be the result of language contact.

9.3 The role of literacy

The results of the topic elicitation study in Chapter 7.2 revealed that the descriptions of the Urum speakers in the two experiments on subjects and non-subjects (i.e., *recipient vs. patient* and *instrument vs. patient*) were by contrast to the descriptions of the Turkish and Russian speakers not affected by givenness. This finding is quite interesting because a similar asymmetry was observed for adults and children. Consider for instance the study by Mykhaylyk et al. (2013) who analyzed the effect of givenness on the order of recipients and patients in Russian and Ukrainian adult and children speech production. Whereas the adults in their study showed a significant effect of givenness on the order of constituents just like the Russian and Turkish speakers, the children showed a general preference for REC<PAT orders independent from the contextually given entity like the Urum speakers. According to Mykhaylyk et al. (2013) the differences in the behaviour of the adults and the children can be attributed to the fact that the *Given-before-New* principle is acquired at a later developmental stage and not yet familiar to the children. With respect to the results of the present study, the findings by Mykhaylyk et al. (2013) imply that the preference of Urum speakers for canonical (REC<PAT) orders might be related to the fact that Urum speakers are by contrast to Turkish and Russian not literate in their native language.

9.4 Relevance of the thesis from a broader perspective

The emergence of multilingual contact situations is a universal phenomenon. A natural consequence of contact due to migration processes is the emergence of bilingual populations. Hence, the investigation of contact situations is inevitable in order to understand how languages change. This knowledge is also highly relevant from a social perspective, e.g., it is necessary for the revitalization of endangered languages and can help to enhance integration processes.

In this thesis I concentrated on language contact in Urum. As an Anatolian variety which has been in close contact to Russian for many years, Urum provides an ideal opportunity to analyze the impact of language contact on language change. The investigation of the correlation of syntax and information structure is immediately relevant for such an analysis, since the packaging of information is substantial for human communication. Since Urum has no writing tradition and the number of Urum Greeks in Georgia is rapidly decreasing from more than 30811 speakers in 1979 to less than 1500 speakers in 2005 (Wheatley 2006: 8), this dissertation also makes a contribution to the documentation of a severely endangered language. Finally, I developed a number of experiments on the correlation of syntax and information structure which demonstrate the differences between the three investigated languages (Turkish, Russian and Urum). The discipline of comparative experimental fieldwork is relative new within linguistic research. The methodology used in this dissertation thus also contributes to current research interests.

9.5 Future research

The aim of this dissertation was to analyze the correlation of syntax and information structure in Caucasian Urum in comparison to Turkish and Russian. Of course, information structure cannot be solved by syntax alone, but is rather a phenomenon solved at the syntax-phonology interface. Hence, further research on the prosodic expression of information structural notions in Urum is inevitable.

For the analysis I developed a series of experiments in order to investigate the interaction of syntax and information structure in spoken languages. Whereas the speech production study generally worked well, the participants

- especially the Urum speakers - had difficulties with the acceptability judgment task, i.e., they gave very high ratings to almost all target sentences. This problem probably could have been avoided by including distractors with patterns that are clearly not available in the language. However, it might be still a huge challenge for naive speakers to rate whether a specific word order fits better to a presented context than another. Moreover it must be taken into consideration that all Urum speakers participating in the study grew up in a multilingual environment and have been in contact with Russian since birth. Furthermore, Urum is a language without any writing tradition, which is not learned in school, but passed on from generation to generation. Hence, even though Urum is the native language of the speakers, its usage is primarily restricted to family communication. Thus, possible reasons for the fact that the acceptability judgment task did not show many significant results might relate to the speakers' lack of literacy or confidence in their language knowledge. Nevertheless, acceptability judgment tasks are in general very useful in addition to speech production studies, because they can help to figure out whether alternative linearizations that are not or only rarely produced by speakers in a given context are not available/acceptable in a language or if they were simply not produced due to other reasons, e.g., the preference to produce canonical orders rather than non-canonical orders. However, the method used here definitely needs further improvement in order to gain more reliable results.

Finally, further research on other Northeastern Anatolian varieties is needed in order to analyze if they show the same flexibility regarding the positions of topics and foci as Urum in order to finally answer the question whether the variable position of information structural notions in Urum can be attributed to Russian language contact.

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Appendix A

Material focus elicitation study

Visual stimuli



(F01)



(F02)



(F03)



(F04)



(F05)



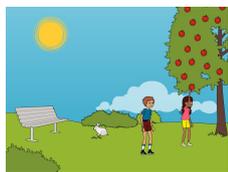
(F06)



(F07)



(F08)



(F09)



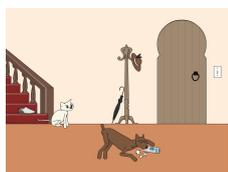
(F10)



(F11)



(F12)



(F13)



(F14)



(F15)



(F16)

Auditory stimuli

Turkish

Item	Condition	Question	Order
F01	n/sbj	Gitarı kim çaldı?	OSV
	n/obj	Erkek ne oynadı?	SOV
	c/sbj	Bir kız gitarı çaldı mı?	SOV
	c/obj	Erkek bir trompet çaldı mı?	SOV
F02	n/sbj	Çantayı kim taşıdı?	OSV
	n/obj	Kadın ne taşıdı?	SOV
	c/sbj	Bir erkek çanta taşıdı mı?	SOV
	c/obj	Kadın bir sepet taşıdı mı?	SOV
F03	n/sbj	Çizmeyi kim tuttu?	OSV
	n/obj	Erkek ne tuttu?	SOV
	c/sbj	Bir kız çizme tuttu mu?	SOV
	c/obj	Erkek bir balık tuttu mu?	SOV
F04	n/sbj	Kalemi kim kaldırdı?	OSV
	n/obj	Erkek ne kaldırdı?	SOV
	c/sbj	Bir kız kalemi kaldırdı mı?	SOV
	c/obj	Erkek bir kitap kaldırdı mı?	SOV
F05	n/sbj	Topu kim vurdu?	OSV
	n/obj	Erkek ne vurdu?	SOV
	c/sbj	Bir kız topu vurdu mu?	SOV
	c/obj	Erkek bir kitap vurdu mu?	SOV
F06	n/sbj	Domatesi kim satın aldı?	OSV
	n/obj	Erkek ne satın aldı	SOV
	c/sbj	Bir kadın domates satın aldı mı?	SOV
	c/obj	Erkek bir soğan satın aldı mı?	SOV
F07	n/sbj	Topu kim attı?	OSV
	n/obj	Kadın ne attı?	SOV
	c/sbj	Bir erkek topu attımı?	SOV
	c/obj	Kadın bir sopayı attımı?	SOV
F08	n/sbj	Topu kim havaya kaldırdı?	OSV
	n/obj	Kadın ne havaya kaldırdı?	SOV
	c/sbj	Bir erkek ne havaya kaldırdı mı?	SOV
	c/obj	Kadın bir sandalyeyi havaya kaldırdı mı?	SOV
F09	n/sbj	Elmayı kim topladı?	OSV

	n/obj	Kız ne topladı?	SOV
	c/sbj	Bir erkek elmayı topladı mı?	SOV
	c/obj	Kadın bir armut topladı mı?	SOV
F10	n/sbj	Gazeteyi kim okudu?	OSV
	n/obj	Adam ne okudu?	SOV
	c/sbj	Bir kadın gazeteyi okudu mu?	SOV
	c/obj	Adam bir kitap okudu mu?	SOV
F11	n/sbj	Muzu kim yedi?	OSV
	n/obj	Adam ne yedi?	SOV
	c/sbj	Bir kadın muz yedi mi?	SOV
	c/obj	Adam bir elma yedi mi?	SOV
F12	n/sbj	Mektubu kim gönderdi?	OSV
	n/obj	Erkek ne gönderdi?	SOV
	c/sbj	Bir kadın mektubu gönderdi mi?	SOV
	c/obj	Erkek bir paket gönderdi mi?	SOV
F13	n/sbj	Mektubu kim gönderdi?	OSV
	n/obj	Erkek ne gönderdi?	SOV
	c/sbj	Bir kadın mektubu gönderdi mi?	SOV
	c/obj	Erkek bir paket gönderdi mi?	SOV
F14	n/sbj	Gazeteyi kim çiğnedi?	OSV
	n/obj	Köpek ne çiğnedi?	SOV
	c/sbj	Bir kedi gazeteyi çiğnedi mi?	SOV
	c/obj	Köpek bir ayakkabı çiğnedi mi?	SOV
F15	n/sbj	Çitleri kim boyadı?	OSV
	n/obj	Kız ne boyadı?	SOV
	c/sbj	Bir adam çitleri boyadı mı?	SOV
	c/obj	Kı bir duvarı boyadı mı?	SOV
F16	n/sbj	Kabağı kim kesti?	OSV
	n/obj	Erkek ne kesti?	SOV
	c/sbj	Bir kadın kabağı kesti mi?	SOV
	c/obj	Erkek bir ekmeği kesti mi?	SOV

Russian

Item	Condition	Question	Order
F01	n/sbj	Kto igrayet na gitare?	SVO
	n/obj	Na chom igrayet mal'chik?	OVS
	c/sbj	Na gitare igrayet devochka?	OVS
	c/obj	Mal'chik igrayet na trube?	SVO
F02	n/sbj	Kto nesyot sumku?	SVO
	n/obj	Chto nesyot zhenshchina?	OVS
	c/sbj	Sumku neysot mal'chik?	OVS
	c/obj	Zhenshchina neysot korziny?	SVO
F03	n/sbj	Kto lovit sapog?	SVO
	n/obj	Chto lovit mal'chik?	OVS
	c/sbj	Sapog lovit devochka?	OVS
	c/obj	Mal'chik lovit rybu?	OVS
F04	n/sbj	Kto podnimayet ruchku?	SVO
	n/obj	Chto podnimayet mal'chik?	OVS
	c/sbj	Ruchku podnimayet devochka?	OVS
	c/obj	Mal'chik podnimayet knigu?	SVO
F05	n/sbj	Kto pinayet myach?	SVO
	n/obj	Chto pinayet mal'chik?	OVS
	c/sbj	Myach pinayet devochka?	OVS
	c/obj	Mal'chik pinayet knigu?	SVO
F06	n/sbj	Kto pokupayet pomidor?	SVO
	n/obj	Chto pokupayet mal'chik?	OVS
	c/sbj	Pomidor pokupayet zhenshchina?	OVS
	c/obj	Mal'chik pokupayet luk?	SVO
F07	n/sbj	Kto brosayet myach?	SVO
	n/obj	Chto brosayet zhenshchina?	OVS
	c/sbj	Myach brosayet mal'chik?	OVS
	c/obj	Zhenshchina brosayet palku?	SVO
F08	n/sbj	Kto podnimayet myach?	SVO
	n/obj	Chto podnimayet zhenshchina?	OVS
	c/sbj	Myach podnimayet mal'chik?	OVS
	c/obj	Devochka podnimayet stul?	SVO
F09	n/sbj	Kto vybirayet yabloko?	SVO
	n/obj	Chto vybirayet devochka?	OVS
	c/sbj	Yabloko vybirayet mal'chik?	OVS

	c/obj	Devochka vybirayet grushu?	SVO
F10	n/sbj	Kto chitayet gazetu?	SVO
	n/obj	Chto chitayet muzhchina?	OVS
	c/sbj	Gazetu chitayet zhenshchina?	OVS
	c/obj	Muzhchina chitayet knigu?	SVO
F11	n/sbj	Kto yest' banan?	SVO
	n/obj	Chto yest' muzhchina?	OVS
	c/sbj	Banan yest' zhenshchina?	OVS
	c/obj	Muzhchina yest' yabloko?	SVO
F12	n/sbj	Kto otpravlyayet pis'mo?	SVO
	n/obj	Chto otpravlyayet mal'chik?	OVS
	c/sbj	Pis'mo otpravlyayet zhenshchina?	OVS
	c/obj	Mal'chik otpravlyayet posylku?	SVO
F13	n/sbj	Kto razzhovyvayet gazetu?	SVO
	n/obj	Chto razzhovyvayet sobaka?	OVS
	c/sbj	Gazetu razzhovyvayet koshka?	OVS
	c/obj	Sobaka razzhovyvayet obuv'?	SVO
F14	n/sbj	Kto krasit zabor?	SVO
	n/obj	Chto krasit devochka?	OVS
	c/sbj	Zabor krasit muzhchina?	OVS
	c/obj	Devochka krasit steny?	SVO
F15	n/sbj	Kto moyet mashinu?	SVO
	n/obj	Chto moyet mal'chik?	OVS
	c/sbj	Mashinu moyet devochka?	OVS
	c/obj	Mal'chik moyet velosiped?	SVO
F16	n/sbj	Kto rezhit tykvu?	SVO
	n/obj	Chto rezhit mal'chik?	OVS
	c/sbj	Tykvu rezhit zhenshchina?	OVS
	c/obj	Mal'chik rezhit khleb?	SVO

Urum

Item	Condition	Question	Order
F01	n/sbj	Kim oinier gitarada?	SVO
	n/obj	Näi oinier oĝlan?	OVS
	c/sbj	Ĝız oinier gitarada?	SVO
	c/obj	Oĝlan oinier duduktä?	SVO
F02	n/sbj	Kim gätirer sumkai?	SVO
	n/obj	Näi gätirer ĝari?	OVS
	c/sbj	Oĝlan gätirer sumkai?	SVO
	c/obj	Ĝari gätirer säpäti?	SVO
F03	n/sbj	Kim dutier sapogi?	SVO
	n/obj	Näi dutier oĝlan?	OVS
	c/sbj	Ĝız dutier sapogi?	SVO
	c/obj	Oĝlan gätirer balıĝi?	SVO
F04	n/sbj	Kim ĝaldırrier ruchkai?	SVO
	n/obj	Näi ĝaldırrier oĝlan?	OVS
	c/sbj	Ĝız ĝaldırrier ruchkai?	SVO
	c/obj	Oĝlan ĝaldırrier knigai??	SVO
F05	n/sbj	Kim vurer topa?	SVO
	n/obj	Näi vurer oĝlan?	OVS
	c/sbj	Ĝız vurer topa?	SVO
	c/obj	Oĝlan vurer knigai?	SVO
F06	n/sbj	Kim aler pamidori?	SVO
	n/obj	Näi aler oĝlan?	OVS
	c/sbj	Ĝari aler pamidori?	SVO
	c/obj	Oĝlan aler soĝani?	SVO
F07	n/sbj	Kim ater topi?	SVO
	n/obj	Näi ater ĝari?	OVS
	c/sbj	Oĝlan ater topi?	SVO
	c/obj	Ĝari ater chubuĝi?	SVO
F08	n/sbj	Kim ĝaldırrier topi?	SVO
	n/obj	Näi ĝaldırrier ĝari?	OVS
	c/sbj	Oĝlan ĝaldırrier topi?	SVO
	c/obj	Ĝari ĝaldırrier smakeikai?	SVO
F09	n/sbj	Kim ĝopadier almaı?	SVO
	n/obj	Näi ĝopadier ĝız?	OVS
	c/sbj	Oĝlan ĝopadier almaı?	SVO

	c/obj	Ğız ğopadier armdudi?	SVO
F10	n/sbj	Kim ohier gazeti?	SVO
	n/obj	Näi ohier ärgishi?	OVS
	c/sbj	Ğari ohier gazeti?	SVO
	c/obj	Ärgishi ohier knigai?	SVO
F11	n/sbj	Kim ier banani?	SVO
	n/obj	Näi ier ärgishi?	OVS
	c/sbj	Ğari ier banani?	SVO
	c/obj	Ärgishi ier almai?	SVO
F12	n/sbj	Kim yollier pismoï?	SVO
	n/obj	Näi yollier oĝlan?	OVS
	c/sbj	Ğari yollier pismoï?	SVO
	c/obj	Oĝlan yollier pasilkai?	SVO
F13	n/sbj	Kim erter gazeti?	SVO
	n/obj	Näi erter it?	OVS
	c/sbj	Pisik erter gazeti?	SVO
	c/obj	It erter tuflii?	SVO
F14	n/sbj	Kim boyader zabori?	SVO
	n/obj	Näi boyader ğız?	OVS
	c/sbj	Ärgishi boyader zabori?	SVO
	c/obj	Ğız boyader duvari?	SVO
F15	n/sbj	Kim yahier mashinai?	SVO
	n/obj	Näi yahier oĝlan?	OVS
	c/sbj	Ğız mashinai?	SVO
	c/obj	Oĝlan yahier velisapedi?	SVO
F16	n/sbj	Kim käser ğabaĝi?	SVO
	n/obj	Näi käser oĝlan?	OVS
	c/sbj	Ğari käser ğabaĝi?	SVO
	c/obj	Oĝlan käser äkmägi?	SVO

Appendix B

Material focus acceptability judgment task

Turkish

V-final experiment

Non-identificational focus

Item	Condition	Question	Answers
F01	n/sbj	Biri çitleri yapıyor. Kim?	SOV: Adam çitleri yapıyor.
	n/obj	Adam bir şey yapıyor. Ne?	OSV: Çitleri adam yapıyor.
F02	n/sbj	Biri çantayı taşıyor. Kim?	SOV: Kadın çantayı taşıyor.
	n/obj	Kadın bir şey taşıyor. Ne?	OSV: Çantayı kadın taşıyor.

F03	n/sbj	Biri topu oğlan yakalıyor. Kim?	SOV:	Oğlan topu yakalıyor.
	n/obj	Kız bir şey yakalıyor. Ne?	OSV:	Topu oğlan yakalıyor.
F04	n/sbj	Biri kalemi kaldırıyor. Kim?	SOV:	Öz kalemi kaldırıyor.
	n/obj	Kız bir şey kaldırıyor. Ne?	OSV:	Kalemi öz kaldırıyor.
F05	n/sbj	Biri topu vuruyor. Kim?	SOV:	Erkek topu vuruyor.
	n/obj	Erkek bir şey vuruyor. Ne?	OSV:	Topu erkek vuruyor.
F06	n/sbj	Biri dergiyi satın alıyor. Kim?	SOV:	Erkek dergiyi satın alıyor.
	n/obj	Erkek bir şey satın alıyor. Ne?	OSV:	Dergiyi erkek satın alıyor.
F07	n/sbj	Biri topu atıyor. Kim?	SOV:	Kadın topu atıyor.
	n/obj	Kadın bir şey atıyor. Ne?	OSV:	Topu kadın atıyor.
F08	n/sbj	Biri mektubu gönderiyor. Kim?	SOV:	Adam mektubu gönderiyor.
	n/obj	Adam bir şey gönderiyor. Ne?	OSV:	Mektubu adam gönderiyor.
F09	n/sbj	Biri elmayı topluyor. Kim?	SOV:	Kız elmayı topluyor.
	n/obj	Kız bir şey topluyor. Ne?	OSV:	Elmayı kız topluyor.
F10	n/sbj	Biri gazeteyi okuyor. Kim?	SOV:	Adam gazeteyi okuyor.
	n/obj	Adam bir şey okuyor. Ne?	OSV:	Gazeteyi adam okuyor.
F11	n/sbj	Biri muz yiyor. Kim?	SOV:	Adam muz yiyor.
	n/obj	Adam bir şey yiyor. Ne?	OSV:	Muzu adam yiyor.
F12	n/sbj	Biri mektubu yazıyor. Kim?	SOV:	Erkek mektubu yazıyor.
	n/obj	Erkek bir şey yazıyor. Ne?	OSV:	Mektubu erkek yazıyor.
F13	n/sbj	Biri pastayı pişiriyor. Kim?	SOV:	Kadın pastayı pişiriyor.

F14	n/obj n/sbj n/obj	Kadın bir şey pişiriyor. Ne? Biri resmi yapıyor. Kim? Adam bir şey yapıyor. Ne?	OSV SOV: OSV:	Pastayı kadın pişiriyor. Adam resmi yapıyor. Resmi adam yapıyor.
F15	n/sbj n/obj	Biri arabayı yıkıyor. Kim? Erkek bir şey yıkıyor. Ne?	SOV: OSV:	Erkek arabayı yıkıyor. Arabayı erkek yıkıyor.
F16	n/sbj n/obj	Biri elmayı kesiyor. Kim? Kadın bir şey kesiyor. Ne?	SOV: OSV:	Kadın elmayı kesiyor. Elmayı kadın kesiyor.

Corrective focus

Item	Condition	Question	Answers
F01	c/sbj	Erkek kitabı okuyor. Değil mi?	SOV: Hayır, kız kitabı okuyor.
	c/obj	Kız dergiyi okuyor. Değil mi?	OSV: Hayır, kitabı kız okuyor.
F02	c/sbj	Kız elbiseyi satın alıyor. Değil mi?	SOV: Hayır, kadın elbiseyi satın alıyor.
	c/obj	Kadın eteği satın alıyor. Değil mi?	OSV: Hayır, elbiseyi kadın satın alıyor.
F03	c/sbj	Kadın armudu topluyor. Değil mi?	SOV: Hayır, kız armudu topluyor.
	c/obj	Kız kirazı topluyor. Değil mi?	OSV: Hayır, armudu kız topluyor.
F04	c/sbj	Kız mektubu gönderiyor. Değil mi?	SOV: Hayır, erkek mektubu gönderiyor.
	c/obj	Erkek paketi gönderiyor. Değil mi?	OSV: Hayır, mektubu erkek gönderiyor.
F05	c/sbj	Erkek saati alıyor. Değil mi?	SOV: Hayır, adam saati alıyor.
	c/obj	Adam bileziği alıyor. Değil mi?	OSV: Hayır, saati adam alıyor.
F06	c/sbj	Kız halkayı kaybediyor. Değil mi?	SOV: Hayır, kadın halkayı kaybediyor.
	c/obj	Kadın kolyeyi kaybediyor. Değil mi?	OSV: Hayır, halkayı kadın kaybediyor.
F07	c/sbj	Kız şarkıyı yazıyor. Değil mi?	SOV: Hayır, erkek şarkıyı yazıyor.
	c/obj	Erkek mektubu yazıyor. Değil mi?	OSV: Hayır, şarkıyı erkek yazıyor.
F08	c/sbj	Eşi arabayı satıyor. Değil mi?	SOV: Hayır, koca arabayı satıyor.
	c/obj	Koca bisikleti satıyor. Değil mi?	OSV: Hayır, arabayı koca satıyor.
F09	c/sbj	Büyükanne elbiseyi dikiyor. Değil mi?	SOV: Hayır, torun elbiseyi dikiyor.
	n/obj	Torun ceketi dikiyor. Değil mi?	OSV: Hayır, elbiseyi torun dikiyor.

F10	c/sbj	Kadın şapkayı giyiyor. Değil mi?	SOV:	Hayır, adam şapkayı giyiyor.
	c/obj	Adam kravatı giyiyor. Değil mi?	OSV:	Hayır, şapkayı adam giyiyor.
F11	c/sbj	Kız eti yiyor. Değil mi?	SOV:	Hayır, erkek eti yiyor.
	c/obj	Erkek balığı yiyor. Değil mi?	OSV:	Hayır, eti erkek yiyor.
F12	c/sbj	Anne çorbayı pişiriyor. Değil mi?	SOV:	Hayır, büyükanne çorbayı pişiriyor.
	c/obj	Büyükanne sebzeleri pişiriyor. Değil mi?	OSV:	Hayır, çorbayı büyükanne pişiriyor.
F13	c/sbj	Adam battaniyeyi katlayor. Değil mi?	SOV:	Hayır, kadın battaniyeyi katlayor.
	c/obj	Kadın havluyu katlayor. Değil mi?	OSV:	Hayır, battaniyeyi kadın katlayor.
F14	c/sbj	Kız somunu çiğmiyor. Değil mi?	SOV:	Hayır, erkek somunu çiğliyor.
	c/obj	Erkek şekeri çiğmiyor. Değil mi?	OSV:	Hayır, somunu erkek çiğliyor.
F15	c/sbj	Kadın turuncu soyulur. Değil mi?	SOV:	Hayır, erkek turuncu soyulur.
	c/obj	Erkek patatesi soyulur. Değil mi?	OSV:	Hayır, turuncu erkek soyulur.
F16	c/sbj	Adam çiçeği ekıyor. Değil mi?	SOV:	Hayır, erkek çiçeği ekıyor.
	c/obj	Erkek ağaç ekıyor. Değil mi?	OSV:	Hayır, çiçeği erkek ekıyor.

V-medial experiment

Non-identificational focus

Item	Condition	Question	Answers
F01	n/sbj	Biri yapıyor çitleri. Kim?	SOV: Adam yapıyor çitleri.
	n/obj	Adam yapıyor bir şey. Ne?	OSV: Çitleri yapıyor adam.
F02	n/sbj	Biri taşıyor çantayı. Kim?	SOV: Kadın taşıyor çantayı.
	n/obj	Kadın taşıyor bir şey. Ne?	OSV: Çantayı taşıyor kadın.
F03	n/sbj	Biri topu yakalıyor oğlan. Kim?	SOV: Oğlan yakalıyor topu.
	n/obj	Kız yakalıyor bir şey. Ne?	OSV: Topu yakalıyor oğlan.
F04	n/sbj	Biri kaldırıyor kalemi. Kim?	SOV: Çiz kaldırıyor kalemi.
	n/obj	Kız kaldırıyor bir şey. Ne?	OSV: Kalemi kaldırıyor çiz.
F05	n/sbj	Biri vuruyor topu. Kim?	SOV: Erkek vuruyor topu.
	n/obj	Erkek vuruyor bir şey. Ne?	OSV: Topu vuruyor erkek.
F06	n/sbj	Biri satın alıyor dergiyi. Kim?	SOV: Erkek satın alıyor dergiyi.
	n/obj	Erkek satın alıyor bir şey. Ne?	OSV: Dergiyi satın alıyor erkek.
F07	n/sbj	Biri atıyor topu. Kim?	SOV: Kadın atıyor topu.
	n/obj	Kadın atıyor bir şey. Ne?	OSV: Topu atıyor kadın.
F08	n/sbj	Biri gönderiyor mektubu. Kim?	SOV: Adam gönderiyor mektubu.
	n/obj	Adam gönderiyor bir şey. Ne?	OSV: Mektubu gönderiyor adam.
F09	n/sbj	Biri topluyor elmayı. Kim?	SOV: Kız topluyor elmayı.

F10	n/obj	Kız topluyor bir şey. Ne?	OSV:	Elmayı topluyor kız.
	n/sbj	Biri okuyor gazeti. Kim?	SOV:	Adam okuyor gazeti.
	n/obj	Adam okuyor bir şey. Ne?	OSV:	Gazeti okuyor adam.
F11	n/sbj	Biri yiyor muz. Kim?	SOV:	Adam yiyor muz.
	n/obj	Adam yiyor bir şey. Ne?	OSV:	Muzu yiyor adam.
F12	n/sbj	Biri yazıyor mektubu. Kim?	SOV:	Erkek yazıyor mektubu.
	n/obj	Erkek yazıyor bir şey. Ne?	OSV:	Mektubu yazıyor erkek.
F13	n/sbj	Biri pişiriyor pastayı. Kim?	SOV:	Kadın pişiriyor pastayı.
	n/obj	Kadın pişiriyor bir şey. Ne?	OSV:	Pastayı pişiriyor kadın.
F14	n/sbj	Biri yapıyor resmi. Kim?	SOV:	Adam yapıyor resmi.
	n/obj	Adam yapıyor bir şey. Ne?	OSV:	Resmi yapıyor adam.
F15	n/sbj	Biri yıkıyor arabayı. Kim?	SOV:	Erkek yıkıyor arabayı.
	n/obj	Erkek yıkıyor bir şey. Ne?	OSV:	Arabayı yıkıyor erkek.
F16	n/sbj	Biri kesiyor elmayı. Kim?	SOV:	Kadın kesiyor elmayı.
	n/obj	Kadın kesiyor bir şey. Ne?	OSV:	Elmayı kesiyor kadın.

Corrective focus

Item	Condition	Question	Answers
F01	c/sbj	Erkek okuyor kitabı. Değil mi?	SOV: Hayır, kız okuyor kitabı.
	c/obj	Kız okuyor dergiyi. Değil mi?	OSV: Hayır, kitabı okuyor kız.
F02	c/sbj	Kız satın alıyor elbiseyi. Değil mi?	SOV: Hayır, kadın satın alıyor elbiseyi.
	c/obj	Kadın satın alıyor eteği. Değil mi?	OSV: Hayır, elbiseyi satın alıyor kadın.
F03	c/sbj	Kadın topluyor armudu. Değil mi?	SOV: Hayır, kız topluyor armudu.
	c/obj	Kız topluyor kirazı. Değil mi?	OSV: Hayır, armudu topluyor kız.
F04	c/sbj	Kız gönderiyor mektubu. Değil mi?	SOV: Hayır, erkek gönderiyor mektubu.
	c/obj	Erkek gönderiyor paketi. Değil mi?	OSV: Hayır, mektubu gönderiyor erkek.
F05	c/sbj	Erkek çalışıyor saati. Değil mi?	SOV: Hayır, adam çalışıyor saati.
	c/obj	Adam çalışıyor bileziği. Değil mi?	OSV: Hayır, saati çalışıyor adam.
F06	c/sbj	Kız kaybediyor halkayı. Değil mi?	SOV: Hayır, kadın kaybediyor halkayı.
	c/obj	Kadın kaybediyor kolyeyi. Değil mi?	OSV: Hayır, halkayı kaybediyorkadın.
F07	c/sbj	Kız yazıyor şarkıyı. Değil mi?	SOV: Hayır, erkek yazıyor şarkıyı.
	c/obj	Erkek yazıyor mektubu. Değil mi?	OSV: Hayır, şarkıyı yazıyor erkek.
F08	c/sbj	Eşi satıyor arabayı. Değil mi?	SOV: Hayır, koca satıyor arabayı.
	c/obj	Koca satıyor bisikleti. Değil mi?	OSV: Hayır, arabayı satıyor koca.
F09	c/sbj	Büyükanne dikiyor elbiseyi. Değil mi?	SOV: Hayır, torun dikiyor elbiseyi.
	n/obj	Torun dikiyor ceketini. Değil mi?	OSV: Hayır, elbiseyi dikiyor torun.

F10	c/sbj	Kadın giyiyor şapkaı. Değil mi?	SOV:	Hayır, adam giyiyor şapkaı.
	c/obj	Adam giyiyor kravati. Değil mi?	OSV:	Hayır, şapkaı giyiyor adam.
F11	c/sbj	Kız yiyor eti. Değil mi?	SOV:	Hayır, erkek yiyor eti.
	c/obj	Erkek yiyor balğı. Değil mi?	OSV:	Hayır, eti yiyor erkek.
F12	c/sbj	Anne pişiriyor çorbayı. Değil mi?	SOV:	Hayır, büyükanne pişiriyor çorbayı.
	c/obj	Büyükanne pişiriyor sebzeleri. Değil mi?	OSV:	Hayır, çorbayı pişiriyor büyükanne.
F13	c/sbj	Adam katlıyor battaniyeyi. Değil mi?	SOV:	Hayır, kadın katlıyor battaniyeyi.
	c/obj	Kadın katlıyor havluyu. Değil mi?	OSV:	Hayır, battaniyeyi katlıyor kadın.
F14	c/sbj	Kız çğniyor somunu. Değil mi?	SOV:	Hayır, erkek çğniyor somunu.
	c/obj	Erkek çğniyor şekeri. Değil mi?	OSV:	Hayır, somunu çğniyor erkek.
F15	c/sbj	Kadın soyulur turuncu. Değil mi?	SOV:	Hayır, erkek soyulur turuncu.
	c/obj	Erkek soyulur patatesi. Değil mi?	OSV:	Hayır, turuncu soyulur erkek.
F16	c/sbj	Adam ekiyor ççeğı. Değil mi?	SOV:	Hayır, erkek ekiyor ççeğı.
	c/obj	Erkek ekiyor ağacı. Değil mi?	OSV:	Hayır, ççeğı ekiyor erkek .

Russian

V-final experiment

Non-identificational focus

Item	Condition	Question	Answers
F01	n/sbj	Kto-to zabor stroit. Ho kto?	SOV: Muzhchina zabor stroit.
	n/obj	Muzhchina chto-to stroit. No chto?	OSV: Zabor muzhchina stroit.
F02	n/sbj	Kto-to sumku nesot. Ho kto?	SOV: Zhenshchina sumku nesot.
	n/obj	Zhenshchina chto-to nesot. No chto?	OSV: Sumku zhenshchina nesot.
F03	n/sbj	Kto-to myach lovit. Ho kto?	SOV: Mal'chik myach lovit.
	n/obj	Mal'chik chto-to lovit. No chto?	OSV: Myach mal'chik lovit.
F04	n/sbj	Kto-to ruchku podnimayet. Ho kto?	SOV: Devochka ruchku podnimayet.
	n/obj	Devochka chto-to podnimayet. No chto?	OSV: Ruchku devochka podnimayet.
F05	n/sbj	Kto-to myach pinayet. Ho kto?	SOV: Mal'chik myach pinayet.
	n/obj	Mal'chik chto-to pinayet. No chto?	OSV: Myach mal'chik pinayet.
F06	n/sbj	Kto-to zhurnal pokupayet. Ho kto?	SOV: Mal'chik zhurnal pokupayet.
	n/obj	Mal'chik chto-to pokupayet. No chto?	OSV: Zhurnal mal'chik pokupayet.
F07	n/sbj	Kto-to myach brosayet. Ho kto?	SOV: Zhenshchina myach brosayet.
	n/obj	Zhenshchina chto-to brosayet. No chto?	OSV: Myach zhenshchina brosayet.
F08	n/sbj	Kto-to pis'mo otpravlyayet. Ho kto?	SOV: Muzhchina pis'mo otpravlyayet.

F09	n/obj	Muzhchina chto-to otpravlyayet. No chto?	OSV:	Pis'mo muzhchina otpravlyayet.
	n/sbj	Kto-to yabloko vybirayet. Ho kto?	SOV:	Devochka yabloko vybirayet.
F10	n/obj	Devochka chto-to vybirayet. No chto?	OSV:	Yabloko devochka vybirayet.
	n/sbj	Kto-to gazetu chitayet. Ho kto?	SOV:	Muzhchina gazetu chitayet.
F11	n/obj	Muzhchina chto-to chitayet. No chto?	OSV:	Gazetu muzhchina chitayet.
	n/sbj	Kto-to banan yest'. Ho kto?	SOV:	Muzhchina banan yest'.
F12	n/obj	Muzhchina chto-to yest'. No chto?	OSV:	Banan muzhchina yest'.
	n/sbj	Kto-to pis'mo pishet. Ho kto?	SOV:	Mal'chik pis'mo pishet.
F13	n/obj	Mal'chik chto-to pishet. No chto?	OSV:	Pis'mo mal'chik pishet.
	n/sbj	Kto-to tort pechet. Ho kto?	SOV:	Zhenshchina tort pechet.
F14	n/obj	Zhenshchina chto-to pechet. No chto?	OSV:	Tort zhenshchina pechet.
	n/sbj	Kto-to kartinku risuyet. Ho kto?	SOV:	Muzhchina kartinku risuyet.
F15	n/obj	Muzhchina chto-to risuyet. No chto?	OSV:	Kartinku muzhchina risuyet.
	n/sbj	Kto-to mashinu moyet. Ho kto?	SOV:	Mal'chik mashinu moyet.
F16	n/obj	Mal'chik chto-to moyet. No chto?	OSV:	Mashinu mal'chik moyet.
	n/sbj	Kto-to yabloko rezhit. Ho kto?	SOV:	Zhenshchina yabloko rezhit.
	n/obj	Zhenshchina chto-to rezhit. No chto?	OSV:	Yabloko zhenshchina rezhit.

Corrective focus

Item	Condition	Question	Answers
F01	c/sbj	Mal'chik knigu chitayet. Pravda?	SOV: Net, devochka knigu chitayet.
	c/obj	Devochka gazetu chitayet. Pravda?	OSV: Net, knigu devochka chitayet.
F02	c/sbj	Devushka plat'ye pokupayet. Pravda?	SOV: Net, zhenshchina plat'ye pokupayet.
	c/obj	Zhenshchina yubku pokupayet. Pravda?	OSV: Net, plat'ye zhenshchina pokupayet.
F03	c/sbj	Zhenshchina grushu vybirayet. Pravda?	SOV: Net, devushka grushu vybirayet.
	c/obj	Devushka vishnyu vybirayet. Pravda?	OSV: Net, grushu devushka vybirayet.
F04	c/sbj	Devushka pis'mo otpravlyayet. Pravda?	SOV: Net, mal'chik pis'mo otpravlyayet.
	c/obj	Mal'chik posylku otpravlyayet. Pravda?	OSV: Net, pis'mo mal'chik otpravlyayet.
F05	c/sbj	Mal'chik chasy kratet. Pravda?	SOV: Net, muzhchina chasy kratet.
	c/obj	Muzhchina braslet kratet. Pravda?	OSV: Net, chasy muzhchina kratet.
F06	c/sbj	Devochka kol'tso teryayet. Pravda?	SOV: Net, zhenshchina kol'tso teryayet.
	c/obj	Zhenshchina tsepochku teryayet. Pravda?	OSV: Net, kol'tso zhenshchina teryayet.
F07	c/sbj	Devochka pesnyu pishet. Pravda?	SOV: Net, mal'chik pesnyu pishet.
	c/obj	Mal'chik pis'mo pishet. Pravda?	OSV: Net, pesnyu mal'chik pishet.
F08	c/sbj	Zhena mashinu prodayet. Pravda?	SOV: Net, muzh mashinu prodayet.
	c/obj	Muzh velosiped prodayet. Pravda?	OSV: Net, mashinu muzh prodayet.
F09	c/sbj	Babushka plat'ye sh'yot. Pravda?	SOV: Net, vnuchka plat'ye sh'yot.
	c/obj	Vnuchka pal'to sh'yot. Pravda?	OSV: Net, plat'ye vnuchka sh'yot.

F10	c/sbj	Zhenshchina shlyapu nosit. Pravda?	SOV:	Net, muzhchina shlyapu nosit.
F11	c/obj	Muzhchina galstuk nosit. Pravda?	OSV:	Net, shlyapu muzhchina nosit.
F12	c/sbj	Devochka myaso yest'. Pravda?	SOV:	Net, mal'chik myaso yest'.
F13	c/obj	Mal'chik rybu yest'. Pravda?	OSV:	Net, myaso mal'chik yest'.
F14	c/sbj	Mat' sup gotovit. Pravda?	SOV:	Net, babushka sup gotovit.
F15	c/obj	Babushka ovoshchi gotovit. Pravda?	OSV:	Net, sup babushka gotovit.
F16	c/sbj	Muzhchina odeyalo skladyvayet. Pravda?	SOV:	Net, zhenshchina odeyalo skladyvayet.
F17	c/obj	Zhenshchina polotentse skladyvayet. Pravda?	OSV:	Net, odeyalo zhenshchina skladyvayet.
F18	c/sbj	Devochka opeks zhuyet. Pravda?	SOV:	Net, paren' opeks zhuyet.
F19	c/obj	Paren' konfety zhuyet. Pravda?	OSV:	Net, opkes paren' zhuyet.
F20	c/sbj	Zhenshchina apel'sin chistit. Pravda?	SOV:	Net, muzhchina apel'sin chistit.
F21	c/obj	Muzhchina kartofelya chistit. Pravda?	OSV:	Net, apel'sin muzhchina chistit.
F22	c/sbj	Muzhchina tsvetok sazhayet. Pravda?	SOV:	Net, mal'chik tsvetok sazhayet.
F23	c/obj	Mal'chik derevo sazhayet. Pravda?	OSV:	Net, tsvetok mal'chik sazhayet.

V-medial experiment**Non-identificational focus**

Item	Condition	Question	Answers
F01	n/sbj	Kto-to stroit zabor. Ho kto?	SOV: Muzhchina stroit zabor.
	n/obj	Muzhchina stroit chto-to. No chto?	OSV: Zabor stroit muzhchina.
F02	n/sbj	Kto-to nesot sumku. Ho kto?	SOV: Zhenshchina nesot sumku.
	n/obj	Zhenshchina nesot chto-to. No chto?	OSV: Sumku nesot zhenshchina.
F03	n/sbj	Kto-to lovit myach. Ho kto?	SOV: Mal'chik lovit myach.
	n/obj	Mal'chik lovit chto-to. No chto?	OSV: Myach lovit mal'chik.
F04	n/sbj	Kto-to podnimayet ruchku. Ho kto?	SOV: Devochka podnimayet ruchku.
	n/obj	Devochka podnimayet chto-to. No chto?	OSV: Ruchku podnimayet devochka.
F05	n/sbj	Kto-to pinayet myach. Ho kto?	SOV: Mal'chik pinayet myach.
	n/obj	Mal'chik pinayet chto-to. No chto?	OSV: Myach pinayet mal'chik.
F06	n/sbj	Kto-to pokupayet zhurnal. Ho kto?	SOV: Mal'chik pokupayet zhurnal.
	n/obj	Mal'chik pokupayet chto-to. No chto?	OSV: Zhurnal pokupayet mal'chik.
F07	n/sbj	Kto-to brosayet myach. Ho kto?	SOV: Zhenshchina brosayet myach.
	n/obj	Zhenshchina brosayet chto-to. No chto?	OSV: Myach brosayet zhenshchina.
F08	n/sbj	Kto-to otpravlyayet pis'mo. Ho kto?	SOV: Muzhchina otpravlyayet pis'mo.
	n/obj	Muzhchina otpravlyayet chto-to. No chto?	OSV: Pis'mo otpravlyayet muzhchina.
F09	n/sbj	Kto-to vybirayet yabloko. Ho kto?	SOV: Devochka vybirayet yabloko.

	n/obj	Devochka vybirayet chto-to. No chto?	OSV:	Yabloko vybirayet devochka.
F10	n/sbj	Kto-to chitayet gazet. Ho kto?	SOV:	Muzhchina chitayet gazet.
	n/obj	Muzhchina chitayet chto-to. No chto?	OSV:	Gazetu chitayet muzhchina.
F11	n/sbj	Kto-to yest' banan. Ho kto?	SOV:	Muzhchina yest' banan.
	n/obj	Muzhchina yest' chto-to. No chto?	OSV:	Banan yest' muzhchina.
F12	n/sbj	Kto-to pishet pis'mo. Ho kto?	SOV:	Mal'chik pishet pis'mo.
	n/obj	Mal'chik pishet chto-to. No chto?	OSV:	Pis'mo pishet mal'chik.
F13	n/sbj	Kto-to pechet tort. Ho kto?	SOV:	Zhenshchina pechet tort.
	n/obj	Zhenshchina pechet chto-to. No chto?	OSV:	Tort pechet zhenshchina.
F14	n/sbj	Kto-to risuyet kartinku. Ho kto?	SOV:	Muzhchina risuyet kartinku.
	n/obj	Muzhchina risuyet chto-to. No chto?	OSV:	Kartinku risuyet muzhchina.
F15	n/sbj	Kto-to moyet mashinu. Ho kto?	SOV:	Mal'chik moyet mashinu.
	n/obj	Mal'chik moyet chto-to. No chto?	OSV:	Mashinu moyet mal'chik.
F16	n/sbj	Kto-to rezhit yabloko. Ho kto?	SOV:	Zhenshchina rezhit yabloko.
	n/obj	Zhenshchina rezhit chto-to. No chto?	OSV:	Yabloko rezhit zhenshchina.

Corrective focus

Item	Condition	Question	Answers
F01	c/sbj	Mal'chik chitayet knigu. Pravda?	SOV: Net, devochka chitayet knigu.
	c/obj	Devochka chitayet gazetu. Pravda?	OSV: Net, knigu chitayet devochka.
F02	c/sbj	Devushka pokupayet plat'ye. Pravda?	SOV: Net, zhenshchina pokupayet plat'ye.
	c/obj	Zhenshchina pokupayet yubku. Pravda?	OSV: Net, plat'ye pokupayet zhenshchina.
F03	c/sbj	Zhenshchina vybirayet grushu. Pravda?	SOV: Net, devushka vybirayet grushu.
	c/obj	Devushka vybirayet vishnyu. Pravda?	OSV: Net, grushu vybirayet devushka.
F04	c/sbj	Devushka otpravlyayet pis'mo. Pravda?	SOV: Net, mal'chik otpravlyayet pis'mo.
	c/obj	Mal'chik otpravlyayet posylku. Pravda?	OSV: Net, pis'mo otpravlyayet mal'chik.
F05	c/sbj	Mal'chik kradet chasy. Pravda?	SOV: Net, muzhchina kradet chasy.
	c/obj	Muzhchina kradet braslet. Pravda?	OSV: Net, chasy kradet muzhchina.
F06	c/sbj	Devochka teryayet kol'tso. Pravda?	SOV: Net, zhenshchina teryayet kol'tso.
	c/obj	Zhenshchina teryayet tsepechku. Pravda?	OSV: Net, kol'tso teryayet zhenshchina.
F07	c/sbj	Devochka pishet pesnyu. Pravda?	SOV: Net, mal'chik pishet pesnyu.
	c/obj	Mal'chik pishet pis'mo. Pravda?	OSV: Net, pesnyu pishet mal'chik.
F08	c/sbj	Zhena prodayet mashinu. Pravda?	SOV: Net, muzh prodayet mashinu.
	c/obj	Muzh prodayet velosiped. Pravda?	OSV: Net, mashinu prodayet muzh.
F09	c/sbj	Babushka sh'yot plat'ye. Pravda?	SOV: Net, vnuchka sh'yot plat'ye.
	c/obj	Vnuchka sh'yot pal'to. Pravda?	OSV: Net, plat'ye vnuchka sh'yot sh'yot.

F10	c/sbj	Zhenshchina nosit shlyapu. Pravda?	SOV:	Net, muzhchina nosit shlyapu.
	c/obj	Muzhchina nosit galstuk. Pravda?	OSV:	Net, shlyapu nosit muzhchina.
F11	c/sbj	Devochka yest' myaso. Pravda?	SOV:	Net, mal'chik yest' myaso.
	c/obj	Mal'chik yest' rybu. Pravda?	OSV:	Net, myaso yest' mal'chik.
F12	c/sbj	Mat' gotovit sup. Pravda?	SOV:	Net, babushka gotovit sup.
	c/obj	Babushka gotovit ovoshchi. Pravda?	OSV:	Net, sup gotovit babushka.
F13	c/sbj	Muzhchina skladyvayet odeyalo. Pravda?	SOV:	Net, zhenshchina skladyvayet odeyalo.
	c/obj	Zhenshchina skladyvayet polotentse. Pravda?	OSV:	Net, odeyalo skladyvayet zhenshchina.
F14	c/sbj	Devochka zhuyet opeks. Pravda?	SOV:	Net, paren' zhuyet opeks.
	c/obj	Paren' zhuyet konfety. Pravda?	OSV:	Net, opkes zhuyet paren'.
F15	c/sbj	Zhenshchina chistit apel'sin. Pravda?	SOV:	Net, muzhchina chistit apel'sin.
	c/obj	Muzhchina chistit kartofelya. Pravda?	OSV:	Net, apel'sin chistit muzhchina.
F16	c/sbj	Muzhchina sazhayet tsvetok. Pravda?	SOV:	Net, mal'chik sazhayet tsvetok.
	c/obj	Mal'chik sazhayet derevo. Pravda?	OSV:	Net, tsvetok sazhayet mal'chik.

Ürum

V-final experiment

Non-identificational focus

Item	Condition	Question	Answers
F01	n/sbj	Kimsä zabori yapier. Kim?	SOV: Ärgishi zabori yapier.
	n/obj	Ärgishi biše yapier. Näi?	OSV: Zabor ärgishi yapier.
F02	n/sbj	Kimsä sumkai gäturer. Kim?	SOV: Ğari sumkai gäturer.
	n/obj	Ğari biše gäturer. Näi?	OSV: Sumkai Ğari gäturer.
F03	n/sbj	Kimsä topi dutier. Kim?	SOV: Oĝlan topi dutier.
	n/obj	Ğari biše dutier. Näi?	OSV: Topi oĝlan dutier.
F04	n/sbj	Kimsä ruchkai ĝaldurier. Kim?	SOV: Ğız ruchkai ĝaldurier.
	n/obj	Ğız biše ĝaldurier. Näi?	OSV: Ruchkai ĝız ĝaldurier.
F05	n/sbj	Kimsä topi vurier. Kim?	SOV: Oĝlan topi vurier.
	n/obj	Oĝlan biše vurier. Näi?	OSV: Topi oĝlan vurier.
F06	n/sbj	Kimsä gazetı alier. Kim?	SOV: Oĝlan gazetı alier.
	n/obj	Oĝlan biše alier. Näi?	OSV: Gazetı oĝlan alier.
F07	n/sbj	Kimsä topı atier. Kim?	SOV: Ğari topı atier.
	n/obj	Ğari biše atier. Näi?	OSV: Topı Ğari atier.
F08	n/sbj	Kimsä pismoı yollier. Kim?	SOV: Ärgishi pismoı yollier.

F09	n/obj	Ärgishi biše yollier. Näi?	OSV:	Pismoj ärgishi yollier.
	n/sbj	Kimsä almai ġopardier. Kim?	SOV:	Ćız almai ġopardier.
	n/obj	Ćız biše ġopardier. Näi?	OSV:	Almai ġız ġopardier.
F10	n/sbj	Kimsä gazetii ohier. Kim?	SOV:	Ärgishi gazetii ohier.
	n/obj	Ärgishi biše ohier. Näi?	OSV:	Gazetii ärgishi ohier.
F11	n/sbj	Kimsä banani ier. Kim?	SOV:	Ärgishi banani ier.
	n/obj	Ärgishi biše ier. Näi?	OSV:	Banani ärgishi ier.
F12	n/sbj	Kimsä pismoj yazier. Kim?	SOV:	Oġlan pismoj yazier.
	n/obj	Oġlan biše yazier. Näi?	OSV:	Pismoj oġlan yazier.
F13	n/sbj	Kimsä torti edier. Kim?	SOV:	Ćari torti edier.
	n/obj	Ćari biše edier. Näi?	OSV:	Torti ġari edier.
F14	n/sbj	Kimsä kartinai boyadier. Kim?	SOV:	Oġlan kartinai boyadier.
	n/obj	Oġlan biše boyadier. Näi?	OSV:	Kartinai oġlan boyadier.
F15	n/sbj	Kimsä mashinai yahier. Kim?	SOV:	Oġlan mashinai yahier.
	n/obj	Oġlan biše yahier. Näi?	OSV:	Mashinai oġlan yahier.
F16	n/sbj	Kimsä almai käser. Kim?	SOV:	Ćari almai käser.
	n/obj	Ćari biše käser. Näi?	OSV:	Almai ġari käser.

Corrective focus

Item	Condition	Question	Answers
F01	c/sbj	Çiz gazetı ohier. Düzdür?	SOV: Yox, oğlan gazetı ohier.
	c/obj	Oğlan knigai ohier. Düzdür?	OSV: Yox, gazetı oğlan ohier.
F02	c/sbj	Çari yubkai alier. Düzdür?	SOV: Yox, çiz yubkai alier.
	c/obj	Çiz gabai alier. Düzdür?	OSV: Yox, yubkai çiz alier.
F03	c/sbj	Çiz kirazi toplier. Düzdür?	SOV: Yox, çari kirazi toplier.
	c/obj	Çari armudi toplier. Düzdür?	OSV: Yox, kirazi çari toplier.
F04	c/sbj	Oğlan pasılkai yollier. Düzdür?	SOV: Yox, çiz pasılkai yollier.
	c/obj	Çiz pismoı yollier. Düzdür?	OSV: Yox, pasılkai çiz yollier.
F05	c/sbj	Ärgishi brasleti chalier. Düzdür?	SOV: Yox, oğlan brasleti chalier.
	c/obj	Oğlan saati chalier. Düzdür?	OSV: Yox, brasleti oğlan chalier.
F06	c/sbj	Çari koliei iturier. Düzdür?	SOV: Yox, çiz koliei iturier.
	c/obj	Çiz üzügi iturier. Düzdür?	OSV: Yox, koliei çiz iturier.
F07	c/sbj	Oğlan pismoı yazier. Düzdür?	SOV: Yox, çiz pismoı yazier.
	c/obj	Çiz türkii yazier. Düzdür?	OSV: Yox, pismoı çiz yazier.
F08	c/sbj	Äri velosipedi satier. Düzdür?	SOV: Yox, çarsı velosipedi satier.
	c/obj	Çarsı mashinai satier. Düzdür?	OSV: Yox, velosipedi çarsı satier.
F09	c/sbj	Toruni paltoi tikier. Düzdür?	SOV: Yox, äbä paltoi tikier.
	c/obj	Äbä gabai tikier. Düzdür?	OSV: Yox, paltoi äbä tikier.

F10	c/sbj	Ärgishi galstuki tahier. Düzdür?	SOV:	Yox, ğari galstuki tahier.
	c/obj	Ğari tärligi tahier. Düzdür?	OSV:	Yox, galstuki ğari tahier.
F11	c/sbj	Oğlan balği ier. Düzdür?	SOV:	Yox, ğız balği ier.
	c/obj	Ğız äti ier. Düzdür?	OSV:	Yox, balği ğız ier.
F12	c/sbj	Äbä ovoshi bishirier. Düzdür?	SOV:	Yox, ana ovoshi bishirier.
	c/obj	Ana ashi bishirier. Düzdür?	OSV:	Yox, ovoshi ana bishirier.
F13	c/sbj	Ğari peshkiri ğatlier. Düzdür?	SOV:	Yox, ärgishi peshkiri ğatlier.
	c/obj	Ärgishi yorğani ğatlier. Düzdür?	OSV:	Yox, peshkiri ärgishi ğatlier.
F14	c/sbj	Oğlan kanfeti cheimier. Düzdür?	SOV:	Yox, ğız kanfeti cheimier.
	c/obj	Ğız jävizi cheimier. Düzdür?	OSV:	Yox, kanfeti ğız cheimier.
F15	c/sbj	Ärgishi gardofi soier. Düzdür?	SOV:	Yox, ğari gardofi soier.
	c/obj	Ğari apelsini soier. Düzdür?	OSV:	Yox, gardofi ğari soier.
F16	c/sbj	Oğlan ağaji äktier. Düzdür?	SOV:	Yox, ärgishi ağaji äktier.
	c/obj	Ärgishi chichägi äktier. Düzdür?	OSV:	Yox, ağaji ärgishi äktier.

V-medial experiment

Non-identificational focus

Item	Condition	Question	Answers
F01	n/sbj	Kimsä yapier zabori. Kim?	SOV: Ärgishi yapier zabori.
	n/obj	Ärgishi yapier biše. Näi?	OSV: Zabor yapier ärgishi.
F02	n/sbj	Kimsä gäturer sumkai. Kim?	SOV: Ğari gäturer sumkai.
	n/obj	Ğari gäturer biše. Näi?	OSV: Sumkai gäturer Ğari.
F03	n/sbj	Kimsä dutier topi. Kim?	SOV: Oĝlan dutier topi.
	n/obj	Ğari dutier biše. Näi?	OSV: Topi dutier oĝlan.
F04	n/sbj	Kimsä ĝaldrier ruchkai. Kim?	SOV: Ğız ĝaldrier ruchkai.
	n/obj	Ğız ĝaldrier biše. Näi?	OSV: Ruchkai ĝaldrier ĝız.
F05	n/sbj	Kimsä vurier topi. Kim?	SOV: Oĝlan vurier topi.
	n/obj	Oĝlan vurier biše. Näi?	OSV: Topi vurier oĝlan.
F06	n/sbj	Kimsä alier gazet. Kim?	SOV: Oĝlan alier gazet.
	n/obj	Oĝlan alier biše. Näi?	OSV: Gazeti alier oĝlan.
F07	n/sbj	Kimsä atier topi. Kim?	SOV: Ğari atier topi.
	n/obj	Ğari atier biše. Näi?	OSV: Topi atier Ğari.
F08	n/sbj	Kimsä yollier pismo. Kim?	SOV: Ärgishi yollier pismo.
	n/obj	Ärgishi yollier biše. Näi?	OSV: Pismo yollier ärgishi.
F09	n/sbj	Kimsä ĝopardier alma. Kim?	SOV: Ğız ĝopardier alma.

	n/obj	Čiz ġopardier biše. Näi?	OSV:	Almai ġopardier ġiz.
F10	n/sbj	Kimsä ohier gazeti. Kim?	SOV:	Ärgishi ohier gazeti.
	n/obj	Ärgishi ohier biše. Näi?	OSV:	Gazeti ohier ärgishi.
F11	n/sbj	Kimsä ier banani. Kim?	SOV:	Ärgishi ier banani.
	n/obj	Ärgishi ier biše. Näi?	OSV:	Banani ier ärgishi.
F12	n/sbj	Kimsä yazier pismoj. Kim?	SOV:	Oġlan yazier pismoj.
	n/obj	Oġlan yazier biše. Näi?	OSV:	Pismoj yazier oġlan.
F13	n/sbj	Kimsä edier torti. Kim?	SOV:	Ġari edier torti.
	n/obj	Ġari edier biše. Näi?	OSV:	Torti edier ġari.
F14	n/sbj	Kimsä boyadier kartinai. Kim?	SOV:	Oġlan boyadier kartinai.
	n/obj	Oġlan boyadier biše. Näi?	OSV:	Kartinai boyadier oġlan.
F15	n/sbj	Kimsä yahier mashinai. Kim?	SOV:	Oġlan yahier mashinai.
	n/obj	Oġlan yahier biše. Näi?	OSV:	Mashinai yahier oġlan.
F16	n/sbj	Kimsä käser almai. Kim?	SOV:	Ġari käser almai.
	n/obj	Ġari käser biše. Näi?	OSV:	Almai käser ġari.

Corrective focus

Item	Condition	Question	Answers
F01	c/sbj	Çiz ohier gazetî. Düzdür?	SOV: Yox, oğlan ohier gazetî.
	c/obj	Oğlan ohier knigai. Düzdür?	OSV: Yox, gazetî ohier oğlan.
F02	c/sbj	Çari alier yubkai. Düzdür?	SOV: Yox, çiz alier yubkai.
	c/obj	Çiz alier gabai. Düzdür?	OSV: Yox, yubkai alier çiz.
F03	c/sbj	Çiz toplier kirazi. Düzdür?	SOV: Yox, çari toplier kirazi.
	c/obj	Çari toplier armudî. Düzdür?	OSV: Yox, kirazi toplier çari.
F04	c/sbj	Oğlan yollier pasilkai. Düzdür?	SOV: Yox, çiz yollier pasilkai.
	c/obj	Çiz yollier pismoi. Düzdür?	OSV: Yox, pasilkai yollier çiz.
F05	c/sbj	Argishi chaliier brasleti. Düzdür?	SOV: Yox, oğlan chaliier brasleti.
	c/obj	Oğlan chaliier saati. Düzdür?	OSV: Yox, brasleti chaliier oğlan.
F06	c/sbj	Çari iturier koliei. Düzdür?	SOV: Yox, çiz iturier koliei.
	c/obj	Çiz iturier üzügi. Düzdür?	OSV: Yox, koliei iturier çiz.
F07	c/sbj	Oğlan yazier pismoi. Düzdür?	SOV: Yox, çiz yazier pismoi.
	c/obj	Çiz yazier türkii. Düzdür?	OSV: Yox, pismoi yazier çiz.
F08	c/sbj	Äri satier velosipedi. Düzdür?	SOV: Yox, çarsî satier velosipedi.
	c/obj	Çarsî satier mashinai. Düzdür?	OSV: Yox, velosipedi satier çarsî.
F09	c/sbj	Toruni tikier paltoi. Düzdür?	SOV: Yox, äbâ tikier paltoi.
	c/obj	Äbâ tikier gabai. Düzdür?	OSV: Yox, paltoi tikier äbâ.

F10	c/sbj	Ärgishi tahier galstuki. Düzdür?	SOV:	Yox, ğari tahier galstuki.
	c/obj	Ğari tahier tärliği. Düzdür?	OSV:	Yox, galstuki tahier ğari.
F11	c/sbj	Oğlan ier balığı. Düzdür?	SOV:	Yox, ğız ier balığı.
	c/obj	Ğız ier äti. Düzdür?	OSV:	Yox, balığı ier ğız.
F12	c/sbj	Äbä bishirier ovoshi. Düzdür?	SOV:	Yox, ana bishirier ovoshi.
	c/obj	Ana bishirier ashi. Düzdür?	OSV:	Yox, ovoshi bishirier ana.
F13	c/sbj	Ğari ğatlier peshkiri. Düzdür?	SOV:	Yox, ärgishi ğatlier peshkiri.
	c/obj	Ärgishi ğatlier yorğani. Düzdür?	OSV:	Yox, peshkiri ğatlier ärgishi.
F14	c/sbj	Oğlan cheinier kanfeti. Düzdür?	SOV:	Yox, ğız cheinier kanfeti.
	c/obj	Ğız cheinier jävizi. Düzdür?	OSV:	Yox, kanfeti cheinier ğız.
F15	c/sbj	Ärgishi soier gardofi. Düzdür?	SOV:	Yox, ğari soier gardofi.
	c/obj	Ğari soier apelsini. Düzdür?	OSV:	Yox, gardofi soier ğari.
F16	c/sbj	Oğlan ağaji äktier. Düzdür?	SOV:	Yox, ärgishi äktier ağaji.
	c/obj	Ärgishi äktier chichägi. Düzdür?	OSV:	Yox, ağaji äktier ärgishi.

Appendix C

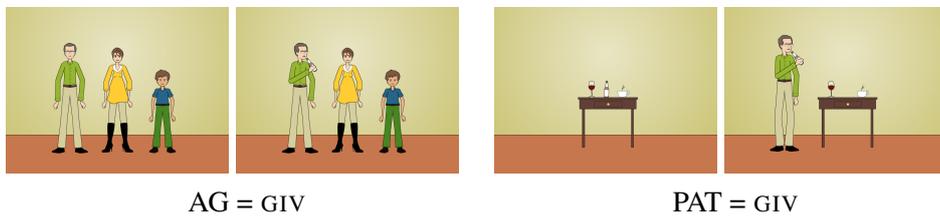
Material topic elicitation study

Experiment 1: *agents vs. patients*

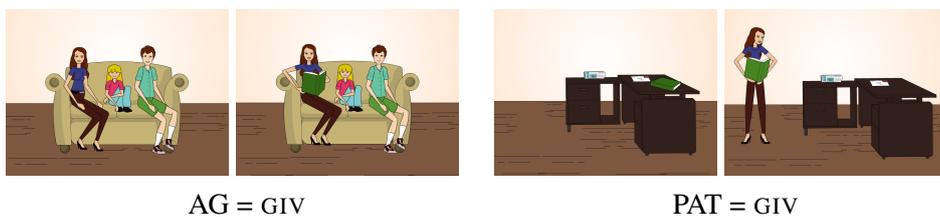
Item T01



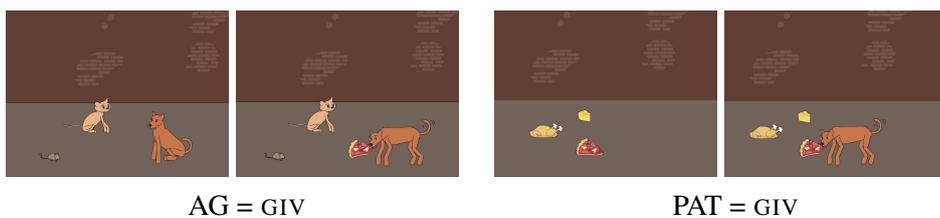
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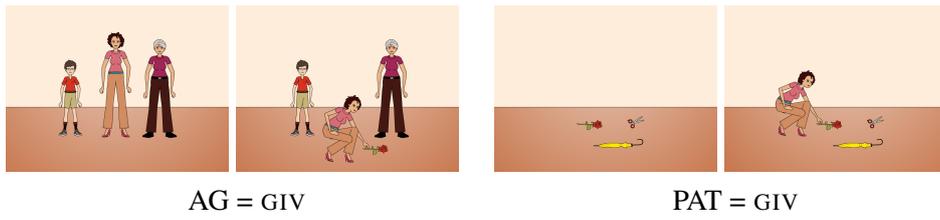
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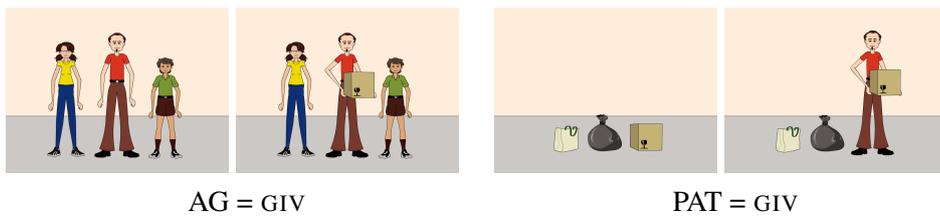
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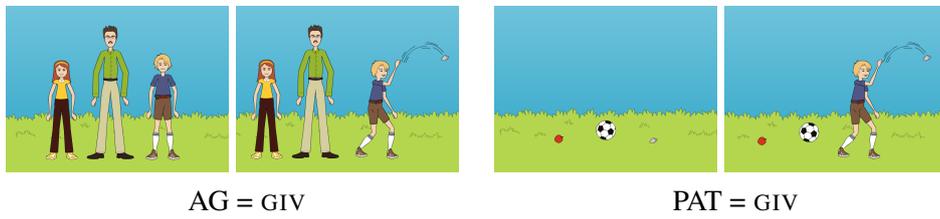
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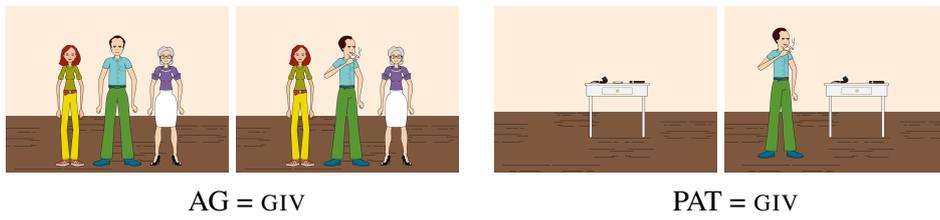
Item T06



Item T07

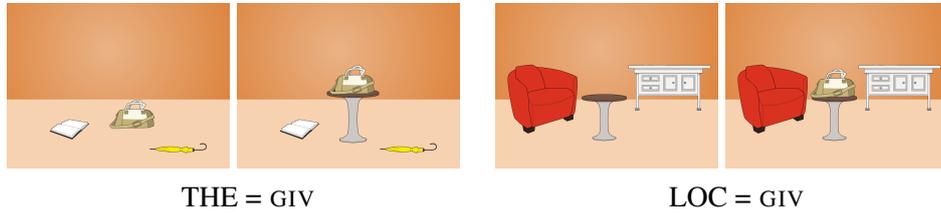


Item T08

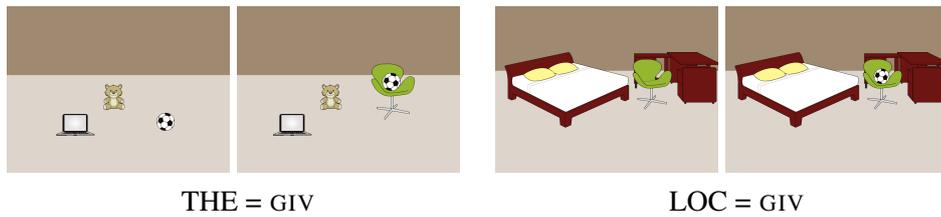


Experiment 2: *theme vs. locative*

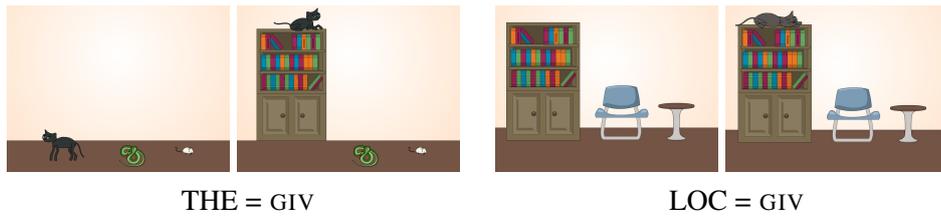
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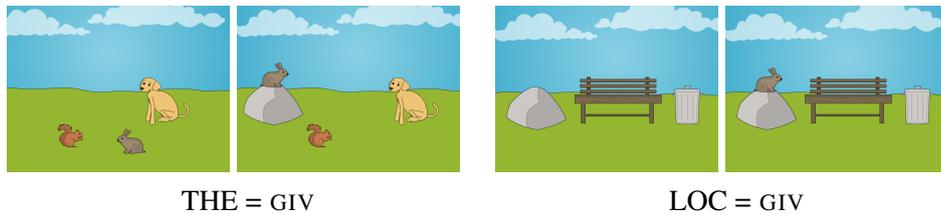
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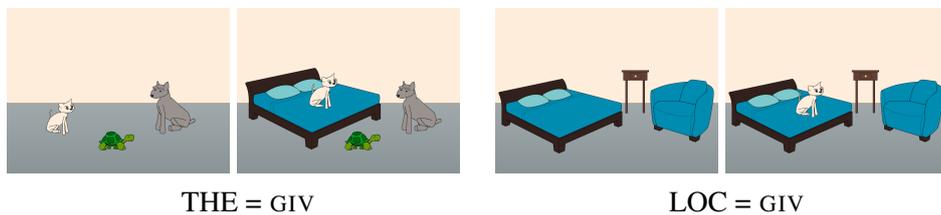
Item T11



Item T12



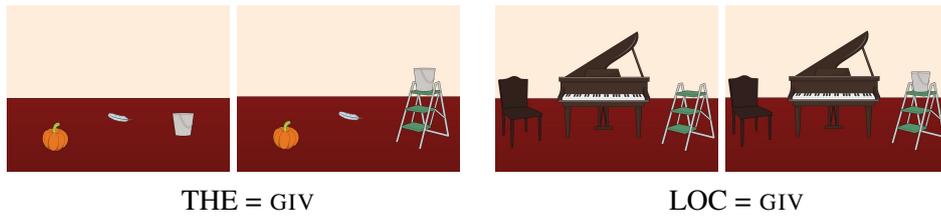
Item T13



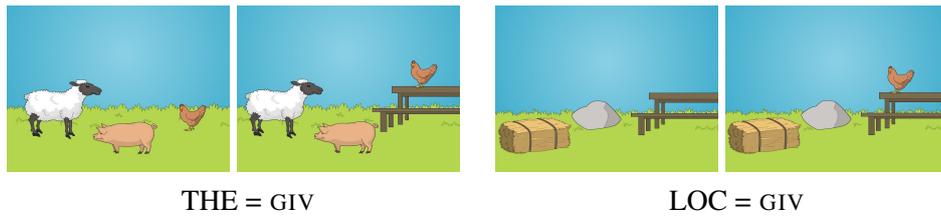
Item T14



Item T15



Item T16

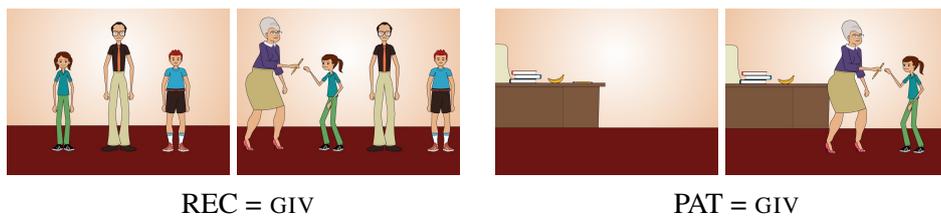


Experiment 3: *recipient vs. patient*

Item T17



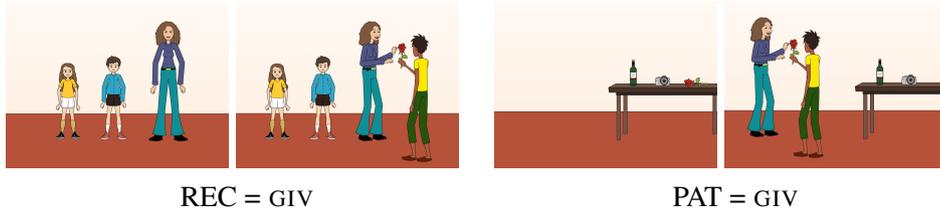
Item T18



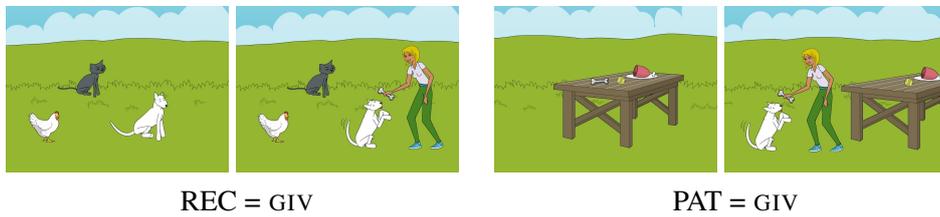
Item T19



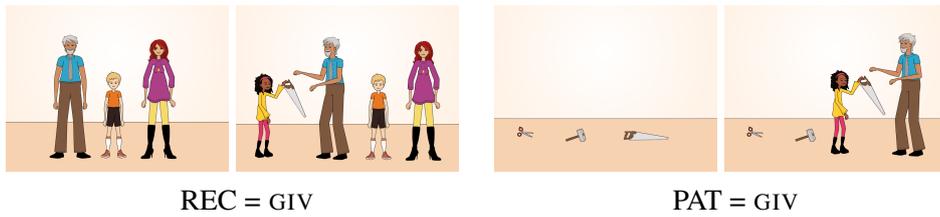
Item T20



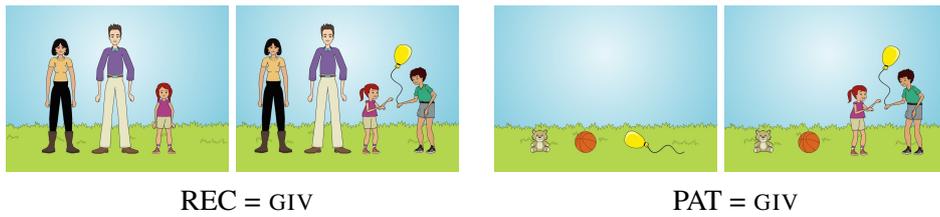
Item T21



Item T22



Item T23

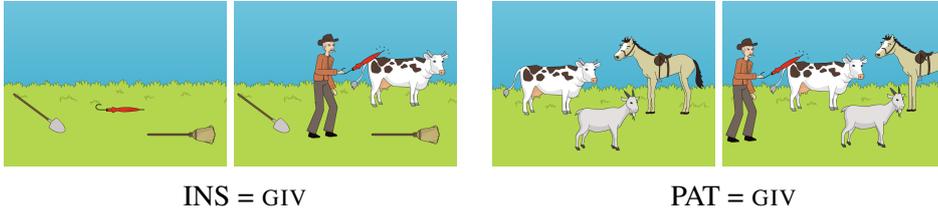


Item T24



Experiment 4: *instrument vs. patient*

Item T25



INS = GIV

PAT = GIV

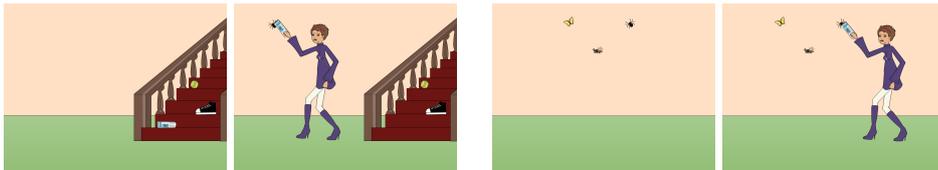
Item T26



INS = GIV

PAT = GIV

Item T27



INS = GIV

PAT = GIV

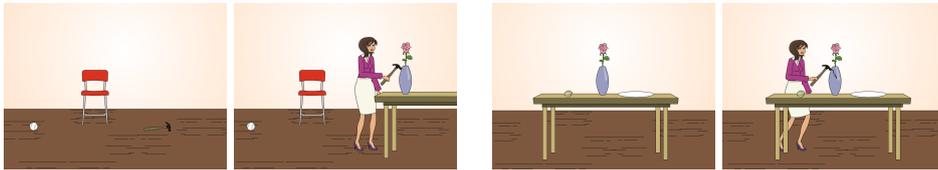
Item T28



INS = GIV

PAT = GIV

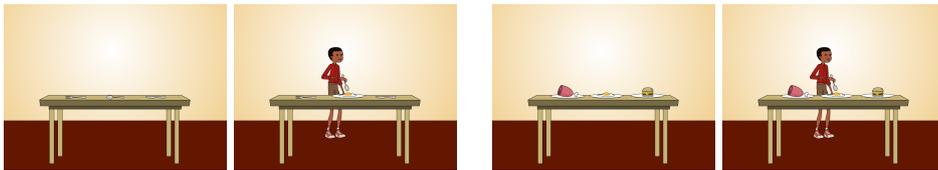
Item T29



INS = GIV

PAT = GIV

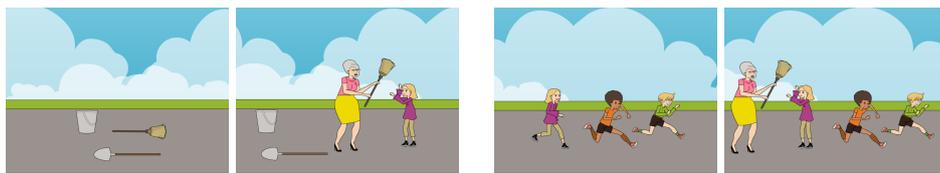
Item T30



INS = GIV

PAT = GIV

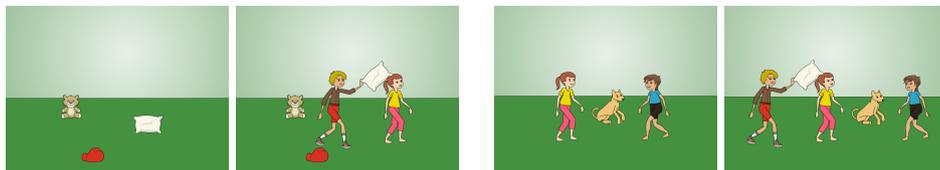
Item T31



INS = GIV

PAT = GIV

Item T32



INS = GIV

PAT = GIV

Appendix D

Material topic acceptability judgment task

Turkish

V-final experiment

Simple topic

Item	Condition	Question	Answers
T01	s/sbj	Mutfakta kadın ve kız.	SOV: Kız elmayı yiyor.
	s/obj	Masanın üstünde elma ve muz.	OSV: Elmayı kız yiyor.
T02	s/sbj	Odadaki anne ve kız.	SOV: Anne çantayı taşıyor.
	s/obj	Yerde çanta ve kitap.	OSV: Çantayı Anne taşıyor.

T03	s/sbj	Odada adam ve erkek.	SOV:	Erkek kitabı okuyor.
T04	s/obj	Masanın üstünde kitap ve gazete.	OSV:	Kitabı erkek okuyor.
T05	s/sbj	Odada kız ve kadın.	SOV:	Kadın gülü kaldırıyor.
T06	s/obj	Yerde gül ve kalem.	OSV:	Gülü kadın kaldırıyor.
T07	s/sbj	Odada baba ve oğul.	SOV:	Oğul vazoyu kırılıyor.
T08	s/obj	Masanın üstünde şişe ve vazoz.	OSV:	Vazoyu oğul kırılıyor.
T09	s/sbj	Çimlerin üzerinde kız ve erkek.	SOV:	Erkek taşı vuruyor.
T10	s/obj	Çimlerin üzerinde top ve taş.	OSV:	Taşı erkek vuruyor.
T11	s/sbj	Mutfakta dede ve torun.	SOV:	Dede ekmeği kesiyor.
T12	s/obj	Masanın üstünde ekme ve peynir.	OSV:	Ekmeği dede kesiyor.
T13	s/sbj	Odada kadın ve kız.	SOV:	Kadın elbiseyi asıyor.
T14	s/obj	Yatakta elbise ve etek.	OSV:	Elbiseyi kadın asıyor.
T15	s/sbj	Mutfakta adam ve erkek.	SOV:	Erkek portakalı alıyor.
T16	s/obj	Masanın üstünde portakal ve armut.	OSV:	Portakalı erkek alıyor.
T17	s/sbj	Odada erkek ve kız.	SOV:	Erkek sandalyeyi itiyor.
T18	s/obj	Odada sandalye ve masa.	OSV:	Sandalyeyi erkek itiyor.
T19	s/sbj	Odada adam ve kız.	SOV:	Adam parayı buluyor.
T20	s/obj	Kanepede kalem ve para.	OSV:	Parayı adam buluyor.
T21	s/sbj	Odada anne ve kız.	SOV:	Kız pastayı tadıyor.
T22	s/obj	Masanın üstünde pasta ve ekme.	OSV:	Pastayı kız tadıyor.

T13	s/sbj	Odada kadın ve kız.	SOV:	Kız mektubu yakıyor.
	s/obj	Masanın üstünde mektup ve kartpostal.	OSV:	Mektubu kız yakıyor.
T14	s/sbj	Odada kadın ve adam.	SOV:	Adam mumu yakıyor.
	s/obj	Masanın üstünde mum ve şarap.	OSV:	Mumu adam yakıyor.
T15	s/sbj	Odada kız ve erkek.	SOV:	Erkek ipi çekiyor.
	s/obj	Odada ip ve kova.	OSV:	İpi erkek çekiyor.
T16	s/sbj	Mutfakta kadın ve kız.	SOV:	Kız portokalı sıkıyor.
	s/obj	Masanın üstünde karpuz ve portokal.	OSV:	Portokalı kız sıkıyor.

Corrective topic

Item	Condition	Question	Answers
T01	c/sbj	Büyükanne kırmızı kitabı okuyor. Ve dede?	SOV: Dede mavi kitabı okuyor.
	c/obj	Büyükanne kırmızı kitabı okuyor. Ve mavi kitabı?	OSV: Mavi kitabı dede okuyor.
T02	c/sbj	Ane yeşil elbiseyi alıyor. Ve kız?	SOV: Kız kırmızı elbiseyi alıyor.
	c/obj	Ane yeşil elbiseyi alıyor. Ve kırmızı elbiseyi?	OSV: Kırmızı elbiseyi kız alıyor.
T03	c/sbj	Kız kırmızı çiçeği yapıyor. Ve erkek?	SOV: Erkek sarı çiçeği yapıyor.
	c/obj	Kız kırmızı çiçeği yapıyor. Ve sarı çiçeği?	OSV: Sarı çiçeği erkek yapıyor.
T04	c/sbj	Erkek kırmızı elmayı alıyor. Ve kız?	SOV: Kız yeşil elmayı alıyor.
	c/obj	Erkek kırmızı elmayı alıyor. Ve yeşil elmayı?	OSV: Yeşil elmayı kız alıyor.
T05	c/sbj	Kadın kara çantayı taşıyor. Ve kız?	SOV: Kız beyaz çantayı taşıyor.
	c/obj	Kadın kara çantayı taşıyor. Ve beyaz çantayı?	OSV: Beyaz çantayı kız taşıyor.
T06	c/sbj	Kız mavi topu vuruyor. Ve erkek?	SOV: Erkek sarı topu vuruyor.
	c/obj	Kız mavi topu vuruyor. Ve sarı topu?	OSV: Sarı topu erkek vuruyor.
T07	c/sbj	Kız küçük taşı atıyor. Ve erkek?	SOV: Erkek büyük taşı atıyor.
	c/obj	Kız küçük taşı atıyor. Ve büyük taşı?	OSV: Büyük taşı erkek atıyor.
T08	c/sbj	Adam sıcak çorbayı yiyor. Ve kadın?	SOV: Kadın soğuk çorbayı yiyor.
	c/obj	Adam sıcak çorbayı yiyor. Ve soğuk çorbayı?	OSV: Soğuk çorbayı kadın yiyor.
T09	c/sbj	Kadın eski arabayı yıkıyor. Ve adam?	SOV: Adam yeni arabayı yıkıyor.

T10	c/obj c/sbj c/obj c/sbj c/obj c/sbj c/obj c/sbj c/obj c/sbj c/obj c/sbj c/obj c/sbj c/obj c/sbj c/obj c/sbj	Kadın eski arabayı yıkıyor. Ve yeni arabayı? Erkek hafif sepeti tutuyor. Ve adam? Erkek hafif sepeti tutuyor. Ve ağır sepeti? Erkek kısa pantolonu giyiyor. Ve kız? Erkek kısa pantolonu giyiyor. Ve uzun pantolonu? Erkek iyi filmi izliyor. Ve kız? Erkek iyi filmi izliyor. Ve kötü filmi? Anne kara kalemi arıyor. Ve kız? Anne kara kalemi arıyor. Ve mavi kalemi? Kadın uzun eteki dikeyiyor. Ve kız? Kadın uzun eteki dikeyiyor. Ve kısa eteki? Oğlan mavi bisikleti satıyor. Ve kız? Oğlan mavi bisikleti satıyor. Ve kırmızı bisikleti? Kadın beyaz şapkayı giyiyor. Ve adam? Kadın beyaz şapkayı giyiyor. Ve siyah şapkayı?	OSV: SOV: OSV: SOV: OSV: SOV: OSV: SOV: OSV: SOV: OSV: SOV: OSV: SOV: OSV: SOV: OSV: SOV:	Yeni arabayı adam yıkıyor. Adam ağır sepeti tutuyor. Ağır sepeti adam tutuyor. Kız uzun pantolonu giyiyor. Uzun pantolonu kız giyiyor. Kız kötü filmi izliyor. Kötü filmi kız izliyor. Kız mavi kalemi arıyor. Mavi kalemi kız arıyor. Kız kısa eteki dikeyiyor. Kız kısa eteki dikeyiyor. Kız kırmızı bisikleti satıyor. Kırmızı bisikleti kız satıyor. Adam siyah şapkayı giyiyor. Siyah şapkayı adam giyiyor.
T11				
T12				
T13				
T14				
T15				
T16				

V-medial experiment

Simple topic

Item	Condition	Question	Answers
T01	s/sbj	Mutfakta kadın ve kız.	SVO: Kız yiyor elmayı.
	s/obj	Masanın üstünde elma ve muz.	OVS: Elmayı yiyor kız.
T02	s/sbj	Odada anne ve kız.	SVO: Anne taşıyor çantayı.
	s/obj	Yerde çanta ve kitap.	OVS: Çantayı taşıyor Anne.
T03	s/sbj	Odada adam ve erkek.	SVO: Erkek okuyor kitabı.
	s/obj	Masanın üstünde kitap ve gazete.	OVS: Kitabı okuyor erkek.
T04	s/sbj	Odada kız ve kadın.	SVO: Kadın kaldırıyor gülü.
	s/obj	Yerde gül ve kalem.	OVS: Gülü kaldırıyor kadın.
T05	s/sbj	Odada baba ve oğul.	SVS: Oğul kırılıyor vazoyu.
	s/obj	Masanın üstünde şişe ve vazo.	OVS: Vazoyu kırılıyor oğul.
T06	s/sbj	Çimlerin üzerinde kız ve erkek.	SVO: Erkek vuruyor taşı.
	s/obj	Çimlerin üzerinde top ve taş.	OVS: Taşı vuruyor erkek.
T07	s/sbj	Mutfakta dede ve torun.	SVO: Dede kesiyor ekmeği.
	s/obj	Masanın üstünde ekmek ve peynir.	OVS: Ekmeği kesiyor dede.
T08	s/sbj	Odada kadın ve kız.	SVO: Kadın asıyor elbiseyi.

Corrective topic

Item	Condition	Question	Answers
T01	c/sbj	Büyükanne okuyor kırmızı kitabı. Ve dede?	SOV: Dede okuyor mavi kitabı.
	c/obj	Büyükanne okuyor kırmızı kitabı. Ve mavi kitabı?	OSV: Mavi kitabı okuyor dede.
T02	c/sbj	Ane yeşil alıyor elbiseyi. Ve kız?	SOV: Kız alıyor kırmızı elbiseyi.
	c/obj	Ane alıyor yeşil elbiseyi. Ve kırmızı elbiseyi?	OSV: Kırmızı elbiseyi alıyor kız.
T03	c/sbj	Kız yapıyor kırmızı çiçeği. Ve erkek?	SOV: Erkek yapıyor sarı çiçeği.
	c/obj	Kız yapıyor kırmızı çiçeği. Ve sarı çiçeği?	OSV: Sarı çiçeği yapıyor erkek.
T04	c/sbj	Erkek alıyor kırmızı elmayı. Ve kız?	SOV: Kız alıyor yeşil elmayı.
	c/obj	Erkek alıyor kırmızı elmayı. Ve yeşil elmayı?	OSV: Yeşil elmayı alıyor kız.
T05	c/sbj	Kadın taşıyor kara çantayı. Ve kız?	SOV: Kız taşıyor beyaz çantayı .
	c/obj	Kadın taşıyor kara çantayı. Ve beyaz çantayı?	OSV: Beyaz çantayı taşıyor kız.
T06	c/sbj	Kız vuruyor mavi topu. Ve erkek?	SOV: Erkek vuruyor sarı topu.
	c/obj	Kız vuruyor mavi topu. Ve sarı topu?	OSV: Sarı topu vuruyor erkek.
T07	c/sbj	Kız atıyor küçük taşı. Ve erkek?	SOV: Erkek atıyor büyük taşı.
	c/obj	Kız atıyor küçük taşı. Ve büyük taşı?	OSV: Büyük taşı atıyor erkek.
T08	c/sbj	Adam yiyor sıcak çorbayı. Ve kadın?	SOV: Kadın yiyor soğuk çorbayı.
	c/obj	Adam yiyor sıcak çorbayı. Ve soğuk çorbayı?	OSV: Soğuk çorbayı yiyor kadın.
T09	c/sbj	Kadın yıkıyor eski arabayı. Ve adam?	SOV: Adam yıkıyor yeni arabayı.

Russian

V-final experiment

Simple topic

Item	Condition	Question	Answers
T01	s/sbj	Na kuchne zhenshchina i devochka.	SOV: Devochka yabloko yest'. OSV: Yabloko devochka yest'.
T02	s/sbj	Na stole yabloko i banan.	SOV: Mat' sumku neset. OSV: Sumku mat' neset.
T03	s/sbj	V komnate muzhchina i mal'chik.	SOV: Mal'chik knigu chitayet. OSV: Knigu mal'chik chitayet.
T04	s/sbj	Na stolike devushka i zhenshchina.	SOV: Zhenshchina rozu nabirayet. OSV: Rosu zhenshchina nabirayet.
T05	s/sbj	Na polu roza i karandash.	SOV: Syn vazy razbivayet. OSV: Vazy syn razbivayet.
T06	s/sbj	Odada baba ve ogul.	SOV: Mal'chik kamen' pinayet. OSV: Kamen' mal'chik pinayet.
T07	s/sbj	Na lugu myach i kamen'.	SOV: Dedushka khleb rezhet. OSV: Khleb dedushka rezhet.

T08	s/sbj	V komnate zhenshchina i devochka.	SOV:	Zhenshchina plat'ye veshayet.
	s/obj	Na krovati plat'ye i yubka.	OSV:	Plat'ye zhenshchina veshayet.
T09	s/sbj	Na kuchne muzhchina i mal'chik.	SOV:	Mal'chik grushu berut.
	s/obj	Na stole apel'sin i grusha.	OSV:	Grushu mal'chik berut.
T10	s/sbj	V komnate mal'chik i devochka.	SOV:	Mal'chik stol tolkayet.
	s/obj	V komnate stol i stol.	OSV:	Stol mal'chik tolkayet.
T11	s/sbj	V komnate muzhchina i devochka.	SOV:	Muzhchina monetu nakhodit.
	s/obj	Na divane ruchka i moneta.	OSV:	Monetu muzhchina nakhodit.
T12	s/sbj	V komnate mat' i doch'.	SOV:	Doch' tort probuyet.
	s/obj	Na stole tort i khleb.	OSV:	Tort doch' probuyet.
T13	s/sbj	V komnate zhenshchina i devochka.	SOV:	Devochka pis'mo szhigayet.
	s/obj	Na stole pis'mo i otkrytki.	OSV:	Pis'mo devochka szhigayet.
T14	s/sbj	V komnate zhenshchina i muzhchina.	SOV:	Muzhchina svechu zazhigayet.
	s/obj	Na stole svecha i vino.	OSV:	Svechu muzhchina zazhigayet.
T15	s/sbj	V komnate devochka i mal'chik.	SOV:	Mal'chik verevku tyanet.
	s/obj	V komnate verevka i vedro.	OSV:	Verevku mal'chik tyanet.
T16	s/sbj	Na kuchne zhenshchina i devochka.	SOV:	Devochka apel'sin szhimayet.
	s/obj	Na stole arbuz i oranzhevyi.	OSV:	Apel'sin devochka szhimayet.

Corrective topic

Item	Condition	Question	Answers
T01	c/sbj	Babushka krasnuyu knigu chitayet. A dedushka?	SOV: Dedushka sinyuyu knigu chitayet.
	c/obj	Babushka krasnuyu knigu chitayet. A sinyaya kniga?	OSV: Sinyuyu knigu dedushka chitayet.
T02	c/sbj	Mat' zelenoye plat'ye pokupayet. A doch'?	SOV: Doch' krasnoye plat'ye pokupayet.
	c/obj	Mat' zelenoye plat'ye pokupayet. A krasnoye plat'ye?	OSV: Krasnoye plat'ye doch' pokupayet.
T03	c/sbj	Devushka krasnyy tsvetok risuyet. A mal'chik?	SOV: Mal'chik zheltyy tsvetok risuyet.
	c/obj	Devushka krasnyy tsvetok risuyet. A zheltyy tsvetok?	OSV: Zheltyy mal'chik tsvetok risuyet.
T04	c/sbj	Mal'chik krasnoye yabloko beret. A devochka?	SOV: Devochka zelenoye yabloko beret.
	c/obj	Mal'chik krasnoye yabloko beret. A zelenoye yabloko?	OSV: Zelenoye yabloko devochka beret.
T05	c/sbj	Zhenshchina chernuyu sumku neset. A devushka?	SOV: Devushka beluyu sumku neset.
	c/obj	Zhenshchina chernuyu sumku neset. A belaya sumka?	OSV: Beluyu sumku devushka neset.
T06	c/sbj	Devochka siniy myach pinayet. A mal'chik?	SOV: Mal'chik zheltyy myach pinayet.
	c/obj	Devochka siniy myach pinayet. A zheltyy myach?	OSV: Zheltyy myach mal'chik pinayet.
T07	c/sbj	Devochka malen'kiy kamen' brosayet. A mal'chik?	SOV: Mal'chik bol'shoy myach brosayet.
	c/obj	Devochka malen'kiy kamen' brosayet. A bol'shoy kamen'?	OSV: Bol'shoy myach mal'chik brosayet.
T08	c/sbj	Muzhchina goryachiy sup yest. A zhenshchina?	SOV: Muzhchina kholodnyy sup yest.
	c/obj	Muzhchina goryachiy sup yest. A kholodnyy sup?	OSV: Kholodnyy sup muzhchina yest.
T09	c/sbj	Zhenshchina staruyu mashinu moyet. A muzhchina?	SOV: Zhenshchina novuyu mashinu moyet.

c/obj	Zhenshchina staruyu mashinu moyet. A novaya mashina?	OSV:	Novuyu mashinu zhenshchina moyet.
T10	Mal' chik legkiy korziny derzhit. A muzhchina?	SOV:	Mal' chik tyazheluyu korziny derzhit.
c/obj	Mal' chik legkiy korziny derzhit. A tyazhelaya korzina?	OSV:	Tyazheluyu korziny mal' chik derzhit.
T11	Mal' chik nizkiy bryuki nosit. A devochka?	SOV:	Mal' chik dlinnyye bryuki nosit.
c/obj	Mal' chik nizkiy bryuki nosit. A dlinnyye bryuki?	OSV:	Dlinnyye bryuki mal' chik nosit.
T12	Paren' khorosheye fil'm smotrit. A devushka?	SOV:	Paren' plokhoy fil'm smotrit.
c/obj	Paren' khorosheye fil'm smotrit. A plokhoy fil'm?	OSV:	Plokhoy fil'm paren' smotrit.
T13	Mat' chernuyu ruchku ishchet. A doch'?	SOV:	Mat' sinyuyu ruchku ishchet.
c/obj	Mat' chernuyu ruchku ishchet. A sinyaya ruchka?	OSV:	Sinyuyu ruchku mat' ishchet.
T14	Zhenshchina dlinnuyu yubku sh'yet. A devochka?	SOV:	Devochka korotkuyu yubku sh'yet.
c/obj	Zhenshchina dlinnuyu yubku sh'yet. A korotkaya yubka?	OSV:	Korotkuyu yubku devochka sh'yet.
T15	Mal' chik siniy velosiped prodayet. A devochka?	SOV:	Mal' chik krasnyy velosiped prodayet.
c/obj	Mal' chik siniy velosiped prodayet. A krasnyy velosiped?	OSV:	Krasnyy velosiped mal' chik prodayet.
T16	Zhenshchina beluyu shlyapu nadevayet. A muzhchina?	SOV:	Zhenshchina chernuyu shlyapu nadevayet.
c/obj	Zhenshchina beluyu shlyapu nadevayet. A chernaya shlyapa?	OSV:	Chernuyu shlyapu zhenshchina nadevayet.

V-medial experiment

Simple topic

Item	Condition	Question	Answers
T01	s/sbj	Na kukhne zhenshchina i devochka.	SVO: Devochka yest' yabloko.
	s/obj	Na stole yabloko i banan.	OVS: Yabloko yest' devochka.
T02	s/sbj	V komnate mat' i doch'.	SVO: Mat' neset sumku.
	s/obj	Na polu sumka i kniga.	OVS: Sumku neset mat'.
T03	s/sbj	V komnate muzhchina i mal' chik.	SVO: Mal' chik chitayet knigu.
	s/obj	Na stolike kniga i gazeta.	OVS: Knigu chitayet mal' chik.
T04	s/sbj	V komnate devushka i zhenshchina.	SVO: Zhenshchina nabirayet rozu.
	s/obj	Na polu roza i karandash.	OVS: Rosu nabirayet zhenshchina.
T05	s/sbj	Odada baba ve oğul.	SVO: Syn razbivayet vazu.
	s/obj	Na komode butylka i vaza.	OVS: Vazu razbivayet syn.
T06	s/sbj	V komnate otets i syn.	SVO: Mal' chik pinayet kamen'.
	s/obj	Na lugu myach i kamen'.	OVS: Kamen' pinayet mal' chik.
T07	s/sbj	Na lugu devochka i mal' chik.	SVO: Dedushka rezhet khleb.
	s/obj	Na stole xleb i syr.	OVS: Khleb rezhet dedushka.
T08	s/sbj	V komnate zhenshchina i devochka.	SVO: Zhenshchina veshayet plat'ye.

T09	s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj s/sbj s/obj	Na krovati plat'ye i yubka. Na kuchne muzhchina i mal'chik. Na stole apel'sin i grusha. V komnate mal'chik i devochka. V komnate stol i stol. V komnate muzhchina i devochka. Na divane ruchka i moneta. V komnate mat' i doch' . Na stole tort i khleb. V komnate zhenshchina i devochka. Na stole pis'mo i otkrytki. V komnate zhenshchina i muzhchina. Na stole svecha i vino. V komnate devochka i mal'chik. V komnate verevka i vedro. Na kuchne zhenshchina i devochka. Na stole arbuz i oranzhevyi.	OVS: SVO: OVS: SVO: OVS: SVO: OVS: SVO: OVS: SVO: OVS: SVO: OVS: SVO: OVS: SVO: OVS: SVO: OVS: SVO: OVS:	Plat'ye veshayet zhenshchina. Mal'chik berut grushu. Grushu berut mal'chik. Mal'chik tolkayet stol. Stol tolkayet mal'chik. Muzhchina nakhodit monetu. Monetu nakhodit muzhchina. Doch' probuyet tort. Tort probuyet doch' . Devochka szhigayet pis'mo. Pis'mo szhigayet devochka. Muzhchina zazhigayet svechu. Svechu zazhigayet muzhchina. Mal'chik tyanet verevku. Verevku tyanet mal'chik. Devochka szhimayet apel'sin. Apel'sin szhimayet devochka.
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Corrective topic

Item	Condition	Question	Answers
T01	c/sbj	Babushka chitayet krasnyyu knigu. A dedushka?	SOV: Dedushka chitayet sinyuyu knigu.
	c/obj	Babushka chitayet krasnyyu knigu. A sinyaya kniga?	OSV: Sinyuyu knigu chitayet dedushka.
T02	c/sbj	Mat' pokupayet zelenoye plat'ye. A doch'?	SOV: Doch' pokupayet krasnoye plat'ye.
	c/obj	Mat' pokupayet zelenoye plat'ye. A krasnoye plat'ye?	OSV: Krasnoye plat'ye pokupayet doch'.
T03	c/sbj	Devushka risuyet krasnyy tsvetok. A mal'chik?	SOV: Mal'chik risuyet zheltyy tsvetok.
	c/obj	Devushka risuyet krasnyy tsvetok. A zheltyy tsvetok?	OSV: Zheltyy mal'chik risuyet tsvetok.
T04	c/sbj	Mal'chik beret krasnoye yabloko. A devochka?	SOV: Devochka beret zelenoye yabloko.
	c/obj	Mal'chik beret krasnoye yabloko. A zelenoye yabloko?	OSV: Zelenoye yabloko beret devochka.
T05	c/sbj	Zhenshchina neset chernuyu sumku. A devushka?	SOV: Devushka neset beluyu sumku.
	c/obj	Zhenshchina neset chernuyu sumku. A belaya sumka?	OSV: Beluyu sumku neset devushka.
T06	c/sbj	Devochka pinayet siniy myach. A mal'chik?	SOV: Mal'chik pinayet zheltyy myach.
	c/obj	Devochka pinayet siniy myach. A zheltyy myach?	OSV: Zheltyy myach pinayet mal'chik.
T07	c/sbj	Devochka brosayet malen'kiy kamen'. A mal'chik?	SOV: Mal'chik brosayet bol'shoy myach.
	c/obj	Devochka brosayet malen'kiy kamen'. A bol'shoy kamen'?	OSV: Bol'shoy myach brosayet mal'chik.
T08	c/sbj	Muzhchina yest goryachiy sup. A zhenshchina?	SOV: Muzhchina yest kholodnyy sup.
	c/obj	Muzhchina yest goryachiy sup. A kholodnyy sup?	OSV: Kholodnyy sup yest muzhchina.
T09	c/sbj	Zhenshchina moyet staruyu mashinu. A muzhchina?	SOV: Zhenshchina moyet novuyu mashinu.

T10	c/obj	Zhenshchina moyet staruyu mashinu. A novaya mashina?	OSV:	Novuyu mashinu moyet zhenshchina.
	c/sbj	Mal'chik derzhit legkiy korziny. A muzhchina?	SOV:	Mal'chik derzhit tyazheluyu korziny.
	c/obj	Mal'chik derzhit legkiy korziny. A tyazhelaya korzina?	OSV:	Tyazheluyu korziny derzhit mal'chik.
T11	c/sbj	Mal'chik nosit nizkiy bryuki. A devochka?	SOV:	Mal'chik nosit dlinnyye bryuki.
	c/obj	Mal'chik nosit nizkiy bryuki. A dlinnyye bryuki?	OSV:	Dlinnyye bryuki nosit mal'chik.
T12	c/sbj	Paren' smotrit khorosheye fil'm. A devushka?	SOV:	Paren' smotrit plokhoy fil'm.
	c/obj	Paren' smotrit khorosheye fil'm. A plokhoy fil'm?	OSV:	Plokhoy fil'm smotrit paren'.
T13	c/sbj	Mat' ishchet chernuyu ruchku. A doch'?	SOV:	Mat' sinyuyu ishchet ruchku.
	c/obj	Mat' ishchet chernuyu ruchku. A sinyaya ruchka?	OSV:	Sinyuyu ruchku ishchet mat'.
T14	c/sbj	Zhenshchina sh'yet dlinnuyu yubku. A devochka?	SOV:	Devochka sh'yet korotkuyu yubku.
	c/obj	Zhenshchina sh'yet dlinnuyu yubku. A korotkaya yubka?	OSV:	Korotkuyu yubku sh'yet devochka.
T15	c/sbj	Mal'chik prodayet siniy velosiped. A devochka?	SOV:	Mal'chik krasnyy prodayet velosiped.
	c/obj	Mal'chik prodayet siniy velosiped. A krasnyy velosiped?	OSV:	Krasnyy velosiped prodayet mal'chik.
T16	c/sbj	Zhenshchina nadevayet beluyu shlyapu. A muzhchina?	SOV:	Zhenshchina nadevayet chernuyu shlyapu.
	c/obj	Zhenshchina nadevayet beluyu shlyapu. A chernaya shlyapa?	OSV:	Chernuyu shlyapu nadevayet zhenshchina.

Urum

V-final experiment

Simple topic

Item	Condition	Question	Answers
T01	s/sbj	Kukhnyada ğarinän ğız.	SOV: Ğız almaı ıer.
	s/obj	Stolun üstündä almaınan banan.	OSV: Almaı ğız ıer.
T02	s/sbj	Gözdä anainan ğız.	SOV: Ana sumkai ğätıer.
	s/obj	Polun üstündä sumkainan kniga.	OSV: Sumkai ana ğätıer.
T03	s/sbj	Gözdä ärgishinän oğlan.	SOV: Oğlan knigai ohıer.
	s/obj	Stolun üstündä knigainan gazet.	OSV: Knigai oğlan ohıer.
T04	s/sbj	Gözdä ğızınan ğari.	SOV: Ğız rozai ğaldıer.
	s/obj	Polun üstündä rozainan ruchka.	OSV: Rozai ğız ğaldıer.
T05	s/sbj	Gözdä babainan oğl.	SOV: Oğl vazai ğıerıer.
	s/obj	Stolun üstündä budırgainan vaza.	OSV: Vazai oğlı ğıerıer.
T06	s/sbj	Otun üstündä ğızınan oğlan.	SOV: Oğlan dasha vurıer.
	s/obj	Otun üstündä topunan dash.	OSV: Dasha oğlan vurıer.
T07	s/sbj	Kukhnyada dädäınän torun.	SOV: Dädä äkmägi käser.
	s/obj	Stolun üstündä äkmäınän .	OSV: Äkmägi dädä käser.

T08	s/sbj	Gözdä ğarinän ğız.	SOV:	Ğari gabai asier.
T09	s/obj	Kravatun üstündä gabainan yubka.	OSV:	Gabai ğari asier.
T10	s/sbj	Kukhnyada ärgishinän oğlan.	SOV:	Oğlan armudi alier.
T11	s/obj	Kravatun üstündä gabainan yubka.	OSV:	Armudi oğlan alier.
T12	s/sbj	Gözdä oğlannan ğız.	SOV:	Oğlan skameikai itälier.
T13	s/obj	Gözdä skameikainan stol.	OSV:	Skameikai oğlan itälier.
T14	s/sbj	Gözdä ärgishinän ğız.	SOV:	Ärgishi manetai bulier.
T15	s/obj	Divanun üstündä ruchkainan maneta.	OSV:	Manetai ärgishi bulier.
T16	s/sbj	Gözdä ananan ğızı.	SOV:	Ğızı torti problier.
T17	s/obj	Stolun üstündä tortinan äkmäk.	OSV:	Torti ğızı problier.
T18	s/sbj	Gözdä ğarinän ğız.	SOV:	Ğız pismoı yahier.
T19	s/obj	Stolun üstündä pisonan atkritka.	OSV:	Pismoı ğız yahier.
T20	s/sbj	Gözdä ğarinän ärgishi.	SOV:	Ärgishi mumi yahier.
T21	s/obj	Stolun üstündä mumunan chahrı.	OSV:	Mumi ärgishi yahier.
T22	s/sbj	Gözdä ğızınan oğlan.	SOV:	Oğlan ipi chäkier.
T23	s/obj	Gözdä ipinän vedro.	OSV:	Ipi oğlan chäkier.
T24	s/sbj	Kukhnyada ğarinän ğız.	SOV:	Ğız apelsini sıhier.
T25	s/obj	Stolun üstündä harpuzunan apelsin.	OSV:	Apelsini ğız sıhier.

Corrective topic

Item	Condition	Question	Answers
T01	c/sbj	Äbä ğirmızı knigai ohier. Ya dädä?	SOV: Dädä gög knigai ohier.
	c/obj	Äbä ğirmızı knigai ohier. Ya gög kniga?	OSV: Gög knigai dädä ohier.
T02	c/sbj	Anna eshil gabai alier. Ya ğız?	SOV: Ğız ğirmızı gabai alier.
	c/obj	Anna eshil gabai alier. Ya ğirmızı gaba?	OSV: Ğirmızı gabai ğız alier.
T03	c/sbj	Ğız ğirmızı chichägi boyadier. Ya oğlan?	SOV: Oğlan ğirmızı chichägi boyadier.
	c/obj	Ğız ğirmızı chichägi boyadier. Ya sari chichäk?	OSV: Ğirmızı chichägi oğlan boyadier.
T04	c/sbj	Oğlan ğirmızı almai alier. Ya ğız?	SOV: Ğız eshil almai alier.
	c/obj	Oğlan ğirmızı almai alier. Ya eshil alma?	OSV: Eshil almai ğız alier.
T05	c/sbj	Ğari ğara sumkai gäturer. Ya ğız?	SOV: Ğız bayaz sumkai gäturer.
	c/obj	Ğari ğara sumkai gäturer. Ya bayaz sumka?	OSV: Bayaz sumkai ğız gäturer.
T06	c/sbj	Ğız gög topi vurier. Ya oğlan?	SOV: Oğlan sari topi vurier.
	c/obj	Ğız gög topi vurier. Ya sari top?	OSV: Sari topi oğlan vurier.
T07	c/sbj	Ğız chüchük dashi atier. Ya oğlan?	SOV: Oğlan böyük dashi atier.
	c/obj	Ğız chüchük dashi atier. Ya böyük dash?	OSV: Böyük dashi oğlan atier.
T08	c/sbj	Ärgishi sijah ashi ier. Ya ğari?	SOV: Ğari söyuh ash ier.
	c/obj	Ärgishi sijah ashi ier. Ya söyuh ash?	OSV: Söyuh ash ğari ier.
T09	c/sbj	Ğari äksi mashinai yahier. Ya ärgishi?	SOV: Ärgishi täzä mashinai yahier.

T10	c/obj	Čari äksi mashinai yahier. Ya täzä mashina?	OSV:	Täzä mashinai ärgishi yahier.
	c/sbj	Oġlan enjiläk säpäti dutier. Ya ärgishi?	SOV:	Ärgishi ağır säpäti dutier.
	c/obj	Oġlan enjiläk säpäti dutier. Ya ağır säpäť?	OSV:	Aġır säpäť ärgishi dutier.
T11	c/sbj	Oġlan ġıssa sharvali geinier. Ya ġız?	SOV:	Ģız uzun sharvali geinier.
	c/obj	Oġlan ġıssa sharvali geinier. Ya uzun sharval?	OSV:	Uzun sharvali ġız geinier.
T12	c/sbj	Oġlan ey kinoi bahier. Ya ġız?	SOV:	Ģız köti kinoi bahier.
	c/obj	Oġlan ey kinoi bahier. Ya köti kino?	OSV:	Köti kinoi ġız bahier.
T13	c/sbj	Ana ġara ruchkai arier. Ya ġızı?	SOV:	Ģızı gög ruchkai arier.
	c/obj	Ana ġara ruchkai arier. Ya gög ruchka?	OSV:	Gög ruchkai ġızı arier.
T14	c/sbj	Čari uzun yubkai tikier. Ya ġız?	SOV:	Ģız ġıssa yubkai tikier.
	c/obj	Čari uzun yubkai tikier. Ya ġıssa yubka?	OSV:	Ģıssa yubkai ġız tikier.
T15	c/sbj	Oġlan gög velasipedi satier. Ya ġız?	SOV:	Ģız ġırmızı velasipedi satier.
	c/obj	Oġlan gög velasipedi satier. Ya ġırmızı velasiped?	OSV:	Ģırmızı velasipedi ġız satier.
T16	c/sbj	Čari bayaz shapkai geinier. Ya ärgishi?	SOV:	Ärgishi ġara shapkai geinier.
	c/obj	Čari bayaz shapkai geinier. Ya ġara shapka?	OSV:	Ģara shapkai ärgishi geinier.

V-medial experiment

Simple topic

Item	Condition	Question	Answers
T01	s/sbj	Kukhnyada ġarinän ġız.	SOV: Ģız ier almai.
	s/obj	Stolun üstündä almaian banan.	OSV: Almai ier ġız.
T02	s/sbj	Gözdä anainan ġız.	SOV: Ana ġäturer sumkai.
	s/obj	Polun üstündä sumkainan kniga.	OSV: Sumkai ġäturer ana.
T03	s/sbj	Gözdä ärgishinän oġlan.	SOV: Oġlan ohier knigai.
	s/obj	Stolun üstündä knigainan gazet.	OSV: Knigai ohier oġlan.
T04	s/sbj	Gözdä ġızınan ġari.	SOV: Ģız ġaldirier rozai.
	s/obj	Polun üstündä rozainan ruchka.	OSV: Rozai ġaldirier ġız.
T05	s/sbj	Gözdä babainan oġl.	SOV: Oġl ġirier vazai.
	s/obj	Stolun üstündä budurgainan vaza.	OSV: Vazai ġirier oġli.
T06	s/sbj	Otun üstündä ġızınan oġlan.	SOV: Oġlan vurier dasha.
	s/obj	Otun üstündä topunan dash.	OSV: Dasha vurier oġlan.
T07	s/sbj	Kukhnyada dädäinän torun.	SOV: Dädä käser äkmägi.
	s/obj	Stolun üstündä äkmäginän .	OSV: Äkmägi käser dädä.
T08	s/sbj	Gözdä ġarinän ġız.	SOV: Ģari asier gabai.

Corrective topic

Item	Condition	Question	Answers
T01	c/sbj	Äbä ohier ğirmızı knigai. Ya dädä?	SOV: Dädä ohier gög knigai.
	c/obj	Äbä ohier ğirmızı knigai. Ya gög kniga?	OSV: Gög knigai ohier dädä.
T02	c/sbj	Anna alier eshil gabai. Ya ğız?	SOV: Ğız alier ğirmızı gabai.
	c/obj	Anna alier eshil gabai. Ya ğirmızı gaba?	OSV: Ğirmızı gabai alier ğız.
T03	c/sbj	Ğız boyadier ğirmızı chichägi. Ya oğlan?	SOV: Oğlan boyadier ğirmızı chichägi.
	c/obj	Ğız boyadier ğirmızı chichägi. Ya sari chichäk?	OSV: Ğirmızı boyadier chichägi oğlan.
T04	c/sbj	Oğlan alier ğirmızı almai. Ya ğız?	SOV: Ğız alier eshil almai.
	c/obj	Oğlan alier ğirmızı almai. Ya eshil alma?	OSV: Eshil almai alier ğız.
T05	c/sbj	Ğari gäturer ğara sumkai. Ya ğız?	SOV: Ğız gäturer bayaz sumkai.
	c/obj	Ğari gäturer ğara sumkai. Ya bayaz sumka?	OSV: Bayaz sumkai gäturer ğız.
T06	c/sbj	Ğız vurier gög topi. Ya oğlan?	SOV: Oğlan vurier sari topi.
	c/obj	Ğız vurier gög topi. Ya sari top?	OSV: Sari topi vurier oğlan.
T07	c/sbj	Ğız atier chüchtük dashi. Ya oğlan?	SOV: Oğlan atier böyük dashi.
	c/obj	Ğız atier chüchtük dashi. Ya böyük dash?	OSV: Böyük dashi atier oğlan.
T08	c/sbj	Ärgishi ier sjarah ashi. Ya ğari?	SOV: Ğari ier söyuh ash.
	c/obj	Ärgishi ier sjarah ashi. Ya söyuh ash?	OSV: Söyuh ash ier ğari.
T09	c/sbj	Ğari yahier äksi mashinai. Ya ärgishi?	SOV: Ärgishi yahier täzä mashinai.

	c/obj	Çari yahier äksi mashinai. Ya täzä mashina?	OSV:	Täzä mashinai yahier ärgishi.
T10	c/sbj	Oĝlan dutier enjiläk säpäti. Ya ärgishi?	SOV:	Ärgishi dutier ağır säpäti.
	c/obj	Oĝlan dutier enjiläk säpäti. Ya ağır säpäti?	OSV:	Ağır säpäti dutier ärgishi.
T11	c/sbj	Oĝlan geinier ğıssa sharvali. Ya ğız?	SOV:	Ğız geinier uzun sharvali.
	c/obj	Oĝlan geinier ğıssa sharvali. Ya uzun sharval?	OSV:	Uzun sharvali geinier ğız.
T12	c/sbj	Oĝlan bahier ey kinoi. Ya ğız?	SOV:	Ğız bahier köti kinoi.
	c/obj	Oĝlan bahier ey kinoi. Ya köti kino?	OSV:	Köti kinoi bahier ğız.
T13	c/sbj	Ana arier ğara ruchkai. Ya ğızı?	SOV:	Ğızı arier gög ruchkai.
	c/obj	Ana arier ğara ruchkai. Ya gög ruchka?	OSV:	Gög ruchkai arier ğızı.
T14	c/sbj	Çari tikier uzun yubkai. Ya ğız?	SOV:	Ğız tikier ğıssa yubkai.
	c/obj	Çari tikier uzun yubkai. Ya ğıssa yubka?	OSV:	Ğıssa yubkai tikier ğız.
T15	c/sbj	Oĝlan satier gög velasipedi. Ya ğız?	SOV:	Ğız satier ğırmızı velasipedi.
	c/obj	Oĝlan satier gög velasipedi. Ya ğırmızı velasiped?	OSV:	Ğırmızı velasipedi satier ğız.
T16	c/sbj	Çari geinier bayaz shapkai. Ya ärgishi?	SOV:	Ärgishi geinier ğara shapkai.
	c/obj	Çari geinier bayaz shapkai. Ya ğara shapka?	OSV:	Ğara shapkai geinier ärgishi.

Zusammenfassung

Die vorliegende Arbeit beschäftigt sich mit der empirischen Untersuchung der Interaktion von Syntax und Informationsstruktur im kaukasischen Urum (fortan als Urum bezeichnet). Das Urum ist eine anatolische Varietät des Türkischen, die von einer griechischen Volksgruppe in Niederkartlien im Kleinen Kaukasus in Georgien gesprochen wird. Die Vorfahren dieser Volksgruppe stammen ursprünglich aus verschiedenen Städten im Nordosten der Türkei (u.a. Kars, Erzurum und Bayburt) und sind seit Beginn des 19. Jahrhunderts in mehreren Migrationswellen in den Kaukasus übergesiedelt. Seither befinden sich die Urumsprecher in permanentem Kontakt mit den anderen Sprachen des Kaukasus, vor allem mit dem Russischen. Das Urum wird als sehr gefährdete Sprache eingestuft. Nach Angaben einer Volkszählung der Georgischen Sozialistischen Sowjetrepublik (SSR) betrug die Anzahl der in Tsalka lebenden Urum Griechen im Jahr 1979 etwa 30.811 Sprecher (Wheatley 2006). Seither ist ein starker Rückgang der Sprecherzahlen zu verzeichnen. Während im Jahr 1989 noch etwa 27.000 Sprecher gezählt werden konnten, beläuft sich die Anzahl der Urum Griechen im Jahr 2006 auf gerade einmal etwa 1500 Sprecher (Wheatley 2009). Dieser drastische Rückgang ist vor allem darauf zurückzuführen, dass viele Urum Griechen ihre traditionellen Dörfer verlassen haben und in städtischere Gebiete Georgiens (u.a. in die Hauptstadt Tiflis) umsiedelten oder in andere Länder (v.a. nach Griechenland) ausgewandert sind. Das Urum existiert ausschließlich in gesprochener Form und wird innerhalb der Familie durch die älteren Sprecher an die jüngere Generation weitergegeben. Eine soziolinguistische Befragung der Sprecher hat jedoch ergeben, dass vor allem Sprecher in den städtischen Gebieten Urum primär zur Kommunikation mit älteren Familienmitgliedern nutzen, während sie mit gleichaltrigen und jüngeren Sprechern, sowie mit Sprechern außerhalb der eigenen Familie eine andere Sprache (Russisch, Georgisch) bevorzugen. Diese Tatsache zeigt, dass die Weitergabe der Sprache von Generation zu Generation stetig abnimmt. Es ist somit auch ein besonderes kulturelles Anliegen diese Sprache zu dokumentieren.

Obwohl das Urum eine Turksprache ist und als solche viele Gemeinsamkeiten zum Standard Türkischen aufweist, sind sowohl im Lexikon als auch in der Syntax deutliche Einflüsse des Russischen erkennbar (Skopeteas 2011). Der Einfluss des Russischen spiegelt sich auch im Satzbau des Urums wieder. Denn während das Türkische eine kopffinale Sprache mit der Grundwortstellung Subjekt-Objekt-Verb (SOV) ist (Erguvanlı 1984, Kural 1992, Kornfilt 1997, Kılıçaslan 2004 u.v.m.), gilt das Russische in der Regel als kopffinitiale Sprache mit der Grundwortstellung Subjekt-Verb-Objekt (SVO) (Bailyn 1995, Junghanns and Zybatow 1997, Slioussar 2007 u.v.m.). Im Urum hingegen können beide Wortstellungsmuster in denselben Kontexten verwendet werden (Skopeteas 2014).

Die vorliegende Arbeit befasst sich mit der empirischen Untersuchung der Interaktion von Wortstellungsvariation und Informationsstruktur und untersucht inwiefern die Informationsstruktur des Urums durch den Sprachkontakt zum Russischen beeinflusst wird. Diese Forschungsfrage ist von besonderer Relevanz da sich die informationsstrukturellen Möglichkeiten von SOV- und SVO-Sprachen unterscheiden und der Wortstellungswandel im Urum von OV zu einer Sprache, in der sich das Verb frei in der Verbalphrase bewegen kann, die optimale Gelegenheit bietet die Dynamik dieser Entwicklung zu analysieren.

Kapitel 2 gibt zunächst eine Einführung in das Konzept der Informationsstruktur und präsentiert einen Überblick über verschiedene informationsstrukturelle Dimensionen und Kategorien. Im zweiten Teil des Kapitels werden die relevanten informationsstrukturellen Konzepte Fokus und Topik eingeführt. Dabei werden verschiedene Fokus- und Topiktypen unterschieden. Zudem wird ein Überblick über unterschiedliche Ausdrucksmöglichkeiten der Informationsstruktur in verschiedenen Sprachen der Welt gegeben.

Kapitel 3 enthält eine grammatische Beschreibung des Urums. Der erste Teil des Kapitels gibt einen Überblick über die historische Entwicklung der Sprache und die besondere Kontaktsituation, die durch die Übersiedlung in den Kaukasus entstanden ist. Anschließend werden einige grundlegende Informationen zum Lexikon, der Phonologie, der Morphologie sowie der Syntax des Urums gegeben und anhand von Korpusbeispielen (vgl. Moisiđi and Skopeteas 2014, Moisiđi et al. 2016) belegt. Ein besonderer Fokus liegt dabei auf den syntaktischen Eigenschaften des Urums, welche für die vorliegende Untersuchung von zentraler Bedeutung sind.

Kapitel 4 konzentriert sich auf die syntaktischen Möglichkeiten in den beiden Vergleichssprachen Türkisch und Russisch. Dabei beinhaltet das Kapitel

zunächst einen Überblick über die grundlegenden theoretischen Annahmen über kanonische und nicht-kanonische Wortstellungsmuster der jeweiligen Sprachen und diskutiert anschließend den Einfluss der Informationsstruktur auf die Wortstellungsvariation. Abschließend werden die Unterschiede der beiden Sprachen in Hinblick auf die Interaktion zwischen Topik/Fokus und Wortstellung zusammengefasst.

Kapitel 5 bietet einen theoretischen Überblick über den Zusammenhang von Syntax und Informationsstruktur im Rahmen der generativen Grammatik. Innerhalb dieses Kapitels werden zwei zentrale Typen von syntaktischen Ansätzen vorgestellt: kartographische und nicht-kartographische Ansätze. Anschließend werden die zentralen syntaktischen Ansätze über den Zusammenhang von Syntax und Informationsstruktur im Türkischen und Russischen rekapituliert. Im zweiten Teil des Kapitels werden die informationsstrukturellen Möglichkeiten des Türkischen und Russischen syntaktisch modelliert. Die wichtigsten Unterschiede zwischen den beiden Sprachen lassen sich dabei wie folgt zusammenfassen:

- (i) Während Foki im Türkischen ausschließlich präverbal realisiert werden dürfen, können Foki im Russischen auch postverbal realisiert werden.
- (ii) $[O]_{\text{Foc}}\text{SV}$ Abfolgen sind nur im Russischen möglich, während sie im Türkischen als nicht akzeptabel gelten.

Die Unterschiede zwischen dem Russischen und Türkischen sind darauf zurückzuführen, dass postverbale Elemente im Türkischen nicht wie im Russischen innerhalb der CP, sondern außerhalb der TP realisiert werden. Ferner müssen Foki in nicht-kanonischen Wortstellungen im Türkischen unmittelbar links vom Verb realisiert werden, während Foki im Russischen auch getrennt vom Verb realisiert werden dürfen. Der syntaktische Vergleich zeigt außerdem, dass sich beide Sprachen hinsichtlich der Annahmen über die informationsstrukturellen Bewegungen unterscheiden. Während für das Türkische angenommen wird, dass alle Fokusbewegungen ausschließlich durch Topikbewegung (d.h. durch Bewegung des unfokussierten Materials zu einer Position außerhalb der Fokusdomäne ([Spec, TopP])) resultieren, wird für das Russische sowohl Topik- als auch Fokusbewegung angenommen. Die Fokus-Verb-Adjazenz im Türkischen ist daher nicht wie in vielen anderen Sprachen das Resultat von Fokusbewegung, sondern von Topikbewegung.

Kapitel 6 and 7 bilden den empirischen Teil dieser Arbeit. Kapitel 6 präsentiert die empirischen Studien zur Interaktion von Fokus und Wortstellung in den drei Objektsprachen Türkisch, Russisch und Urum. Kapitel

7 beinhaltet die empirischen Studien zur Interaktion von Topik und Wortstellung in den drei Sprachen. Die empirischen Studien umfassen jeweils eine Sprachproduktions- und eine Akzeptabilitätsstudie. Die Ergebnisse der Studien werden für die einzelnen Sprachen zunächst getrennt voneinander berichtet und anschließend miteinander verglichen. Die Ergebnisse der empirischen Untersuchung bestätigen die theoretischen Annahmen über das Türkische und Russische indem sie aufzeigen, dass Foki im Türkischen ausschließlich präverbal (d.h. unmittelbar präverbal oder am Satzanfang) realisiert werden, während Foki im Russischen sowohl prä- als auch postverbal realisiert werden können. Des Weiteren haben die Ergebnisse der Topikstudien gezeigt, dass Topiks im Türkischen primär in der linken oder in der rechten Satzperipherie realisiert werden, während Topiks im Russischen primär in der linken Satzperipherie oder im Mittelfeld realisiert werden. Jedoch scheint auch die postverbale Topikrealisierung möglich. Die Ergebnisse der Studien für das Urum haben abschließend gezeigt, dass sowohl die Position von Foki als auch die Position von Topiks im Urum sehr flexibel ist. Das heißt sowohl Foki als auch Topiks können (a) am Satzanfang, (b) unmittelbar präverbal oder (c) postverbal realisiert werden. Des Weiteren haben die Ergebnisse aller drei Sprachen gezeigt, dass die Interaktion von Syntax und Wortstellung nicht durch den Fokustypen (Informationsfokus vs. korrektiver Fokus) beeinflusst wird.

Kapitel 8 beinhaltet die finale Analyse und präsentiert einen syntaktischen Ansatz, welcher die Flexibilität von Foki und Topiks im Urum erfassen soll. Dabei wird argumentiert, dass die scheinbar 'freie' Position von informationsstrukturellen Kategorien im Urum das Resultat des Wortstellungswandels von OV zu einer Sprache mit einer freien Position des Verbs innerhalb der VP ist, welcher es dem Urum erlaubt die informationsstrukturellen Möglichkeiten von OV- (=Türkisch) und VO-Sprachen (=Russisch) zu vereinen. Die anschließende syntaktische Analyse basiert auf der Annahme, dass es im Urum wie im Russischen sowohl Topik- als auch Fokusbewegung gibt. Zudem wird angenommen, dass beide Arten der Bewegung optional sind, wodurch sowohl *in situ* Foki als auch *in situ* Topiks möglich sind. Ferner geht die Analyse davon aus, dass Topiks im Urum zwei unterschiedliche strukturelle Positionen besetzen können. Während sich präverbale Topiks in [Spec, TopP] bewegen, werden postverbale Topiks rechts an die TP adjungiert. Zusammenfassend lässt sich festhalten, dass der präsentierte Ansatz einem strengen kartographischen Ansatz, der auf der Annahme basiert, dass es bestimmte funktionale Projektion (FocP, TopP) gibt, in welche sich alle topikalisierten

und fokussierten Elemente bewegen müssen um ihre Diskursinterpretation zu erhalten, widerspricht. Dennoch enthält der Ansatz einige kartographische Züge, in dem davon ausgegangen wird, dass bestimmte strukturelle Positionen mit bestimmten Diskursinterpretationen korrelieren.

Die Ergebnisse der Arbeit werden abschließend in Kapitel 9 resümiert. Ein besonderer Schwerpunkt der abschließenden Diskussion liegt auf der Rolle des Sprachkontakts. Dabei wird aufgezeigt, dass viele nordostanatolische Varietäten des Türkischen eine ähnlich flexible Wortstellung wie im Urum aufweisen, sodass ein abschließende Beantwortung der Frage, ob die Flexibilität von Foki und Topiks im Urum tatsächlich durch das Russische geprägt wird oder aber vielmehr eine charakteristische Eigenschaft nordostanatolischer Varietäten ist, durch weitere Untersuchungen in diesen Sprachen gezielt überprüft werden muss.