UNIVERSITY OF CALGARY

A Minimalist Look into Multiple *Wh*-Fronting in Ukrainian

By

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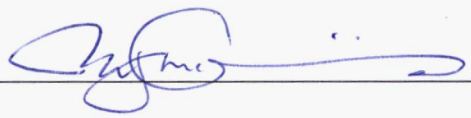
The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "A Minimalist Look into Multiple *Wh*-Fronting in Ukrainian" submitted by Kara Bashutski in partial fulfilment of the requirements for the degree of Masters of Arts.



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ABSTRACT

Since Rudin's (1988) seminal work on multiple *wh*-fronting (MWF) languages, much research has been done on languages which move all *wh*-phrases to sentence-initial position, in particular Richards' (1997, 2001) theory of CP- and IP-absorption languages. However, Ukrainian poses a problem for these analyses. While Ukrainian exhibits Superiority effects (typical of CP-absorption languages), other data, such as *wh*-island effects, provide evidence that Ukrainian is an IP-absorption language.

The data suggest that, contra Richards, Superiority constrains not only A-bar movement, but A-movement as well. I propose that the binary distinction of CP- and IP-absorption languages needs to be extended to account for Ukrainian. I propose that Ukrainian is an IP-absorption language; however, the key difference between Ukrainian and other MWF IP-absorption languages is the obligatoriness of a [focus] feature on its *wh*-phrases, which effectively forces them to obey Superiority.

ACKNOWLEDGEMENTS

Nothing is ever done in isolation, and this thesis is a prime example of how the support, experience, and guidance of many others have made it possible for this thesis to come into completion.

First and foremost, my supervisor Martha McGinnis deserves many thanks and praises for her continual support and guidance. Without her, surely, this thesis would never have taken flight. Her enthusiasm for the idea of "multiple *wh*-fronting" was immediately apparent ever since it was first mentioned as an idea for my LING 611 term paper. Throughout this past year she has been a great leader, supervisor, and guide and I am truly thankful that as I look back on my thesis-writing experiences I am fortunate to have such an understanding supervisor. Martha went above and beyond the call of duty, and I could not have asked for a better supervisor.

I also want to thank my committee members, Elizabeth Ritter, and Elena Bratishenko. I had a great thesis committee and it was through their well thought questions and suggestions which gave me new perspectives on my thesis.

I owe a great deal to the Department of Linguistics at the University of Calgary. Over the past two-years they have given me so many opportunities that I will be able to remember fondly for many years to come. I will miss the intimate nature and the specialized attention of the Department. Without hesitation I would recommend the Department. Amanda Pounder deserves special mention, whom, as Graduate Coordinator, has helped me on numerous occasions with all aspects of graduate student life and work. I also owe a great thanks to SSHRC, whose grant allowed me to focus my time and energy on my research.

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I want to extend a big thank you to all the participants in my study who kindly volunteered their time and expertise to help me with the many sentence judgements.

Finally, I want to thank my family and friends outside of the Department of Linguistics, most of whom have no idea what a "*wh*-question" is and yet they still love me despite my various attempts at describing my thesis to them. My parents, of course, deserve thanks for their occasional proofreading, and their continual support and encouragement. I'd also like to thank my grandpa, who was the first in our family to experience thesis-writing and fairly warned me that the writing process will be a "very interesting time in life." It was. I also want to thank my friends in Calgary, Regina, and Ottawa who have supported me in so many ways. They know who they are. In particular, Karley Parovsky and Chris Godfrey have been two unbelievable people in my life, and both deserve a great deal of thanks. Chris's random motivational coffee's and words of wisdom were comforts going into my defence.

And now, on with the show...

-This thesis is dedicated to inquiring minds everywhere.
And in particular, to my parents, who instilled in me
the joy of learning from an early age.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

1ST	first person
2ND	second person
3RD	third person
ACC	accusative
AUX	auxiliary
CL	clitic
COND	conditional particle
EPP	Extended Projection Principle
IND	indicative complementizer
INTERR	interrogative
LF	Logical Form
MWF	Multiple *Wh*-Fronting
NOM	nominative
PAST	past tense
PIC	Phase Impenetrability Condition
PRES	present tense
PRN	pronoun
SCO	Strong crossover
SPEC	specifier
SG	singular
SOT	Sequence of Tense
SUBJ	subjunctive complementizer
WCO	Weak crossover

A word after a word after a word is power.
--Margaret Atwood

Those who believe
in the syntax of things
will never wholly kiss you
-e.e. cummings

CHAPTER 1

INTRODUCTION

This thesis examines multiple *wh*-questions in Ukrainian within a Minimalist syntactic framework. Multiple *wh*-questions are questions in which the speaker is asking more than one thing, such as the English example:

(1) **Who** bought **what**?

Wh-questions are so named since English question words typically begin with "*wh*" this term is still used across all languages with multiple question words, though typically, each language differs with the morphology of their question words.

This thesis focuses particularly on languages which obligatorily move all their *wh*-words to a sentence initial position, commonly called multiple *wh*-fronting (MWF). (2) illustrates a multiple *wh*-question in Ukrainian in which all the *wh*-phrases move to the sentence initial position.

(2) **Kto koho** bachyv?
who whom *saw*
'Who saw whom?'

While other multiple *wh*-fronting (MWF) languages such as Serbo-Croatian, Bulgarian, Romanian, and to lesser extent Polish, Czech and Russian have received much attention in the literature, relatively little work has been done on Ukrainian multiple *wh*-questions. In this thesis, I examine Ukrainian MWF constructions to see how they pattern with respect to previously studied languages, and propose an analysis that integrates both the new Ukrainian data and other previously studied MWF languages.

This chapter is organized as follows. Section 1.0 examines cross-linguistic multiple *wh*-questions. Section 1.1 examines certain assumptions I make in this thesis, under the Minimalist Program. In section 1.2 I examine Ukrainian *wh*-questions. In section 1.3 I outline the present study. Finally, in section 1.4 I outline the remainder of this thesis.

1.0 Cross-Linguistic Variation in Multiple *Wh*-Questions

Languages differ with respect to where *wh*-words are placed. In a seminal paper, Rudin (1988) discusses how languages differ with regard to their placement of *wh*-words in multiple *wh*-questions. The standard assumption is that there are three language types with respect to *wh*-movement in multiple questions. Some languages, such as English, normally front one and only one *wh*-word. Here, in (3) *what* is fronted, but *to whom* is in situ:

(3) **What** did you give **t** to **whom**?

Other languages, like Chinese, have all *wh*-words in situ, as in (4):

(4) Ni xiang-zhidao Lisi **weisheme** mai-le **sheme**?
*you wonder Lisi **why** bought **what***
'What do you wonder why Lisi bought (it)?'

A third group of languages (including all the Slavic languages) fronts all *wh*-words, as in the Russian example in (5). These are known as multiple *wh*-fronting (MWF) languages.

(5) **Kto** **čto** **kogda** skazal?
who ***what*** ***when*** *said*
'Who said what when?'

Despite the apparent similarities in the surface word order of MWF languages, Rudin (1988) noticed that these languages actually divide into two classes when looked at in depth. Since the work of Rudin, many authors have been investigating the different patterning of MWF languages, despite their superficial similarities. The goal of this thesis is to investigate the patterning of Ukrainian multiple *wh*-questions.

1.1 The Minimalist Framework

This thesis is written within the framework of the Minimalist Program of Chomsky (2000, 2001). I assume certain general minimalist notions, such as the following. Syntactic trees are built up out of lexical items via the operations Merge and Move.

Minimalist theory introduces interpretable and uninterpretable features. Uninterpretable features [*u*F] are semantically null and must be checked by a matching

interpretable feature [F] or the derivation is said to "crash" at LF. Typically *u*F can be checked by being in a local relationship (Agree) with a category containing a matching feature (F). Agree is often sufficient to check a feature. Essentially, Agree allows uninterpretable features to be checked under c-command. (6) illustrates checking features under Agree.

Agree:

(6) X[*u*F]…Y[F]

With Agree, once a Probe (a head with [*u*F]) looks to attract a matching element, it selects the closest c-commanded element it finds. Agree between a Probe and a matching element happens as soon as it Merges. The syntactic operation of Agree then checks the uninterpretable features on matching elements.

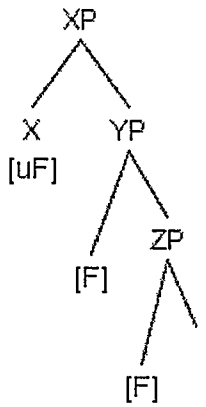
Sometimes elements cannot be checked by Agree alone, and therefore, Move is an operation employed which is driven by a need to check off a [*u*F]. Move checks a semantically uninterpretable "EPP" feature, which cannot be checked by Agree, only by Move. Move is considered to be a "costly" operation (Chomsky, 1995; 235), and therefore its use is restricted to cases where simpler operations (such as Agree) are not available. (7) illustrates checking features by Move.

Move:

(7) $X[F]_i \ldots Y[uF^*] \ldots t_i$

I assume that movement obeys Shortest (Richards, 2001), as described in chapter 2, section 2.1.2. This has two consequences: (i) a probe seeking a matching goal will not look past the first matching goal it sees, as in the following:

(8) Move obeys Shortest:

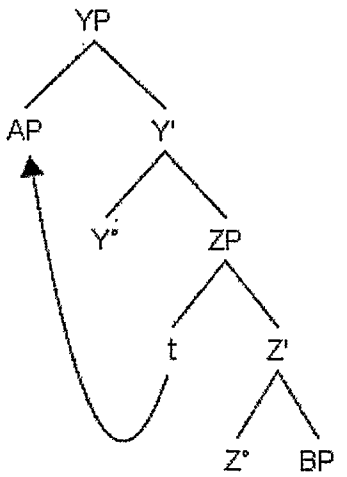


Here, the [*u*F] will probe the highest matching [F] under YP, so that the lower [F] under ZP will not enter an Agree relation in this derivation. Also, (ii) Shortest has the implication that the [*u*F] will move the goal to the specifier closest to the probe.

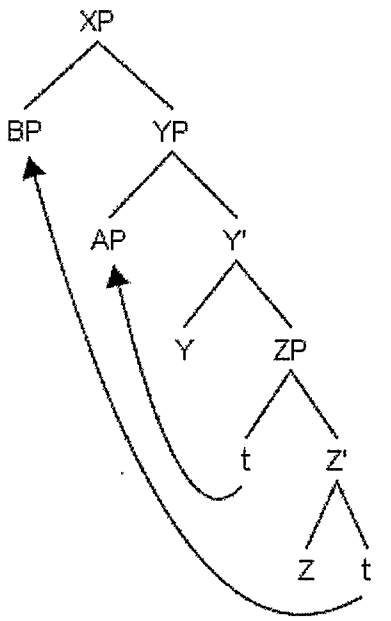
I follow Richards (1997, 2001) in assuming "tucking-in" of multiple specifiers in the derivation. Richards argues against Chomsky's (1993) Extension Condition, which states that operations must always extend the tree. Instead, Richards argues for Featural Cyclicity, which says that a strong feature must be checked as soon as possible after being introduced into the structure. (9a) and (9b) illustrate the Extension Condition.

Extension condition

(9a)



(9b)

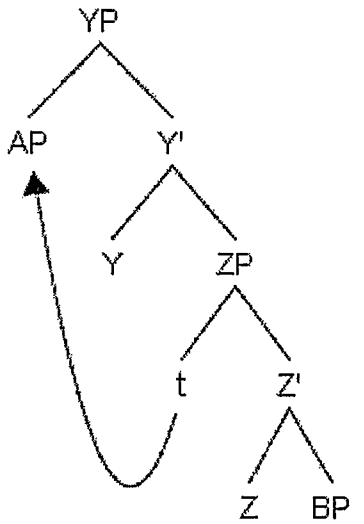


The Extension Condition predicts the derivation in (9), in which movement of AP happens first (9a), and BP happens next (9b), necessarily expanding the tree. In contrast, with Featural Cyclicity, the second movement (movement of BP) targets a position higher than the attractor, but potentially lower than the position occupied by AP. The derivation in (10) below involves what Richards calls "tucking-in[1]." Richards' theory necessarily allows multiple specifiers of the same head.

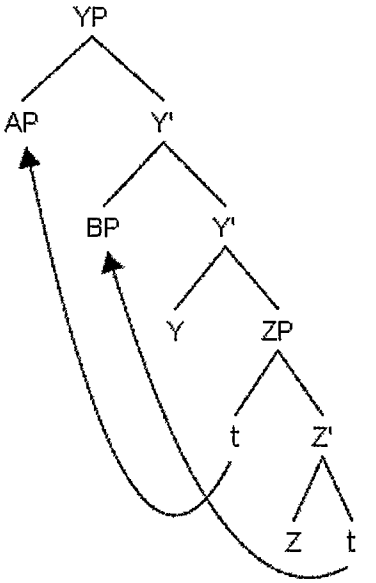
[1] Note that "tucking-in" requires that movement paths obligatorily cross, as in (10b), rather than nest, as in (9b). This is beyond the scope of my thesis, and I refer interested readers to Richards (2001) chapter 5, section 5 for his detailed analysis of crossing vs. nested paths.

Featural Cyclicity (Richards, 1997, 2001)

(10a)

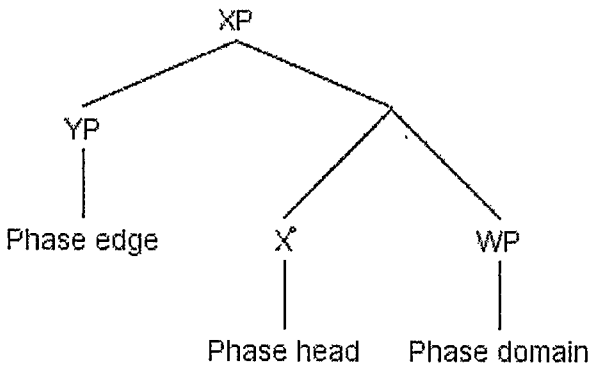


(10b)



Movement also obeys the Phase Impenetrability Condition (PIC) with the result that *wh*-movement cannot skip specifiers of CP. Chomsky (2001) proposes that the syntactic derivation proceeds in incremental steps, called phases. According to Chomsky, phases include *v*P and CP. The general idea of phases is that once these domains have been built up, most of their content is sent to the semantic (LF) and phonological (PF) interfaces for interpretation and becomes unavailable to the remainder of the syntactic derivation, thereby reducing the computational burden. Chomsky distinguishes between the phase "domain" or complement, the phase head itself (*v* or C), and the edge of the phase:

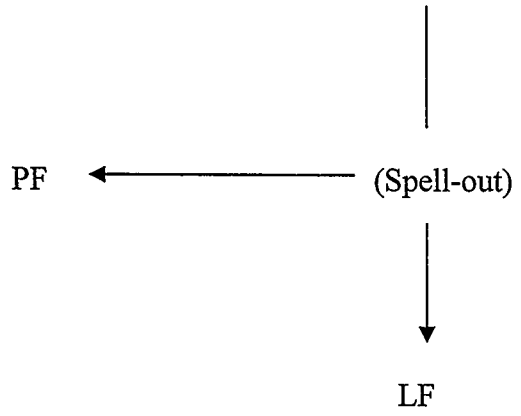
(11) *Phase edge, head, and domain:*



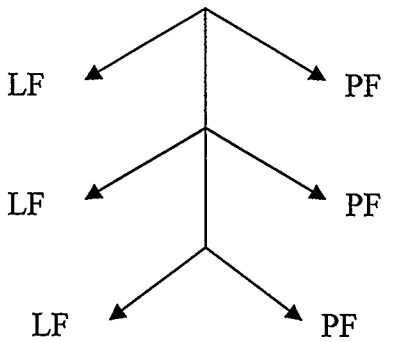
Once a phase has been completed, the domain of the phase is transferred to the interfaces, and thereby becomes inaccessible to operations outside the phase; hence, phases are "impenetrable." I return to the PIC in chapter 2, section 2.1.1 where I introduce the *wh*-island constraint, and again in chapter 3, section 3.4 where I discuss *wh*-islands further.

Essentially the PIC forces derivations to have short memories because material inside embedded phrases is forgotten. Accordingly, instead of previous approaches such as the Y model (e.g. Lasnik & Saito, 1984) or the T model in (12) assumed by Chomsky (1995), the PIC ensures multiple Spell-Out, as in (13) below.

(12) Chomsky (1995)



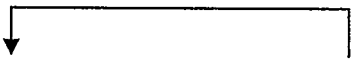
(13) *Multiple Spell-Out*



Multiple spell-out means that the Spell-Out operation occurs more than once and information is sent off to PF (phonetic form) and LF (logical form).

I assume that movement can be either overt or covert, with Slavic languages like Russian and Ukrainian having overt *wh*-movement, and languages like Chinese and Japanese having covert *wh*-movement. Overt movement is movement which affects the phonology. Of particular interest to this thesis is overt *wh*-movement, as in the English example below:

Overt wh-movement (Pesetsky, 2000)



(14) Which book did Mary give ___ to Sue?

In contrast, covert movement is movement that does not affect the phonology of the sentence. The following example from Huang (1982) illustrates the phenomenon.

(15) Zhangsan xiang-zhidao [Lisi mai-le shenme]. *Chinese*

Zhangsan wonders Lisi bought what

'Zhangsan wonders what Lisi bought.' *(Huang, 1982)*

In (15) the embedded SVO order allows the embedded interrogative reading of 'Zhangsan wonders what Lisi bought.' Covert movement operations will not play a large role in this thesis since I will focus on Slavic languages, which display overt *wh*-movement.

I will make descriptive use of the terms A-movement and A-bar movement, with each type involving different binding effects. A-movements are movements to an A(rgument)-position, which can create new binding relations. In contrast, A-bar movement are movements to a non-A(rgument)-position, such as SpecCP, which cannot create new binding relations. A- and A-bar movement will be examined more closely in chapter 3.

1.2 A Brief Description of Ukrainian

Ukrainian is an Eastern Slavic language, closely related to Russian and Belarusian. With respect to MWF, some work has been done on Russian (e.g. Rudin, 1989; Stjepanović, 1999; Strahov, 2001; Nossalik, 2005; Mezhevich, 2006), but very little has been explored in Ukrainian or Belarusian[2].

Ukrainian is a language with free word order. Thus, a simple transitive sentence permits essentially all possible surface variants: (SVO, SOV, VSO, VOS OVS, and OSV), with only minor, if any, differences in meaning to the sentences (Sherekh, 1963). The free word order of Ukrainian is possible because inflectional endings mark grammatical relations and roles in the sentence. The following simple sentence illustrates the free word order of Ukrainian:

(16a) Student čitaje knižku. (S-V-O)

student reads book

'The student reads the book'

(16b) Student knižku čitaje. (S-O-V)

(16c) Knižku čitaje student. (O-V-S)

Despite the varying word order of the examples above, all the sentences convey similar meaning. As in Russian, however, it has been suggested that SVO is the most common word order in Ukrainian (e.g. Franks, 2000).

[2] Ukrainian *wh*-movement was examined briefly by Rudin (1989); more recently, Richardson (2007) touches on *wh*-islands and weak crossover effects, which I return to in chapters 3.

Ukrainian *wh*-questions are normally formed by fronting the interrogative *wh*-phrase to sentence-initial position, as in the following:

(17) *wh1 wh2 wh3* verb

However, leaving *wh*-phrases in situ is also grammatical in Ukrainian. In this case, the question is not interpreted as a true question, but rather one with special semantics, described as an echo question. The following scenario was used in Ukrainian to elicit grammatical and ungrammatical examples of an echo question and a *wh*-question.

Scenario 1, grammatical echo question:

(18) A: I saw a koala.

B: Ty bachyv ščo?

you saw what

'You saw a **what**?'

Scenario 2, non- echo question:

(19) A: I went to the zoo.

B: Ščo ty bachyv?

what you saw

'What did you see?'

B: *Ty bachyv ščo?

you saw what

'You saw a what?'

Ukrainian *wh*-questions are normally introduced using question words; these include the interrogative pronouns and adverbial interrogatives:

(20)

INTERROGATIVE PRONOUNS		**ADVERBIAL INTERROGATIVES**	
kto	*who*	skilki	*how (much)*
ščo	*what*	koli	*when*
či	*whose*	de	*where*
kotri	*which*	kupi	*where*

(URGE, 2006; 217)

In Ukrainian, nouns, pronouns, and adjectives are marked with case. Ukrainian distinguishes seven cases, namely nominative, vocative, accusative, genitive, locative, dative, and instrumental. However, *wh*-phrases in Ukrainian only permit six of these cases, as follows:

(21)

CASE	WHO	WHAT
Nominative	kto	ščo
Accusative	koho	ščo
Genitive	koho	čoho
Locative	Komu	čomu
Dative	Komu	čomu
Instrumental	kym	čym

(URGE, 2006, 114)

1.3 THE PRESENT STUDY

1.3.1 SPECIFIC RESEARCH GOALS

The primary goal of this thesis is to propose an analysis that accounts for *wh*-movement in Ukrainian, while still being able to account for previously studied MWF languages such as Bulgarian and Serbo-Croatian.

Another goal of this thesis is to document previously unstudied MWF constructions in Ukrainian. This is an important area to pursue, since as we build theories of human language, the ultimate aim is to account for as wide a range of individual languages as possible. Since many current theories about MWF languages are based on other Slavic languages, it is important to investigate how Ukrainian patterns.

1.3.2 Participants & Methods

The data for this thesis come primarily from five native Ukrainian speakers, ranging in ages from 24-55 and all currently residing in Calgary, Alberta, Canada. The speakers were primarily from Western regions of Ukraine prior to immigrating to Canada. Further speakers were used in the study for verifying certain judgements. These speakers were recruited through a bulletin sent out to three separate Ukrainian churches. In total, there were 5 participants.

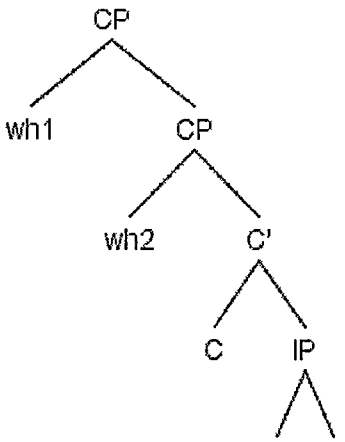
There were two main translators, while the other three participants saw only the Ukrainian examples and not the original English sentences. The translators were shown an English sentence, followed by an oral or visual description to help provide context. Translators were asked to write the most grammatical, common Ukrainian translation of the sentence first if any. Following this, alternative versions of the sentence were constructed from the original Ukrainian translations. To verify the accuracy of the translations, other Ukrainian participants were asked to translate certain sentences from Ukrainian back into English.

The participants were tested on all the Ukrainian sentences in this thesis which they were required to judge on a five point scale for grammaticality. While there was inter-speaker variation, I was interested in overall patterns of grammaticality for each individual participant. Within this thesis I will footnote any sentences that received large discrepancies in ratings between speakers.

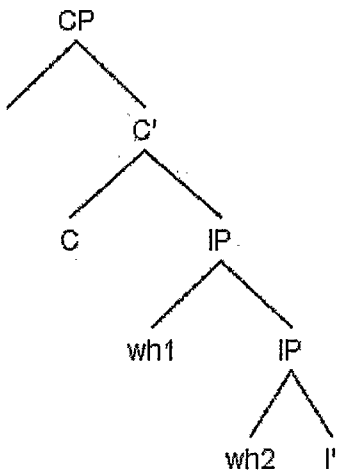
1.3.3 Proposal

In chapters 3 and 4 I will show that Ukrainian *wh*-movement poses a problem for the traditional binary division of MWF languages. Since Rudin (1988), it has been standardly assumed that Slavic languages are divisible into two classes with respect to MWF, which Richards (1997, 2001) later terms CP-absorption and IP-absorption languages. CP-absorption languages allow multiple specifiers of CP, as in (22a), and display local Superiority effects, but no *wh*-islands. In contrast, IP-absorption languages have multiple specifiers of IP, as in (22b), and display *wh*-islands, but no local Superiority effects.

(22a) CP-absorption



(22b) IP-absorption



Ukrainian, however, displays both local Superiority effects and *wh*-islands. Therefore, Ukrainian does not fit into the pattern of the previously studied MWF languages.

I follow Rudin, Richards and others in assuming that MWF languages group into either CP-absorption or IP-absorption types. However, I propose that IP-absorption languages need to be further divided to account for the Ukrainian data. Specifically, I propose that those IP-absorption languages which do display local Superiority effects

(such as Ukrainian and some dialects of Polish and Russian) have an obligatory [focus] feature on their *wh*-phrases, which effectively forces them to obey Superiority. I return to this analysis in chapter 5.

1.4 Organization of the Thesis

Chapter 2 provides an overview of previous literature on multiple *wh*-fronting languages. I discuss several theories on MWF languages which are relevant for examining the Ukrainian data. In Chapter 3, I examine relevant Ukrainian data that support an IP-absorption analysis. This includes Weak Crossover in scrambling, Weak Crossover in *wh*-movement, and *wh*-islands. Chapter 4 introduces Ukrainian data that seem to support a CP-absorption analysis. This includes Superiority and multiple *wh*-extraction. In chapter 5, I outline an analysis that accounts for the Ukrainian data, and show how it goes beyond previous analyses. Finally, chapter 6 summarizes the main points of this argumentation and outlines further avenues of research.

We stand on the shoulders of giants
-Sir Isaac Newton

CHAPTER 2

PREVIOUS LITERATURE

2.0 INTRODUCTION

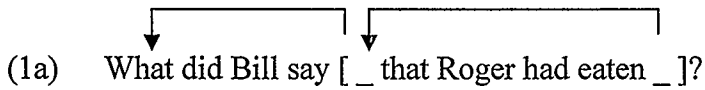
This chapter introduces previous literature with respect to multiple *wh*-fronting (MWF) languages. Many authors have examined languages which obligatorily front all *wh*-words in a sentence. The standard view in the literature is that despite surface similarities, MWF languages actually pattern in one of two ways with respect to the syntactic positions of *wh*-phrases. I focus on two languages which have been studied extensively in the literature, namely Bulgarian and Serbo-Croatian, and I also discuss Russian, which has been more problematic in the literature.

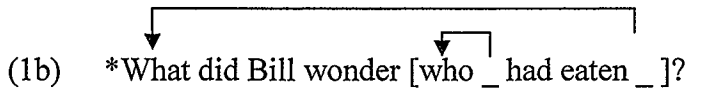
This chapter is organized as follows. In section 2.1 I present some critical concepts that are central to this thesis, including *wh*-islands and the Superiority Condition in sections 2.1.1 and 2.1.2 respectively. In section 2.2 I present previous theories of MWF languages, including those of Rudin (1988, 1989) in section 2.2.1, Bošković (1997, 1998, 2002) in section 2.2.2, and Richards (1997, 2001) in section 2.2.3. In section 2.2.4 I examine Russian data and briefly review analyses by authors such as Mezhevich (2006). Finally, in section 2.3 I summarize the main points of this chapter and briefly outline the approach to be taken in chapters 3 and 4.

2.1 CRITICAL CONCEPTS

2.1.1 *Wh*-islands

The existence of island phenomena has given rise to both relativized notions of locality (such as Richards' (1997) "Shortest") and rigid notions of locality (such as Chomsky's (2001) Phase Impenetrability Condition). These constraints have served as a diagnostic for movement operations. The concept of islands may be traced back to Ross's (1967) seminal work. Ross discusses structural configurations which disallow certain types of dependencies. He investigates sentences in which even small changes affected the grammaticality, as in (1a) and (1b):

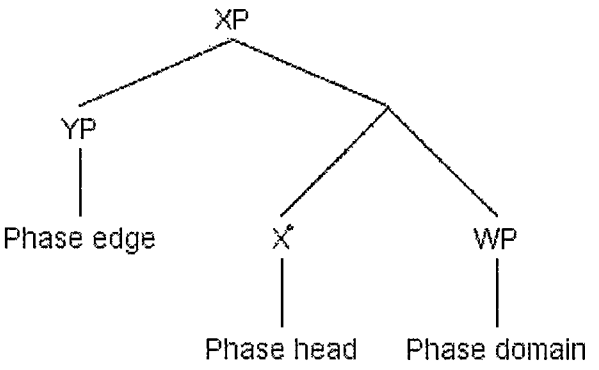




Chomsky set out to unify the various domains that Ross identified as islands. Thus, Chomsky (1973) proposed that movement is subject to the Subjacency Condition, which is recast as the Phase Impenetrability Condition (PIC) in Minimalism.

As mentioned in chapter 1, section 1.1, Chomsky (2000) proposes that derivations proceed in incremental steps, called phases (e.g. *v*P and CP). Once a *v*P or CP has been built up, most of its content becomes inaccessible to the remainder of the derivation, thereby reducing the computational burden. Chomsky furthermore distinguishes between the phase domain, the phase head itself (*v* or C), and the edge of the phase:

(2) *Phase edge, head, and domain:*



With these notions in mind, Chomsky introduces the PIC, which states that once a phase has been completed, the complement of the phase head is transferred to the interfaces, and thereby becomes inaccessible to operations outside the phase. Only the head and edge of a phase remain accessible. Under the PIC, movement out of CP is forced to be "successive cyclic" (i.e. to move to the edge of each phase before moving to a higher phase edge).

For example, *wh*-phrases must stop at intermediate specifiers of CP on their way to their 'ultimate destination,' as in the following example:

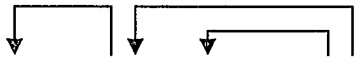
(3) [$_{CP}$ **What** do you think [$_{CP}$ __ (that) he'll say [$_{CP}$ __ (that) we should buy __]]

When a *wh*-phrase cannot stop at an intermediate specifier of CP (because it is blocked by another *wh*-phrase) the result is ungrammaticality, as in the following example:

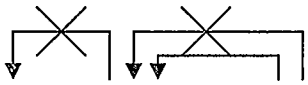
(4) *[$_{CP3}$ **What** did Mary ask [$_{CP2}$ **who** said [$_{CP1}$__ that Bill had bought ___]]?

In (4), even though *what* may move to SpecCP1, it may not move to SpecCP2 since that specifier is occupied by *who*. Within Minimalist theory, movement from SpecCP1 to SpecCP3 violates the PIC, which ensures that a *wh*-phrase is inaccessible to operations above CP2 unless it first moves to SpecCP2.

As noted in chapter 1, MWF languages have been divided according to whether or not they allow multiple *wh*-phrases in SpecCP. The presence or absence of *wh*-island effects is frequently used as a diagnostic to determine whether or not languages allow multiple *wh*-phrases in SpecCP. Languages which allow multiple specifiers of CP will not exhibit *wh*-island effects, as in (5a) below. On the assumption that IP-absorption languages allow only one specifier of CP, these languages should exhibit *wh*-island effects, illustrated in (5b) below:



(5a) [$_{CP2}$ wh$_i$ …[$_{CP}$ t$_i$ [$_{CP}$ wh$_j$…[$_{IP}$ [t$_j$ t$_i$]]]] CP-absorption: Bulgarian



(5b) *[$_{CP2}$ wh$_i$ …. [$_{CP}$ t$_i$ wh$_j$…[$_{IP}$ [t$_j$ t$_i$]]]] IP-absorption: Serbo-Croatian

I return to *wh*-islands once again in chapter 3, section 3.4.

2.1.2 The Superiority Condition

Another property that varies cross-linguistically for multiple *wh*-questions is the restricted ordering of *wh*-phrases. As is well known, in English multiple *wh*-questions

with both a *wh*-subject and a *wh*-object, the *wh*-subject is fronted, and the *wh*-object is left in situ:

(6) Who$_i$ do you think t_i hit whom?

If, however, the *wh*-object is fronted above the *wh*-subject, the sentence becomes ungrammatical:

(7) *Whom$_i$ did who hit t_i?

This restriction on the ordering of *wh*-phrases is known as Superiority. The Superiority Condition as originally formulated by Chomsky (1973) is given below:

(8) *The Superiority Condition (Chomsky, 1973)*

a. No rule can involve X, Y in the structure

...X...[...Z...WYV...]... where the rule applies ambiguously to Z and Y, and Z is superior to Y.

b. the category A is 'superior' to category B if every major category dominating A dominates B as well, but not conversely.

Essentially, the Superiority Condition predicts that no *wh*-phrase will move past a higher *wh*-phrase. Below I give the definition of Shortest which recaptures the Superiority Condition within a Minimalist framework.

(9) *Shortest (Richards, 1997: 111)*

A pair P of elements {α, β} obeys Shortest iff there is no well-formed pair P' which can be created by substituting γ for either α or β, and the set of nodes c-commanded by one element of P' and dominating the other is smaller than the set of nodes c-commanded by one element of P and dominating the other.

As is standard in the literature, I refer to Superiority effects throughout this thesis; however, for concreteness, I assume that Superiority effects arise from Shortest. I return to Superiority in chapter 4, sections 4.1 - 4.3.

2.2 Previous Theories

2.2.1 Rudin (1988)

Rudin (1988) argues that MWF languages can be classified into two different groups. She proposes the following structural analysis of MWF languages:

(i) all fronted *wh*-phrases are located in CP, as in Bulgarian and Romanian:

(10) [$_{CP}$ **Koj kogo kŭde** [$_{C'}$ vižda]] *(B)*

who whom where sees

'Who sees whom where?' *(Rudin, 1988)*

(ii) only the first fronted *wh*-phrase is located in CP, and the others are located in IP, as in Serbo-Croatian, Polish, and Czech:

(11) [$_{CP}$ **Ko** [$_{IP}$ **koga gdje** gleda]] *(SC)*

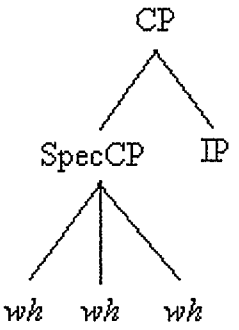
who whom where sees

'Who sees whom where?' *(Rudin, 1988)*

Rudin proposes the tree structure in (12a) for CP-absorption languages and the tree structure in (12b) for IP-absorption languages[3]:

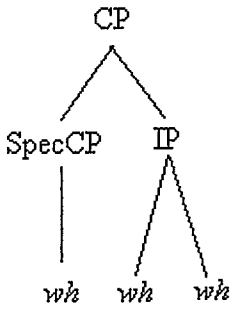
(12a) **CP-absorption languages**

(Bulgarian, Romanian)



(12b) **IP-absorption languages**

(Serbo-Croatian, Russian, Polish)



This analysis is somewhat different from the one I will be assuming (see section 1.1, and section 2.2.3 below).

Rudin (1988) bases her two-way classification on four diagnostics (see chapters 3 and 4 for more detail):

[3]Rudin calls CP-absorption languages [+Multiply-filled specifier] (+MFS) languages and IP-absorption languages [-Multiply-filled specifier] (-MFS) languages.

(13) *Rudin's (1988) diagnostics:*

	CP-ABSORPTION Bulgarian, Romanian	**IP-ABSORPTION** Serbo-Croatian, Polish, & Czech
1. SHOWS *WH*-ISLAND EFFECTS	-	+
2. OBEYS SUPERIORITY	+	-
3. MULTIPLE EXTRACTION FROM A CLAUSE BANNED	-	+
4. INTERVENING LEXICAL MATERIAL ALLOWED	-	+

2.2.1.1 *Wh*-Islands

Rudin (1988) observes that languages like Bulgarian do not obey the *wh*-island constraint, as illustrated in (14). Under Rudin's analysis, this is expected since she claims Bulgarian is a CP-absorption language, and therefore, any number of *wh*-phrases can move into the embedded CP projections on their way into higher clauses.

(14) Vidjah edna kniga, **kojato**$_i$ se čudja **[koj** znae **[koj** prodava **t**$_i$**]]** *(B)*

saw-1s a book which wonder-1s who knows who sells

'I saw a book which I wonder who knows who sells.' *(Rudin, 1988: 457)*

In contrast, IP-absorption languages, like Serbo-Croatian, do not have the option to move more than one *wh*-phrase into an embedded CP projection. Rudin observes that Serbo-Croatian obeys the *wh*-island constraint, as in (15).

(15) *Šta_j si me pitao [ko_i t_i može da uradi t_j]? *SC*

what aux-2ND.SG me asked who can to do

'What have you asked me who can do?' *(Rudin, 1988: 459)*

Under my analysis, this violates the PIC since *šta* 'what' must first move into the embedded CP or it becomes inaccessible for further derivation. Only languages which allow multiple embedded CPs, therefore, will allow *wh*-island extractions, since in these languages the embedded *wh*-phrase is always able to move into an embedded CP.

2.2.1.2 THE SUPERIORITY CONDITION

As Rudin notes, another trait that seems to correlate with the two types of MWF languages is the order of the fronted *wh*-words. In CP-absorption languages, the order is relatively strict, with nominative always preceding accusative. These ordering restrictions are said to result from Superiority. However, in IP-absorption languages, the order of *wh*-words tends to be relatively free, with both nominative > accusative and accusative > nominative acceptable.

Bulgarian exhibits strict ordering constraints in all contexts, providing evidence that *wh*-movement in Bulgarian is subject to the Superiority Condition. Only subject > object ordering is acceptable, as seen in (16a) and (16b).

(16a) **Koj_i kogo_j** t_i vižda t_j ? *(B)*

who whom sees

'Who sees whom?'

(16b) ***Kogo$_j$ koj$_i$ t$_i$** vižda **t$_j$** ? *(Rudin, 1988: 472)*

Rudin states that Serbo-Croatian type languages never exhibit such ordering constraints; both the subject > object order and the object > subject order of fronted *wh*-phrases are allowed:

(17a) **Ko$_i$ koga$_j$ t$_i$** vidi **t$_j$** ? *(SC)*

who whom sees

'Who sees whom?'

(17b) **Koga$_j$ ko$_i$ t$_i$** vidi **t$_j$** ? *(Rudin, 1988: 449)*

2.2.1.3 Multiple *Wh*-Extraction from a Clause

Rudin (1988) notes furthermore that Slavic MWF languages differ with respect to the possibility of extracting multiple *wh*-words from a clause. She shows that in CP-absorption languages like Bulgarian, all *wh*-phrases in a multiple question move to the closest interrogative SpecCP. *Wh*-phrases may neither remain in situ, nor move to the specifier of a non-interrogative CP.

(18a) **Koj$_i$ kŭde$_j$** misliš [(če) **t$_i$** e otišul **t$_j$**] ? *(B)*

who where think (that) has gone

'Who do you think that went where?'

(18c) ***Koj**$_i$ misliš [(če) **t**$_i$ e otišul **kŭde**] ?

(18b) ***Koj**$_i$ misliš [**kŭde**$_j$ (če) **t**$_i$ e otišul **t**$_j$] ? *(Rudin, 1988: 450)*

The only grammatical option in Bulgarian is the one where both *wh*-phrases undergo movement into the interrogative CP projection, as in (18a). By contrast, in IP-absorption languages such as Serbo-Croatian, Rudin reports that extraction of multiple *wh*-words from a clause results in ungrammaticality, as in (19b):

(19a) **Ko**$_i$ želite [da vam **šta** kupi **t**$_i$] ? *(SC)*

who want-2nd to you what buy

'Who do you want to buy you what?'

(19b) ***Ko**$_i$ **šta**$_j$ želite [da vam kupi **t**$_i$ **t**$_j$] ? *(Rudin, 1988: 453)*

In the Serbo-Croatian examples, only one *wh*-phrase can move into the matrix SpecCP (19a); the sentence becomes ungrammatical when both *wh*-phrases move into the matrix SpecCP[4].

Rudin (1988) proposes that movement of multiple *wh*-phrases into the matrix clause is allowed in languages like Bulgarian since these languages have multiple CP-absorption. Therefore, all *wh*-phrases can move into the embedded CP projection before moving into their final position in the matrix CP. In contrast, IP-absorption languages, such as Serbo-Croatian, can only have one *wh*-phrase in the embedded CP projection, and therefore, no further *wh*-phrases can move into the matrix CP.

[4] Bošković has data contradicting this claim; see section 2.2.2 and chapter 4, section 4.4, for further discussion of these contradicting facts.

2.2.1.4 Intervening Lexical Material

One of Rudin's arguments for the proposed constituent structure is the ability for lexical material such as adverbs, particles, or parenthetical phrases to interrupt the *wh*-word sequence. Rudin shows that in Bulgarian, no intervening clitic or adverb (such as *pruv* 'first') can interrupt the sequence of *wh*-phrases, as in (20):

(20a) Zavisi ot tova, **koj kogo *prŭv*** e udaril. *(B)*

depends on this who whom first has hit

'It depends on who hits whom first.'

(20b) *Zavisi ot tova, **koj *pruv* kogo** e udaril. *(Rudin, 1988: 467)*

In the grammatical example (20a), both *wh*-phrases are located in the embedded SpecCP and no intervening material separates the *wh*-phrases. By contrast, in languages such as Serbo-Croatian the adverb *prvi* 'first' may appear between the *wh*-words (21):

(21a) **Ko** je **koga *prvi*** udario? *(SC)*

who has whom first hit

'Who hit whom first.'

(21b) **Ko** je ***prvi* koga** udario? *(Rudin, 1988: 467)*

In the grammatical examples (21a) and (21b), the adverb *prvi* 'first' may or may not intervene between the *wh*-words. Rudin proposes that in languages such as Bulgarian all *wh*-phrases are in SpecCP. Rudin takes this to indicate that the *wh*-words form a constituent in Bulgarian (see (12a)), but not in languages like Serbo-Croatian (see (12b)).

As mentioned in footnote 3, instead of adopting Rudin's +MFS and –MFS theory, I assume that both CP and IP can have multiple specifiers (see Richards' theory, section 2.2.3 for further discussion). I argue that on this analysis intervening lexical material is a weak argument for classifying MWF languages (see chapter 3, section 3.5.1 for more discussion). I follow Rudin, however, in arguing that the presence or absence of Superiority effects signals a difference in structure between languages, and further, I assume that *wh*-islands are also a structural diagnostic, such that languages that allow multiple specifiers of CP have an 'escape hatch' in embedded CP, and therefore do not exhibit the *wh*-island constraint. The possibility of multiple *wh*-extraction proves to be a less reliable diagnostic for IP-absorption vs. CP-absorption languages, as we will see in chapter 4, section 4.4.1.

2.2.2 Bošković's Theory (1997, 1998, 2002)

Bošković focuses his attention on the contrast between Bulgarian and Serbo-Croatian Superiority effects, such as the facts we saw in 2.2.1.2.

(22a) **Koj$_i$ kogo$_j$** e **t$_i$** vidjal **t$_j$** ? *(B)*

who whom is seen

'Who saw whom?'

(22b) ***Kogo**$_j$ **koj**$_i$ e t_i vidjal t_j ? *(Bošković, 1997: 3)*

(23a) **Ko**$_i$ je **koga**$_j$ t_i video t_j ? *(SC)*

who is whom seen

'Who saw whom?'

(23b) **Koga**$_j$ je **ko**$_i$ t_i video t_j ? *(Bošković, 1997: 3)*

Bošković highlights that Rudin's (1988) classification was based only on simple clauses, such as those above. Contrary to Rudin's (1988) claim that Serbo-Croatian never exhibits ordering constraints, Bošković (1997, 1998, 2002) notes that Serbo-Croatian is subject to ordering constraints in certain contexts, which he argues follows from Superiority. Specifically, Bošković reports that Superiority effects emerge in multiple *wh*-extraction from embedded clauses:

(24a) **Ko** si **koga** tvrdio [da je istukao] ?[5] *(SC)*

who are whom claimed that is beaten

'Who did you claim beat whom?'

(24b) ***Koga** si **ko** tvrdio [da je istukao] ? *(Bošković, 1997: 5)*[6]

[5] Note that Bošković uses *turdio* 'claimed' instead of *tvrdio* for (24a). I take this to be a misprint and continue to use *tvrdio* throughout the Serbo-Croatian examples like (24a). Furthermore, throughout this thesis I have inserted traces in examples in order to clarify relevant aspects of the structure.

[6] This contradicts Rudin's (1988) claim that IP-absorption languages like Serbo-Croatian do not allow multiple *wh*-extraction, see section 2.2.1.3.

Moreover, CP-absorption languages show some freedom in the ordering of *wh*-phrases. For example, when a third *wh*-phrase is added in Bulgarian, the order of the non-initial *wh*-phrases is free:

(25a) **Koj *kogo* *kakvo*** e pital? *(B)*

who whom what is asked

'Who asked whom what?'

(25b) **Koj *kakvo kogo*** e pital?

(25c) ***Kogo kakvo* koj** e pital?

(25d) ***Kakvo* koj *kogo*** e pital? *(Bošković, 1995: 13-14)*

Attempting to unite the distinction between Bulgarian and Serbo-Croatian local Superiority effects, and the contrast in local vs. long-distance Superiority effects in Serbo-Croatian, Bošković (1997, 1998, 2002) develops a theory that captures these distinctions on the basis of where the feature driving movement is located and at what point in the derivation C is inserted.

Bošković argues that MWF is actually an epiphenomenon decomposable into two separate parts, *wh*-movement and focus-movement. He argues that *wh*-movement is subject to Superiority, while focus-movement is not. Bošković claims that the Superiority contrasts result in part from a difference in where the features driving movement resides. He claims that with *wh*-movement, the strong features driving movement reside in the attracting head, not on the elements being moved. In contrast, for focus-movement, Bošković claims that the strong features reside in the elements

undergoing movement. The following abstract configurations for *wh*-movement (26a) and focus-movement (26b) helps to illustrate their differences:

(26a) ***Wh*-movement**

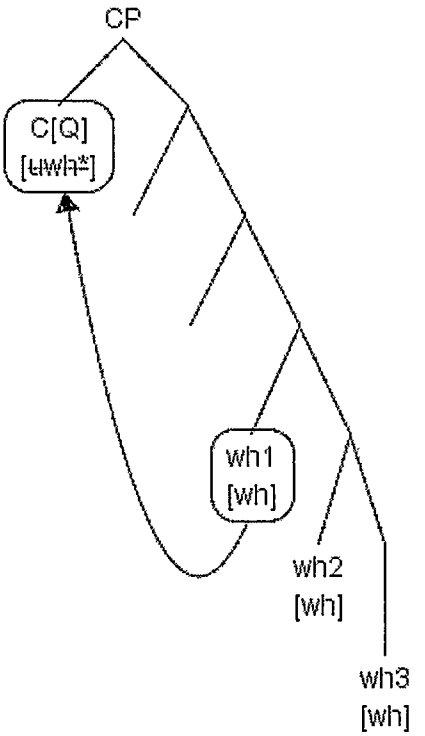
F	*wh*-phrase1	*wh*-phrase2	*wh*-phrase3
+wh	+wh	+wh	+wh
strong	weak	weak	weak

(26b) **Focus-movement**

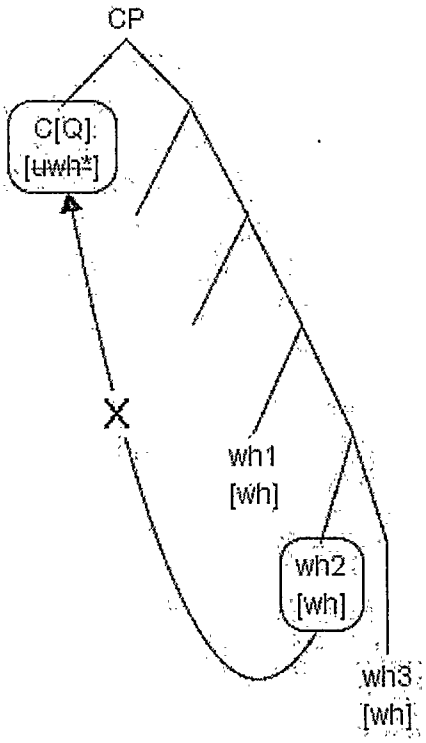
F	*wh*-phrase1	*wh*-phrase2	*wh*-phrase3
+focus	+focus	+focus	+focus
weak	strong	strong	strong

He argues that Superiority effects arise when the strong feature belongs to the attracting head, not when it belongs to the elements undergoing movement. When the strong [*u*wh*] feature resides on the attracting head, the closest phrase with a matching [wh] feature will always be the structurally highest *wh*-phrase (27a); if either *wh*2 or *wh*3 are fronted, it will be a violation of locality (27b):

(27a) *Wh-movement obeys locality*

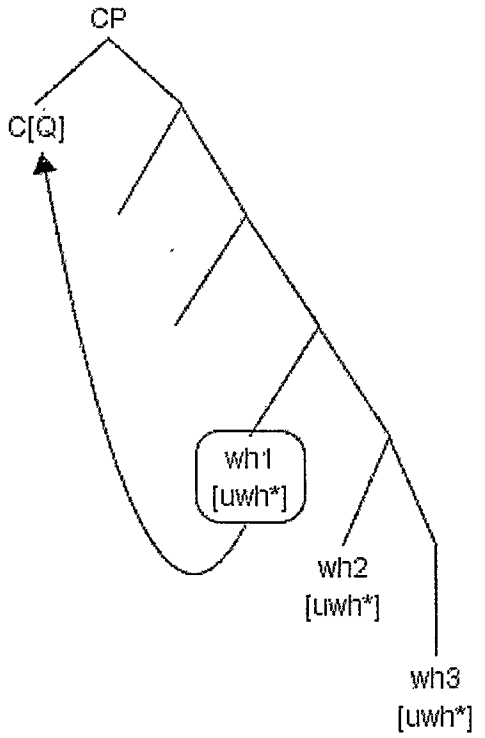


(27b) Wh-movement locality violation:

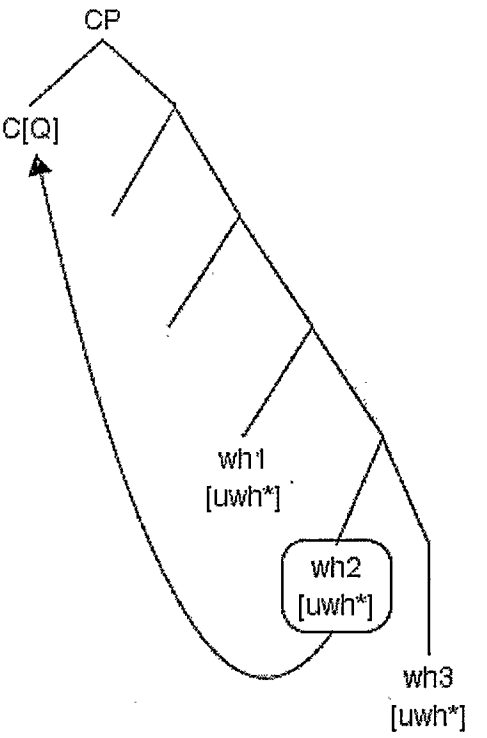


In contrast, Bošković claims that with focus-movement the strong feature resides on the elements undergoing movement, not on the C head. When C is merged, it is the closest target for all *wh*-phrases, simultaneously. Therefore, *wh*-phrases can move in any order without violating locality. The following illustrates how moving either *wh*1 (28a) or *wh*2 (28b) does not violate locality:

(28a) *Focus-movement wh1*



(28b) *Focus-movement wh2*



According to Bošković, Bulgarian *wh*-fronting exhibits Superiority effects since movement of the first *wh*-phrase is always *wh*-movement, not focus-movement. However, he claims that movement of additional *wh*-phrases in Bulgarian does involve focus-movement. Thus, the highest *wh*-phrase is subject to Superiority, with the other *wh*-phrases being freely ordered. In both local *wh*-movement (within a single clause, (29a-b) and (30a-b)) and long-distance *wh*-movement (across a clause boundary (31a-b))

the highest *wh*-phrase checks the strong [+wh] feature of interrogative C, while the other *wh*-phrases check their own strong focus features.

Bulgarian local wh-movement (within a single clause)

(29a) **Koj$_i$ kogo$_j$** **t$_i$** vižda **t$_j$** ?

who whom sees

'Who sees whom?'

(29b) ***Kogo$_j$ koj$_i$** e **t$_i$** vižda **t$_j$**?

Bulgarian wh1 wh2 wh3 movement

(30a) **Kto *kade kogo*** vidjal ?

who where whom saw

'Who saw whom where?'

(30b) **Kto *kogo kade*** vidjal?

Bulgarian long-distance wh-movement (across a clause boundary)

(31a) **Ko** si **kogo** tvrdio [da je istukao] ?

who are whom claimed that is beaten

'Who did you claim beat whom?'

(31b) ***Kogo** si **ko** tvrdio [da je istuako] ?

For Serbo-Croatian, Bošković claims that fronting the first *wh*-phrase is not necessarily driven by the need to check a strong [wh] feature of C. For local *wh*-movement, in (32) below, he argues that the interrogative C does not have a strong [wh] feature, unlike Bulgarian. Instead, he argues that Serbo-Croatian local *wh*-movement involves focus-movement, where the strong features reside on the elements being moved, which can therefore move in any order and not violate locality.

(32a) **Ko$_i$** je **koga$_j$** **t$_i$** video **t$_j$** ? *(SC)*

who is whom seen

'Who saw whom?'

(32b) **Koga$_j$** je **ko$_i$** **t$_i$** video **t$_j$** ? *(Bošković, 1997: 3)*

For long-distance movement in Serbo-Croatian, however, Bošković claims that movement is *wh*-movement, where the strong feature resides on interrogative C. Therefore, the highest *wh*-phrase must move first, or else a locality violation will result, as shown in (33a-b) below:

(33a) **Ko$_i$** si **koga$_j$** tvrdio [da **t$_i$** je istukao **t$_j$**]? *(SC)*

who are whom claimed that is beaten

'Who did you claim beat whom?'

(33b) ***Koga$_j$** si **ko$_i$** tvrdio [da **t$_i$** je istukao **t$_j$**]? *(Bošković, 1997: 5)*

To recap, Bošković accounts for the different behaviour of local and long-distance *wh*-movement in Serbo-Croatian by positing that locus of strong features differs in the two cases. He predicts, then, that Superiority effects will emerge whenever the interrogative C has a strong [wh] feature, which he claims is always the case in Bulgarian, and only in Serbo-Croatian long-distance and embedded *wh*-movement.

Although Bošković provides an account that predicts Superiority effects will emerge in languages with focus-movement and overt C insertion, his analysis does not outline any predictions beyond those of Superiority effects. Moreover, he provides no independent evidence for the proposed split between *wh*-moved and focus-moved *wh*-phrases, and there is no principled account of why matrix C would have a strong [wh] feature in long-distance cases, but not in local cases in Serbo-Croatian. Furthermore, Bošković's theory would not be able to distinguish between those cases where Superiority effects do emerge in Bulgarian local clauses, as in 4.3.1, and in Ukrainian local clauses, section 4.2. Ideally, a theory which can best account for the widest range of phenomena and make the greatest number of predictions should be the theory that is adopted. Therefore, we now turn to examine the predictions of Richards' (2001) theory of MWF languages.

2.2.3 Richards' Analysis (1997, 2001)

Richards (2001) outlines a theory that connects the absence of Superiority effects to the availability of A-scrambling. Building on Rudin's (1988) analysis, Richards proposes that the contrast between languages such as Bulgarian and Serbo-Croatian can be accounted for by dividing languages into CP-absorption and IP-absorption languages.

CP-absorption languages allow multiple specifiers of CP, and one specifier of IP, while IP-absorption languages allow multiple specifiers of IP, and only one specifier of CP.

Richards (2001) proposes a number of syntactic tests to distinguish between CP- and IP-absorption languages. These tests include:

(34) *Richards' (1997, 2001) diagnostics:*

	CP-ABSORPTION	IP-ABSORPTION
1. OBEYS LOCAL SUPERIORITY	+	-
2. SHOWS *WH*-ISLAND EFFECTS	-	+
3. SCRAMBLING REPAIRS WCO	-	+
4. *WH*-MOVEMENT REPAIRS WCO	-	+

I now briefly present Richards' theory on Superiority, followed by his arguments based on WCO in scrambling and in *wh*-movement. However, I do not review *wh*-islands here as Richards' theory does not differ much from the information in section 2.1.1, and in section 2.2.1.1. I return to WCO in scrambling and in *wh*-movement in chapter 3, and Superiority in chapter 4.

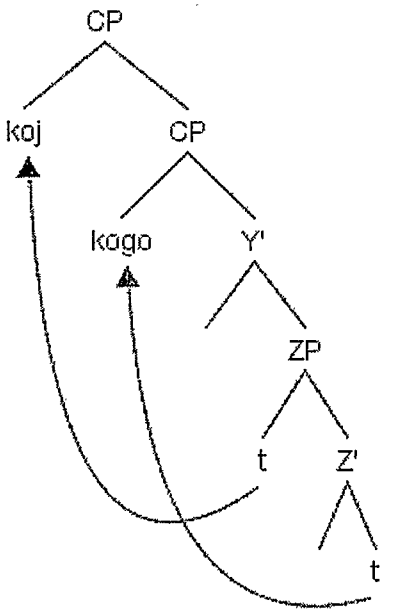
2.2.3.1 RICHARDS' ACCOUNT OF SUPERIORITY

Richards claims that Superiority effects are present for local movement in CP-absorption languages, but not in IP-absorption languages. He devises a theory which combines Featural Cyclicity (see chapter 1, section 1.1) and Shortest to account for the differing Superiority effects in Bulgarian and Serbo-Croatian. Essentially, Richards argues that the

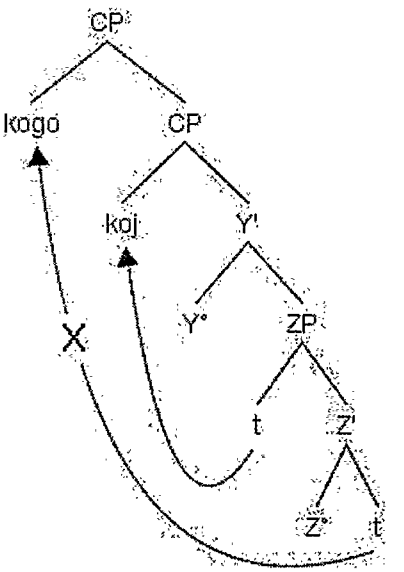
base c-command relations among *wh*-phrases will be maintained in CP-absorption languages, but not in IP-absorption languages.

In CP-absorption languages, like Bulgarian, the highest *wh*-phrase moves first to SpecCP, given Shortest, and the second *wh*-phrase "tucks in" beneath it, in a lower SpecCP. This is illustrated in (35a) for Bulgarian.

(35a) *Bulgarian Obeying Superiority*



(35b) Bulgarian disobeying Superiority



In short, Richards, claims that Superiority constrains multiple A-bar movements as derived from the combination of Featural Cyclicity and Shortest[7].

In contrast, Richards claims that A-movement does not (strictly speaking) obey Superiority. Therefore, IP-absorption languages do not exhibit local Superiority effects.

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[7] Richards' theory also makes predictions about the free orderings of *wh*2 and *wh*3. He argues that *wh*-phrases are subject to the Principle of Minimal Compliance (PMC) which basically states that once a certain dependency (D) obeys a constraint (C), any remaining elements with D can be ignored for obeying C. He argues that in the case of multiple *wh*-phrases, C first attracts the highest *wh*-phrase (*wh*1). At this point PMC renders the attractor C immune to Shortest and as a result, the leftover *wh*-phrases can be attracted in any order.

Richards (2001) argues that IP-absorption is driven by multiple attractors, so that tucking in does not apply. Others (Rackowski, 2002; Richards, 2008) argue instead that an object can move over a subject because of an "escape hatch" in Spec*v*P: the object can A-move to Spec*v*P before the subject Merges, so that the subject tucks in underneath the object. I will discuss these and other options in chapter 5. For now, let us simply grant that A-movement allows a lower *wh*-phrase to move over a higher one.

2.2.3.2 Scrambling Repairs WCO

Richards (2001) argues that IP-absorption languages allow local A-scrambling but CP-absorption languages only allow A-bar scrambling, if any. A-scrambling is movement to an A-position, which is a position that can act as a binder for anaphors and pronominal variables. As a result CP-absorption and IP-absorption languages differ with respect to binding effects such as weak crossover (WCO). So-called WCO effects arise when a variable pronoun (prn) is either not c-commanded by its operator antecedent, as in (36a), or when the antecedent c-commands the variable from an A-bar position as in (36b)[8]:

(36a) * [...**prn**$_i$]...XP$_i$

(36b) *XP$_i$...[...**prn**$_{i...}$]...t

Thus, an object operator cannot bind a variable contained in the subject, either from its base position or from an A-bar position c-commanding the variable. A-scrambling, however, can create new binding relations and thus repair WCO violations (37):

[8] An "operator" here is either a quantified DP (e.g. *every girl*; *no politician*) or a *wh*-phrase.

(37) XP_i …[…**prn**$_i$…]…t

Richards argues that IP-absorption languages allow A-scrambling generally. Thus, scrambling in IP-absorption languages is able to repair WCO violations:

(38a) ??Njegov$_i$ susjedi ne vjeruju **nijednom politicaru$_i$.** *(SC)*

his neighbours not trust no politician

'His neighbours trust no politician.'

(38b) **Nijednom politicaru$_i$** njegov$_i$ susjedi ne vjeruju **t** .

no politician his neighbours not trust

His neighbours trust no politician.'

(=No politician is trusted by his neighbours) *(Richards, 2001: 15)*

In contrast to IP-absorption languages, Richards argues that CP-absorption languages allow only A-bar scrambling, if any. Therefore, scrambling in CP-absorption languages is predicted not to be able to cure WCO violations, as illustrated in the Bulgarian example below:

(39a) *Majka mu$_i$ obicha **vseki chovek$_i$.** *(B)*

mother his love every person

'His mother loves everyone.'

(39b) ***Vseki chovek**$_i$ obicha majka mu$_i$ **t** .

every person love mother his

'His$_i$ mother loves everyone$_i$.' *(Richards, 2001: 15-16)*

See chapter 3, section 3.2 and 3.3, for more on WCO in scrambling and *wh*-movement respectively.

2.2.3.3 *WH*-MOVEMENT REPAIRS WCO

As mentioned in section 2.2.3.2, A-movement but not A-bar movement of an operator can repair WCO violations. If local *wh*-movement in IP-absorption languages is A-scrambling, it should remedy WCO violations. IP-absorption languages, such as Serbo-Croatian, do not display WCO effects in local *wh*-movement (40a-b). However, they do show WCO effects in long-distance *wh*-movement (40c).

(40a) **Tko**$_i$ __ voli **svoju**$_i$ majku

who loves self's mother

'Who$_i$ loves his$_i$ mother?'

(40b) **Koga**$_i$ voli **njegova**$_i$ majka __?

who loves his mother

'Who$_i$ does his$_i$ mother love?'

(40c) ***Koga$_i$ njegova$_i$** majka misli [da Marija voli __]? *(SC)*

who his mother thinks that Maria loves

'Who$_i$ does his$_i$ mother think that Mary loves?' *(Richards, 2001: 20)*

It is well known that A-scrambling is clause-bound (Saito, 1989; Webelhuth, 1989; Mahajan, 1990, inter alia). However, scrambling across a clause-boundary must be A-bar movement. Richards proposes that even in IP-absorption languages, Superiority effects emerge in long-distance *wh*-movement because this is A-bar movement, not A-movement as in local *wh*-movement. While it is appealing, this analysis is not quite complete, as I will discuss in chapter 5. However, it is clear that there is a contrast between IP-absorption and CP-absorption languages with respect to WCO effects in local *wh*-movement.

In CP-absorption languages, moving the *wh*-phrase over a pronoun involves only A-bar movement, and thus cannot cure a WCO violation even in local *wh*-movement, as shown in the Bulgarian examples in (41a-b):

(41a) **Koj$_i$** _ običa majka **si$_i$**?

who loves mother his

'Who$_i$ loves his$_i$ mother?'

(41b) *Kogo$_i$ običa majka su$_i$ __? *(B)*

who loves mother his

'Who$_i$ does his$_i$ mother love?' *(Richards, 2001: 19)*

To this end, Richards proposes a two-way implicational relation between A-scrambling and the absence of local Superiority effects. If a language allows A-scrambling, then Richards predicts that local *wh*-movement in this language will also lack Superiority effects. In contrast, if a language has no A-scrambling, then this language will exhibit Superiority effects. Richards applies his theory to data from Bulgarian and Serbo-Croatian, and to non-MWF languages such as Japanese, Chinese, German, English, and Hungarian. However, to my knowledge Richards does not remark on any other MWF languages, such as Russian or Ukrainian.

2.2.4 Russian Data & Analyses

While most of the work on Slavic MWF languages focuses on Bulgarian and Serbo-Croatian, other languages have also been investigated, including Russian, Polish, and Czech. For this thesis, I do not address either Polish or Czech, but see Dornisch (1998) and Atkey (1999) for theories of MWF in Polish and Czech respectively.

Rudin (1989) investigates the patterning of MWF constructions in Russian, including *wh*-islands, Superiority effects, intervening lexical material, and multiple *wh*-extraction from a clause. She notes that for the most part, Russian patterns along with IP-absorption languages such as Serbo-Croatian. In particular, Rudin found that, like IP-absorption languages, Russian exhibits *wh*-islands, as in (42), and disallows multiple *wh*-extraction, as in (43):

(42) *$\mathbf{Kto_i}$ ty ne znaeš, [gde $\mathbf{t_i}$ živet]? *(Rus)*

who you not know where lives

'Who don't you know where (he) lives?' *(Rudin, 1989: 114)*

(43) *$\mathbf{Čto_i}$ $\mathbf{kogda_j}$ vy xotite, čtoby ja prinesla $\mathbf{t_i}$ $\mathbf{t_j}$? *(Rus)*

what when you want SUBJ me bring

'What do you want me to bring when?' *(Rudin, 1989: 113)*

However, Rudin notes that Russian also displays characteristics of CP-absorption languages; specifically, she claims that Russian exhibits Superiority effects, as in (44):

(44a) $\mathbf{Kto_i}$ $\mathbf{kogo_j}$ $\mathbf{t_i}$ udaril $\mathbf{t_j}$? *(Rus)*

who whom hit

'Who hit whom?'

(44b) *$\mathbf{Kogo_j}$ $\mathbf{kto_i}$ $\mathbf{t_i}$ udaril $\mathbf{t_j}$? *(Rudin, 1989: 115)*

Since Russian does not have any second-position clitics, Rudin claims that clitics cannot be used to determine whether lexical material can intervene between fronted *wh*-phrases. Instead, Rudin tests intervening lexical material in Russian using the conditional

by, which she says can occur in either postverbal or clause-second position. The clause-second option supports an IP-absorption analysis.

(45a) **Kuda** by **kto** pošel? *(Rus)*

where COND who went

'Who would go where?'

(45b) ***Kuda kto** by pošel? *(Rudin, 1989: 112)*[9]

Rudin categorizes Russian as an IP-absorption language, like Serbo-Croatian, despite the "lack of evidence from clitics and ...questionable significance of *wh*-word order" (115). Aside from commenting that Superiority effects in Russian are of "questionable significance" she does not offer an analysis of these effects.

With respect to Russian Superiority effects, there seems to be quite a bit of disagreement, which may or may not result from dialect differences. Meyer (2004), Rudin (1989), and Karpacheva (1998) claim that Russian does, in fact, have *wh*-order preferences, with a preference for subject > object ordering. While neither Meyer nor Rudin develop an analysis that accounts for the Superiority effects in Russian, Karpacheva follows Hornstein (1995) in claiming that Superiority effects in Russian are actually manifestations of Weak Crossover (WCO). However, Karpacheva's analysis does not make predictions for MWF languages outside of WCO and Superiority effects. I refer interested readers to Karpacheva (1998).

[9] The gloss for this example comes from a native Russian speaker, as Rudin does not provide any glosses for her examples in her (1989) paper.

Other authors, such as Strahov (2001) claim that the ordering of *wh*-phrases in Russian is completely free except for the one requirement that a D(iscourse)-linked *wh*-phrase (such as *which*) must precede a non-D-linked one. Others such as Citko (1997), Grebanyova (2003), King (1995), and Mezhevich (2006) note no Superiority effects, while Stepanov (1998) notes that only the sequence *to kto* 'what-ACC who-NOM' is ungrammatical.

In general the evidence suggests that Russian is an IP-absorption language. For example, Mezhevich (2006) argues that apart from apparent WCO effects in *wh*-movement constructions, Russian patterns like an IP-absorption language. Although Mezhevich does not provide a detailed account of the WCO facts, she suggests that focus may play a key role in the ungrammaticality of Russian WCO *wh*-movement cases. In fact, there does not seem to be a consensus with respect to WCO effects in Russian *wh*-movement. For example, unlike Mezhevich, Nossalik (2005) claims that *wh*-movement can repair WCO:

(46) **Kogo$_i$** ljubit **ego$_i$** podruga **t$_i$**? *(Rus)*

whom-ACC loves [his girlfriend]-NOM

'Whom$_i$ does his$_i$ girlfriend love? *(Nossalik; 2005: 7)*

While the Russian data seem to elude consensus, I will nevertheless attempt to capture the Russian Superiority facts under my theory; see section 5.3.1.

2.3 CONCLUSION

While many different theories have been proposed, the most empirically well-grounded view is that Slavic MWF languages can be classified into one of two types of languages, CP-absorption and IP-absorption languages, depending on how they pattern with respect to certain characteristics, including Superiority, *wh*-islands, and WCO effects in scrambling and *wh*-movement. The goal of the following chapters will be to examine several different cases of multiple *wh*-fronting in Ukrainian. I will show how previous theories of MWF languages fail to account for the Ukrainian data presented in chapters 3 and 4, and I will offer my own analysis of these facts in chapter 5.

CHAPTER 3

UKRAINIAN AS AN IP-ABSORPTION LANGUAGE

3.0 INTRODUCTION

As mentioned in the previous chapter, Rudin (1988, 1989) and Richards (1997, 2001) propose certain diagnostics for dividing MWF languages into two groups, IP-absorption languages and CP-absorption languages. These diagnostics have become widely used to analyze how a particular language patterns. The focus of this chapter is to examine the subset of these diagnostics in Ukrainian which conform to the standard binary division of multiple *wh*-fronting languages. Specifically, this chapter will examine those respects in which Ukrainian patterns unambiguously like an IP-absorption language. To this end, this chapter will present data on weak crossover in scrambling and *wh*-movement, *wh*-islands and intervening lexical material in Ukrainian.

3.1 A/A-BAR DIAGNOSTICS & PROPERTIES

As mentioned in chapter 2, section 2.2.3, Richards (2001) develops an account that relates properties of A- and A-bar movement, scrambling, *wh*-movement and the division between CP-absorption and IP-absorption languages. A- and A-bar positions have different properties including binding characteristics. On the standard assumption that movement to a CP level is A-bar movement, and movement to an IP level is A-movement, Richards argues that those languages in which *wh*-movement displays properties of A-movement are IP-absorption languages, while languages in which *wh*-movement displays properties of A-bar movement are CP-absorption languages. The standard claim in the

literature is that A-movement, but not A-bar movement, is able to create new binding relations. For example, the weak crossover (WCO) test is often used to determine whether or not movement is A- or A-bar movement. Compare the following sentences in English. In (1), A-bar movement of an operator across a coindexed pronoun gives rise to WCO effects in English, such as the following:

(1) ??[Which boy]$_i$ does [$_{NP}$ his$_i$ mother] like t$_i$?

Here, the coindexed pronoun *his* is A-bar bound by the *wh*-operator *which.*

In contrast, A-movement of an operator across a coindexed pronoun does not give rise to WCO effects, as in (2) below.

(2) [Every boy]$_i$ seems to [$_{NP}$ his$_i$ mother] [$_{IP}$ t$_i$ to be intelligent]

Here, the pronoun *his* is A-bound by *every boy,* and since A-bound variables do not give rise to WCO effects, the sentence is well formed.

Weak crossover is simply one type of crossover. While we saw in (1) above that A-bar movement across a bound variable produces WCO effects, strong crossover (SCO) is a violation involving A-bar movement of one phrase over a coindexed phrase. SCO violation is typically judged worse than WCO violations.

Strong Crossover (SCO)

(3) *Who$_i$ did he$_i$ see t$_i$

I focus only on WCO effects in this thesis, and leave aside SCO effects.

If *wh*-movement creates new binding relations, Richards concludes that it is A-movement to a specifier of IP. In contrast, if *wh*-movement creates no new binding relations, as in English, he concludes that it is A-bar movement to a specifier of CP. Therefore, the presence or absence of the WCO effect can be taken as an indicator of a movements' A- or A-bar status.

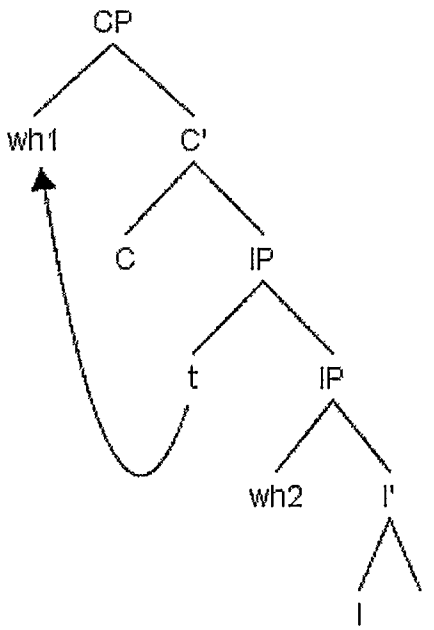
This chapter is outlined as follows. Section 3.2 will examine WCO in scrambling from the previous literature, focusing on Bulgarian, Serbo-Croatian, and Russian. In section 3.2.1 I present the Ukrainian data for WCO in scrambling. Section 3.3 will examine WCO in *wh*-movement from the previous literature, focusing on Bulgarian, Serbo-Croatian, and Russian. In section 3.3.1 I present the Ukrainian data for WCO in *wh*-movement. Section 3.4 will examine *wh*-islands in previous literature, focusing on Bulgarian, Serbo-Croatian, and Russian. In section 3.4.1 I present Ukrainian data on *wh*-islands, including arguments that cast doubt on long-distance *wh*-extraction in Ukrainian. In section 3.5 I present data on intervening lexical material. Finally, in 3.6 I summarize the main points in this chapter, and outline the approach for chapter 4.

3.2 Weak Crossover and Scrambling

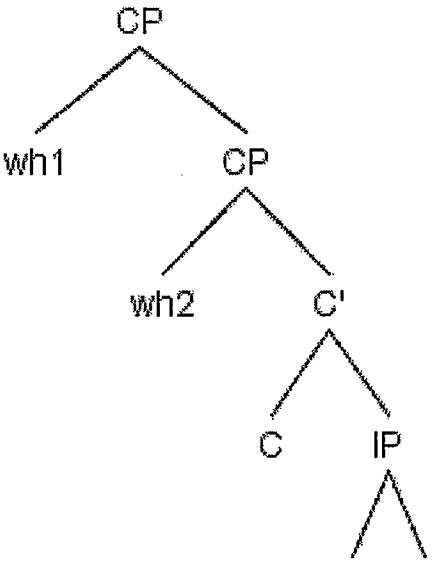
As mentioned in section 2.2.3.2, Richards (2001) argues that IP-absorption languages allow local A-scrambling, but CP-absorption languages only allow A-bar scrambling, if any. Since A-scrambling is scrambling to an A-position, it can create new binding relations. In contrast, A-bar scrambling is unable to do so. Therefore CP-absorption and IP-absorption languages differ with respect to weak crossover (WCO) effects

As we saw, in WCO violations an object operator cannot bind a subject variable, either from its base position or from an A-bar position c-commanding the variable. A-scrambling, however, can create new binding relations and thus repair WCO violations. Richards (1997, 2001) argues that IP-absorption languages allow local A-scrambling, but CP-absorption languages only allow A-bar scrambling, if any. (4a) illustrates a simple tree of the SpecIP position (IP-absorption language), and (4b) illustrates a simple tree of the SpecCP position (CP-absorption language).

(4a) *Specifier of IP*



(4b) *Specifier of CP*



Several analyses have been proposed for how the object is able to scramble over the subject in IP-absorption languages. One possibility, put forth by Richards' (2008), is that there is an 'escape hatch' in Spec*v*P in which the object is able to move to, making the object the closest for further movement (see chapter 5, section 5.3.2 for further discussion). Another possibility, which I adopt (see chapter 5, section 5.3.2), is that IP-

absorption languages allow an object to scramble over a subject if the object has a [focus] feature that the subject lacks. I° then attracts the closest [focus] feature, which is the object, obeying Shortest.

Since Richards proposes that IP-absorption languages allow A-scrambling generally, object scrambling in these languages should be able to repair WCO violations. Serbo-Croatian uses A-scrambling as a repair strategy for WCO violations:

(5a) ??Njegov$_i$ susjedi ne vjeruju **nijednom politicaru$_i$.** *(SC)*

his neighbours not trust no politician

'His neighbours trust no politician.'

(5b) **Nijednom politicaru$_i$** njegov$_i$ susjedi ne vjeruju **t** .

no politician his neighbours not trust

'His neighbours trust no politician.' *(Richards, 2001: 15)*

(=No politician is trusted by his neighbours)

In the ungrammatical example (5a) above, the object *nijednom politcarui* 'no poilitician' cannot bind the subject variable *njegov susjedi* 'his neighbours' from its base position. In (5b), however, the object *nijenom politicaru* 'no politician' moves over the subject *njegov susjedi* 'his neighbours' and in doing so makes the variable binding grammatical. As mentioned previously, the ability to establish new binding relations, and in particular to repair WCO violations, is considered a property of A-movement. Under the standard assumption that SpecIP is an A-position, the grammaticality of (5b) can be taken to indicate that the object *nijednom politicaru* 'no politician' moves to SpecIP.

Recent work by Mezhevich (2006) found that Russian also patterns like Serbo-Croatian in that Russian uses A-scrambling as a repair strategy for WCO violations, as in the following:

(6a) *Ego$_i$ mama ljubit **kazdogo mal'cika$_i$**. *(Rus)*

mother loves every boy

'His$_i$ mother loves every boy$_i$.'

(6b) **Kazdogo mal'cika$_i$** ljubit **t** ego$_i$ mama.

every boy loves his mother

'Every boy$_i$, his$_i$ mother loves.' *(Mezhevich, 2006: 203)*

Mezhevich notes that when the object *kazdogo mal'cika* 'every boy' moves into a position from which it c-commands the subject, as in (6b), the variable binding becomes grammatical. This suggests that in (6b), the object A-scrambles to SpecIP. Like Serbo-Croatian, Russian therefore patterns as an IP-absorption language.

In contrast to IP-absorption languages, Richards claims that CP-absorption languages allow only A-bar scrambling, if any. Therefore, scrambling in CP-absorption languages should not be able to cure WCO violations, as illustrated in the Bulgarian example below:

(7a) *Majka mu_i obicha **vseki chovek$_i$.** *(B)*

mother his love every person

'His mother loves everyone.'

(7b) ***Vseki chovek$_i$** obicha majka mu_i **t**

every person love mother his

'His$_i$ mother loves everyone$_i$.' *(Richards, 2001:15-16)*

Just as in the Serbo-Croatian and Russian examples above, (7a) in Bulgarian is ungrammatical because the subject pronoun *majka mu* 'his mother' cannot be interpreted as bound variable since at no point in the derivation is it c-commanded by its antecedent, the object *vseki choveki* 'every person.' Unlike the IP-absorption examples above, when the object *vseki chovek* 'every person' in Bulgarian moves over the subject *majka mu* 'his mother,' the sentence remains ungrammatical (7b). This indicates that the object undergoes A-bar scrambling, and therefore, is not able to create new binding relations. Following Richards, I will assume that A-bar scrambling is movement to SpecCP.

3.2.1 The Data: WCO and Scrambling in Ukrainian

Following Richards' (2001) proposal that only IP-absorption languages allow A-scrambling, we can use WCO to test whether or not Ukrainian is an IP-absorption or CP-absorption language. As it turns out, Ukrainian patterns like Serbo-Croatian and Russian in that it uses local A-scrambling as a repair strategy for WCO violations, as in the examples below:

(8a) ***Yioho**$_i$ mama **kožnoho**$_i$ ljubit.

his mother everyone loves

'His$_i$ mother loves everyone$_i$.'

(8b) **Kožnoho**$_i$ ljubit **yioho**$_i$ mama $\mathbf{t}_i$.

everyone loves his mother

'His$_i$ mother loves everyone$_i$.'

The grammaticality of (8b) indicates that the object *koznoho* 'everyone' is able to create new binding relations when it moves over the subject containing the bound variable *yioho mama* 'his mother.' This indicates that the object A-scrambles into SpecIP, suggesting that Ukrainian patterns as an IP-absorption language.

3.3 Weak Crossover and *Wh*-movement

As mentioned in section 3.2, A-movement but not A-bar movement of a quantifier phrase (QP) can repair WCO violations. Furthermore, while languages can differ with respect to clause bound scrambling, which may be either A-scrambling or A-bar scrambling, it has been shown that long-distance scrambling is always A-bar scrambling (e.g. Saito, 1989; Webehuth, 1989; Mahajan, 1990; McGinnis, 1998).

If local (clause-bound) *wh*-movement in IP-absorption languages can be A-scrambling it should remedy WCO violations. As predicted, IP-absorption languages, such as Serbo-Croatian, display WCO effects only in long-distance *wh*-movement (since this is an instance of A-bar movement), but not in local *wh*-movement (since this is an

instance of A-movement). Examples (9a-b) show that Serbo-Croatian does not exhibit WCO violations locally, but does display them in long distance *wh*-movement (9c):

(9a) **Tko**$_i$ __ voli **svoju**$_i$ majku? *(SC)*

who loves self's mother

'Who$_i$ loves his$_i$ mother?'

(9b) **Koga**$_i$ voli **njegova**$_i$ majka __?

who loves his mother

'Who$_i$ does his$_i$ mother love?'

(9c) ***Koga**$_i$ **njegova**$_i$ majka misli da Marija voli __?

who his mother thinks that Maria loves

'Who$_i$ does his$_i$ mother think that Mary loves?' *(Richards, 2001: 20)*

The grammaticality of (9b) indicates that local *wh*-movement of the object *koga* 'who' over the subject *njegova majka* 'his mother' involves A-movement. In contrast, Richards argues the ungrammaticality of (9c) results because long-distance movement of *wh*-phrases must always be A-bar movement. This is because such phrases must move through the embedded SpecCP in order to escape the embedded clause, as per the PIC as mentioned in chapter 1, section 1.1. Since SpecCP is an A-bar position, subsequent movements must also be A-bar, on the standard assumption that A-movement following A-bar movement is "improper movement" (e.g. Müller and Sternefeld, 1993). Therefore,

movement of *koga* 'who' cannot move directly from an A-position in the embedded clause to the matrix SpecIP, but rather it must stop at the embedded SpecCP first, then A-bar scramble into the matrix clause. This explains why long-distance *wh*-movement induces WCO effects even in IP-absorption languages.

In contrast, in CP-absorption languages, such as (10b), moving the *wh*-phrase over the pronoun is A-bar movement and thus cannot cure WCO violations, as shown in the Bulgarian examples in (10a-b):

(10a) **Koj$_i$** __ običa majka **si$_i$**? *(B)*

who loves mother his

'Who$_i$ loves his$_i$ mother?'

(10b) ***Kogo$_i$** običa majka **su$_i$** __?

who loves mother his

'Who$_i$ does his$_i$ mother love?' *(Richards, 2001: 19)*

With respect to Russian and WCO in *wh*-movement there seems to be some conflict of data. While Nossalik (2005) claims that *wh*-movement in Russian is able to cure WCO violations, as in (11). Mezhevich (2006) argues that *wh*-movement does not repair WCO violations, as in (12).

(11) **Kogo$_i$** ljubit **ego$_i$** podruga **t$_i$**? *(Rus)*

whom-ACC loves [his girlfriend]-NOM

'Whom$_i$ does his$_i$ girlfriend love? *(Nossalik, 2005: 7)*

(12) ***Kogo$_i$** ljubit **ego$_i$** mama **t$_i$**?[10] *(Rus)*

who loves his mother

'Who$_i$ does his$_i$ mother love?' *(Mezhevich, 2006: 209)*

Under the assumption that CP-absorption languages allow only A-bar movement of *wh*-phrases, and IP-absorption languages allow local A-movement of *wh*-phrases, we can now use WCO in *wh*-movement to test whether Ukrainian behaves as a CP-absorption or IP-absorption language.

3.3.1 WCO AND *WH*-MOVEMENT IN UKRAINIAN

Local *wh*-movement in Ukrainian repairs WCO violations, as shown in (16a-b), indicating that local *wh*-movement can involve a step of A-movement. Therefore, Ukrainian patterns once again as an IP-absorption language.

(13a) **Kto$_i$** __ ljubit **svoju$_i$** cectru?

who loves self's sister

'Who$_i$ loves his$_i$ sister?'

[10] Mezhevich's dissertation contains a typo in which the object originates above the subject in (12). I have corrected this example in my thesis.

(13b) **Koho$_i$** ljubit **yioho$_i$** sestra __?

who loves his sister

'Who$_i$ does his$_i$ sister love?'

In long-distance WCO and scrambling, Ukrainian patterns as we would expect, with long-distance variable binding ungrammatical, under the assumption that A-bar movement followed by A- movement is 'improper.'

(14) ***Koho$_i$,** na dymky **yoho$_i$ mami,** ljubit Vira t ?

whom, think his mother loves Vera

'Who$_i$ does his$_i$ mother think that Vera loves?'

The results from WCO in scrambling and WCO in *wh*-movement in Ukrainian indicate that Ukrainian exhibits both local A-scrambling and local A-movement of *wh*-phrases. This provides support for Richards' proposal that in IP-absorption languages, *wh*-movement and scrambling belong to the same movement type. These diagnostics indicate that Ukrainian is an IP-absorption language.

3.4 *WH*-ISLANDS

As mentioned in chapter 2, section 2.1.1, *wh*-islands are another diagnostic used by both Rudin (1988) and Richards (1997, 2001) to determine whether or not languages allow multiple CP-absorption of *wh*-phrases. The standard account of *wh*-islands is based on the idea that SpecCP is an obligatory escape hatch for movement out of an embedded CP,

which can be captured by adopting the PIC. Recall that under the PIC, aside from its' specifier, anything in the phase is inaccessible and is sent off to Spell-Out after the phase is built up. Therefore, *wh*-phrases must stop in intermediate specifiers of CP on their way to their 'ultimate destination,' such as in the example below, repeated from chapter 2:

(15) [$_{CP}$ **What** do you think [$_{CP}$__ (that) he'll say [$_{CP}$__ (that) we should buy ___]]

Here, the *wh*-phrase *what* has raised to the embedded specifier of CP, and then moves into the matrix specifier of CP, with no violation of the PIC.

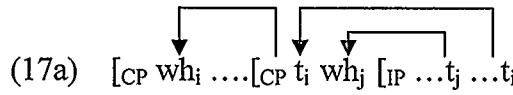
In contrast, when a *wh*-phrase cannot stop at an intermediate specifier of CP (because it is blocked by another *wh*-phrase) the result is ungrammaticality, as in the following example:

(16) *[$_{CP3}$ **What** did Mary ask [$_{CP2}$ **who** said [$_{CP1}$__ that Bill had bought ___]]?

In (16), even though *what* can move to SpecCP1, it cannot move to SpecCP2 since that specifier is occupied by *who*. Within Minimalist theory, movement of *what* to SpecCP3 will then violate the PIC. The PIC insures that a *wh*-phrase is inaccessible to operations above CP2 unless it first moves to SpecCP2.

Languages which allow multiple specifiers of CP are predicted not to exhibit *wh*-island effects, since *wh*-phrases always have the option of moving into an embedded specifier of CP, as schematized in (17a) below. By contrast, if IP-absorption languages

allow only one specifier of CP, these languages should exhibit *wh*-island effects, illustrated in (17b) below:



(17a) $[_{CP}\ wh_i \ldots.[_{CP}\ t_i\ wh_j\ [_{IP} \ldots t_j \ldots t_i \ldots]]]$ CP-absorption: Bulgarian

(17b) $*[_{CP}\ wh_i \ldots.[_{CP}\ wh_j \ldots [_{IP} \ldots\ t_j \ldots t_i \ldots]]]$ IP-absorption: Serbo-Croatian

Following Rudin (1988), Richards (2001) proposes that movement out of an embedded question is not allowed in IP-absorption languages, because they have only one specifier of CP. This is illustrated with the Serbo-Croatian example below:

(18) ***Šta** si me pitao [**ko** t može da uradi t] ? *(SC)*

what aux-2ND.SG me asked who can to do

'What have you asked me who can do?' *(Richards,1997: 38, from Rudin 1988: 457)*

However, while Serbo-Croatian exhibits *wh*-islands, Bošković (1995) observes (contra Rudin, 1988) that multiple *wh*-movement out of a non-*wh*-clause is possible in Serbo-Croatian:

(19) **Ko** si **koga** tvrdio da t je istukao t ? *(SC)*

who AUX whom claimed that AUX beaten

'Who did you claim beat whom?' *(Bošković, 1995: 8)*

Richards argues that even IP-absorption languages may have multiple specifiers of CP at some point in the derivation as long as no more than a single specifier remains at the end of the derivation. However, this requires that IP-absorption languages have strong "look ahead" qualities which can be problematic. I refer readers to Richards (2001), chapter 5, section 2.6.2.2.1 for a further discussion of his theory. I return to the facts presented in (19) in chapter 4.

In contrast to IP-absorption languages, Richards argues that MWF CP-absorption languages allow multiple specifiers of CP and therefore do not exhibit *wh*-island effects. This is illustrated by the Bulgarian example below[11]:

(20) **Koj$_i$** se optivat de razberat **kogo$_j$** **t$_i$** e ubil **t$_j$** ?[12] *(B)*

who SELF try to find-out whom AUX killed (Richards, 1997; 41)

In multiple *wh*-extraction from embedded interrogative clauses, SpecCP is a necessary escape hatch for CP-absorption languages. As a result, *kogo* 'whom' in the Bulgarian example is able to move into the embedded SpecCP, which is also occupied by *koj* 'who.' This is expected if in these languages any number of *wh*-phrases can move into the embedded SpecCP.

Mezhevich (2006) argues that Russian is an IP-absorption language, allowing only one specifier of CP. In (21) below, the ungrammaticality is expected if we assume Russian has only one specifier of CP which is already occupied by *kto* 'who,' and

[11] Richards argues that in CP-absorption languages, like Bulgarian, speakers prefer crossing to nested paths for non-D-linked *wh*-words.
[12] Richards (1997) does not provide a translation for (24).

therefore, the relative pronoun *kotoryj* 'which' cannot move out of the embedded interrogative clause:

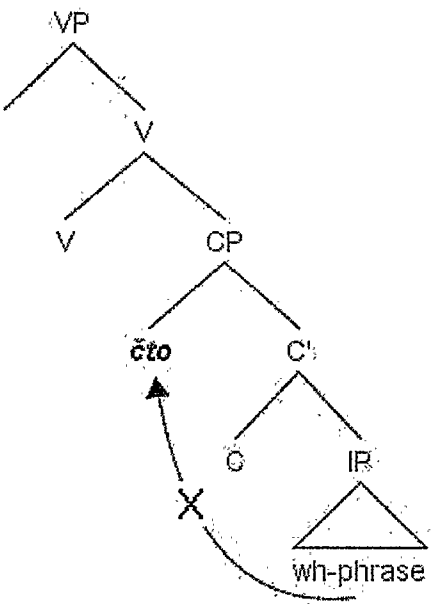
(21) *Ja videla dom, **kotoryj$_j$** mne interesno [**kto$_i$** prodajet **t$_j$**]. *(Rus)*

I saw house which me interesting who sells

'I saw a house, which I wonder who sells.' *(Mezhevich, 2006; 199)*

In Russian, extraction even out of an embedded declarative indicative clause is ungrammatical. Mezhevich (2006) argues that this is because Russian allows only one specifier of CP and the indicative "complementizer" actually occupies SpecCP. Therefore, no *wh*-phrase can move out of an embedded clause since the embedded SpecCP position is already occupied by a complementizer *čto*, as illustrated in (22).

(22) *Wh-movement out of embedded indicative (Mezhevich, 2006; 216)*



Mezhevich argues that unlike the indicative complementizer occupying SpecCP, the subjunctive occupies C, and not SpecCP. Therefore, *wh*-movement is possible out of an embedded subjunctive clause. I return to Mezhevich's analysis of the indicative vs. subjunctive complementizer distinction in section 3.4.2.2.

3.4.1 *WH*-ISLANDS IN UKRAINIAN

Ukrainian exhibits *wh*-island violations, indicating that it does not have multiple specifiers of CP for *wh*-phrases to use as an 'escape hatch'. In the example below, *kotru* 'which' is blocked from moving into the higher clause by the *wh*-word *kto* 'who' which is already occupying the embedded specifier of CP. Therefore, Ukrainian patterns as an IP-absorption language in that it does not permit *wh*-island violations.

(23) *Ya bachiv knihu [**kotru**$_j$ ya zdivuvannya [**kto**$_i$ napicav **t**$_j$]]?

I saw book which I wonder who wrote

'I saw a book which I wonder who wrote'

Rudin (1989) also provides evidence where extraction from *wh*-islands is ungrammatical in Ukrainian:

(24) *Tse ta zinka, [**kotra**$_i$ ja tobi kazav, [**de** **t**$_i$ zyve]].

this is woman which I you said where lives

'This is the woman who I told you where lives'

This supports the conclusion that Ukrainian is an IP-absorption language, with only one specifier of CP.

3.4.2 APPARENT LACK OF LONG-DISTANCE MOVEMENT

As we have seen, evidence from *wh*-islands indicates that Ukrainian allows only one specifier of CP, and therefore, it patterns as an IP-absorption MWF language. However, there is a possibility that the ungrammaticality of the *wh*-islands in Ukrainian is not a result of a blocked specifier of CP. In many languages, such as English, *wh*-questions have the interesting property that the *wh*-movement operation may apply across a clausal boundary. There seems to be some reason to believe that Ukrainian does not permit long distance *wh*-movement at all. A *wh*-phrase in an embedded clause is strongly ungrammatical when it is extracted into the matrix clause, as in the following example:

(25a) Olena zaperechela, ščo Vira ljubit Petra.
Olen deny *that Vera loves Peter*
'Olena denied that Vera loves Peter.'

(25b) ***Koho*** Olena zaperechela, ščo Vira ljubit?
who *Olena deny* *that Vera loves*
'Whom did Olena deny that Vera loves?'

Speakers found (25b) to be ungrammatical, indicating that Ukrainian may not allow long-distance or embedded *wh*-movement. There are two possible theories to

account for this. The first is Mezhevich's (2006) indicative "complementizer" in SpecCP, which I use to show that only *wh*-extraction from subjunctives is grammatical in Ukrainian (as I discuss below), and the other is Richards' theory of Sequence of Tense (SOT) and *wh*-movement, which I discuss in 3.4.2.2.

3.4.2.1 Indicative vs. Subjunctive Complementizers

It has long been known that in Russian, *wh*-movement out of indicatives is problematic, but *wh*-movement out of subjunctives is acceptable (e.g. Bošković, 2004). Russian disallows extraction of *wh*-phrases out of indicative complement clauses, as follows:

(26a) Anna dumajet, [*čto* Liza ljubit Feliksa].
Anna thinks IND Liza loves Felix
'Anna thinks that Liza loves Felix.'

(26b) ??(*)**Kogo** Anna dumajet, [*čto* Liza ljubit **t**]?
who Anna thinks IND Liza loves
'Whom does Anna think that Liza loves?'

Thus, the sentence in (26b) is marginal or ungrammatical in Russian. However, extraction out of subjunctive complement clauses is allowed:

(27a) Anna xočet, [*čtoby* Liza ljubi-l-a Feliksa].
Anna wants SUBJ Liza love-PAST Felix
'Anna wants Liza to love Felix.'

(27b) **Kogo** Anna xočet, [*čtoby* Liza ljubi-l-a **t**]?

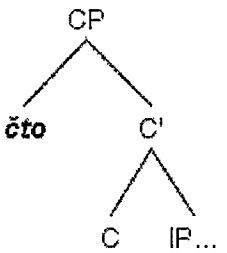
who Anna wants SUBJ Liza love-PAST

'Who does Anna want Liza to love?'

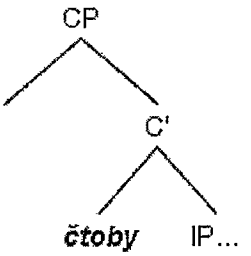
Mezhevich (2006) proposes an analysis of the Russian indicative/ subjunctive distinction whereby the different behaviour of the indicative and subjunctive *wh*-movement is due to the nature of the complementizer. Mezhevich proposes that in Russian the indicative "complementizer" *čto* is actually a *wh*-word 'what' which is merged in SpecCP[13]. In contrast, she argues that the subjunctive complementizer *čtoby* is a genuine complementizer in C. Figure (28a) illustrates the posited position of *čto*, while (28a) illustrates the position of *čtoby*:

Russian Indicative vs. Subjunctive complementizers (Mezhevich, 2006; 215)

(28a) Indicative



(28b) Subjunctive

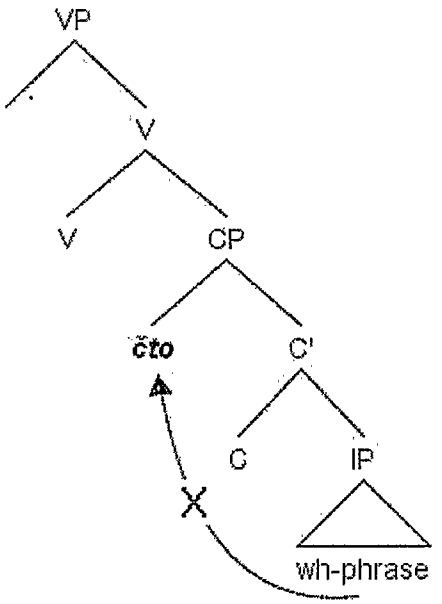


Mezhevich (2006) accounts for the problematic indicative *wh*-movement as follows. She argues, on the basis of Superiority and WCO effects, that Russian is an IP-

[13] The Russian indicative "complementizer" *čto* is morphologically identical to the Russian *wh*-word for *what*.

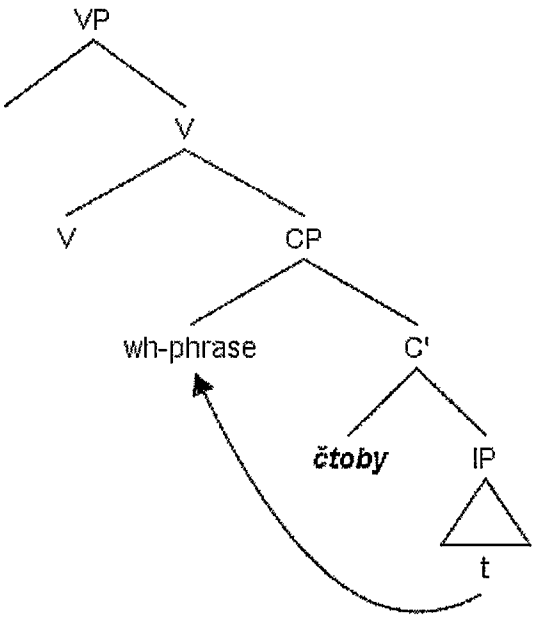
absorption language, which therefore allows only one *wh*-word to move into the specifier of CP. If, as Mezhevich claims, the complementizer *čto* is a *wh*-word in SpecCP, then *wh*-word extraction from this CP would result in a *wh*-island violation, since the extracted *wh*-word would skip a filled SpecCP (occupied by *čto*), as illustrated in (29):

(29) Wh-movement out of embedded indicative clause (Mezhevich, 2006: 216)



In contrast, Mezhevich argues that *wh*-movement out of an embedded subjunctive clause is acceptable since *čtoby* is a true complementizer and thus occupies C. *Wh*-movement out of the embedded clause will thus not be moving past any filled SpecCP, so no *wh*-island violation will occur. The proposed structure for *wh*-movement out of an embedded subjunctive clause is illustrated in (30):

(30) Wh-movement out of an embedded subjunctive (Mezhevich, 2006: 216



With respect to the grammaticality of Ukrainian *wh*-movement out of an embedded indicative, the general pattern seems to be that the Ukrainian complementizer *ščo*, which is morphologically identical to the word *what* in Ukrainian, renders the sentence unacceptable[14]. The Ukrainian sentences, equivalent to the Russian indicatives, are given below in (31a-b):

[14] Note the corresponding sentence to (31b) without the complementizer *ščo* is perfectly acceptable:

(i) c: Koho, hadaye Olena, ljubit Vira?
who thinks Olena loves Vera
'Whom does Olena think that Vera loves?'

While most speakers found the indicative complementizer in (31b) to be ungrammatical '*' there was one speaker, 'L', who accepted the above sentence as perfectly grammatical '*ok.*' This is also true in Russian (e.g. Mezhevich, 2006).

Ukrainian wh-movement out of indicatives:

(31a) Olena hadaye [*ščo* Vira ljubit Andriya].

Olena thinks IND Vera loves Andre

'Olena thinks that Vera loves Andre.'

(31b) ***Koho**$_i$*, Olena hadaye, [*ščo* Vira ljubit t_i]?

who Olena thinks IND Vera loves

'Whom does Olena think that Vera loves?'

Contrary to the above example (31b), Rudin (1989) claims that Ukrainian does allow extraction of a single *wh*-word from an indicative clause (32). My Ukrainian informants judged this example, however, as ungrammatical:

(32) **Kto**$_i$, vony skazaly, *ščo* t_i vdaryv kohos? *(Ukr)*

who you tell IND hit someone

'Who did they tell you that hit someone?' *(Rudin, 1989: 116)*

Like Russian, Ukrainian allows extraction out of subjunctive complement clauses, as in (33a-b):

(33a) Olena koče, [*ščob* Vira ljubila Andriya].

Olena wants SUBJ Vera loves Andre

'Olena wants Vera to love Andre.'

(33b) **Koho$_i$**, koče Olena, [*ščob* Vira ljubila **t$_i$**]?

who wants Olena SUBJ Vera loves

'Whom does Olena want Vera to love?'

Let's assume that Mezhevich's (2006) argument for the indicative and subjunctive complementizer distinction is correct. Similar to the Russian indicative complementizer, the Ukrainian indicative complementizer *ščo* is the same as the *wh*-word for 'what' in Ukrainian. Therefore, if the analysis that the indicative complementizer is truly a *wh*-word is correct, the contrast between subjunctive and indicative *wh*-extraction in Ukrainian provides further evidence that Ukrainian is an IP-absorption language with *wh*-island effects.

With respect to long-distance movement, it appears as though it may only be possible to extract *wh*-phrases from subjunctives in Ukrainian. In the following section, I examine Sequence of tense and *wh*-movement in Ukrainian.

3.4.2.2 Sequence of Tense and *Wh*-movement

As Richards (2001) notes, there are a number of cases in the literature in which the properties of *wh*-movement are partly dependent on those of tense, such as Sequence of Tense. The Sequence of Tense (SOT) phenomenon is a generalization about the relationship between verb forms in a sentence. SOT phenomena arise when the matrix and the embedded verb are both in past tense. For example, observe the difference in (34a-b) in English where the sentence is ambiguous between a non-SOT and SOT reading.

(34) *John said that Mary was sick.*

(a) John said: "Mary was sick." (no SOT)

(b) John said: "Mary is sick." (SOT)

According to the interpretation in (34a), Mary's illness necessarily precedes John's reporting it. However, there is no requirement that Mary's sickness coincides with the time of John's report: Mary may or may not be sick at the time of John's report. (34) can also have the interpretation that Mary's illness and John's report occurred simultaneously (SOT), as in (34b).

While languages like English exhibit SOT, other languages, like Polish, lack the SOT phenomenon. Instead, the meaning is expressed using a present tense verb in the embedded clause:

(35) Janek powiedział [że Maria **jest** chory] *(Polish)*

*Janek said that Maria **is** sick*

'Janek said that Maria was sick.' *(Richards, 2001: 277, from Kusumoto 1999)*

Richards (2001) observes that "overt wh-movement cannot escape tensed clauses in the absence of Sequence of Tense..." (p. 278). He notes that languages that have SOT tend to allow long-distance *wh*-movement out of indicative clauses (for example, English).

(36) What do you think [that Mary bought t] ?

In contrast, he claims that there are a number of languages which lack SOT and disallow overt *wh*-movement out of a tensed clause, such as Polish in (37):

(37) ***Co** Maria mysli, ze Janek kupil t ? *(Polish)*

what Maria thinks that Janek bought

'What does Maria think that Janek bought?' *(Richards, 2001: 275)*

Richards does not develop a full theory based on these arguments, but rather he sketches a possible interaction. Similarly, I do not develop a theory on SOT and *wh*-movement here; however, the following findings show that such a solution does not work for Ukrainian.

Ukrainian seems to have SOT. In (38) below, the matrix and embedded verbs are both in the past tense, and both (a) and (b) readings are available, where Peter's illness can both proceed Olga's report, and occur simultaneously with Olga's report:

(38) Olga kazala, ščo Petro buv kvorij.

Olga said IND Peter was sick

'Olga said that Peter was sick.'

(a) Olga said: "Peter was sick".

(b) Olga said: "Peter is sick".

While Ukrainian seems to disallow overt *wh*-movement, it also has SOT. Therefore, Richards' proposed connection between lack of overt *wh*-movement and lack of SOT does not work for Ukrainian.

3.5 Intervening Lexical Material

Once again we return to the work of Rudin (1988, 1989). Rudin claims that one argument for the division between CP-absorption and IP-absorption languages is the differing patterning of the ability of adverbs, particles, or parenthetical phrases to interrupt the *wh*-word sequence. She observes that in Bulgarian, no intervening clitic or adverb such as *pruv* 'first' can interrupt the *wh*-phrases, as in (39):

(39a) Zavisi ot toga, *koj kogo* **pruv** e udaril. *(B)*
*depends on it who whom **first** hits*
'It depends on who hits whom first.'

(39b) *Zavisi ot toga, *koj* **pruv** *kogo* e udaril. *(Rudin, 1988: 467)*

The only grammatical example is (39a), where both *wh*-phrases are located in the embedded SpecCP and no intervening material separates the *wh*-phrases. In contrast, in languages such as Serbo-Croatian the intervening adverb *prvi* 'first' may appear between the *wh*-words (40a-b):

(40a) **Ko** je **koga** ***prvi*** udario? *(SC)*

*who has whom **first** hit*

'Who hit whom first?'

(40b) **Ko** je ***prvi*** **koga** udario? *(Rudin, 1988: 467)*

Rudin (1988) proposes that in Bulgarian all *wh*-phrases are in SpecCP. In contrast, languages such as Serbo-Croatian allow only one *wh*-phrase in specifier of CP, while the rest adjoin to IP. For Rudin, this means that the *wh*-words form a constituent in Bulgarian but not in Serbo-Croatian.

While Rudin's theory has all *wh*-phrases in CP-absorption languages, like Bulgarian, forming a constituent, Richards' (1997, 2001) analysis does not make such strong predictions. Under Richards' analysis, instead of multiply filled specifiers of CP, he assumes multiple specifiers of CP or IP. To my knowledge there is nothing in Richards' theory that would disallow adverbs, particles, or parenthetical phrases to occur immediately following the first *wh*-phrase. In fact, there are several authors who have found that even in Bulgarian there are second-place clitics that obligatorily follow the first *wh*-phrase; see the discussion below.

3.5.1 Intervening Lexical Material in Ukrainian

With respect to intervening lexical material in Ukrainian, in (41b) it appears that the intervening adverb 'peršči' *first* cannot come between the *wh*-phrases. From this example, it would appear that Ukrainian patterns like Bulgarian. If we adopt Rudin's (1988) analysis, the following example in Ukrainian is problematic.

(41a) **Kto koho** ***perščі*** vdariv?

who whom first hit

'Who hit whom first?'

(41b) *?**Kto perščі** ***koho*** vdariv?

However, as the next two examples from Ukrainian show, it appears that Ukrainian actually does pattern more like Serbo-Croatian, in that intervening lexical material can occur between fronted *wh*-phrases. (42a,b) and (42a,b) show that the clitics *tobi* 'you' and *yii* 'her' can intervene between the *wh*-phrases and still yield acceptable sentences in Ukrainian.

Intervening pronoun:

(42a) **Kto ščo** ***tobi*** skazav?

who what you told

'Who told what to you?'

(42b) **Kto** ***tobi*** **ščo** skazav?

Intervening pronoun:

(43a) **Kto ščo** ***yii*** dav?

who what her gave

'Who gave her what?'

(43b) **Kto** ***yii*** **ščo** dav?

It should be noted that the grammaticality of (42a-b) and (43a-b) crucially requires that the intervening material is a pronoun. In contrast, consider the following examples with intervening non-pronominals in (44a-b) and (45a-b):

Intervening noun:

(44a) **Kto ščo** ***Marij*** skazav?

who what Maria told

'Who told what to Maria?'

(44b) ?***Kto** ***Marij*** **ščo** skazav?

Intervening noun:

(45a) **Kto ščo** ***Viri*** dav?

who what Vera gave

'Who gave Vera what?'

(45b) ?***Kto** ***Viri*** **ščo** dav?

This demonstrates that it is crucial that clitics are able to split up the *wh*-phrases, but intervening non-pronominals render the sentences ungrammatical.

Furthermore, Rudin (1989) found Ukrainian parentheticals following the first *wh*-words to be grammatical:

Intervening parentheticals:

(46a) **Kto koho,** ***na vaš pohljad,*** vdaryv? *(Ukr)*

who whom on your opinion hit

'Who, in your opinion, hit whom?'

(46b) **Kto,** ***na vaš pohljad,*** **koho** vdaryv? *(Rudin, 1989: 116)*

One of the reasons that we find a difference in grammaticality between different intervening lexical material such as in (41a-b) vs. (42a-b) and (43a-b) could be the type of material and location of attachment site. The absence of intervening lexical material is a weak argument for CP-absorption on Richards' analysis. Under Richards' (2001) minimalist analysis, the *wh*-phrases are said to be in multiple specifiers of CP; if this is correct, they do not form a constituent. It is not necessarily the case that clitics, pronouns, adverbs, or parentheticals would be blocked from appearing between specifiers of CP.

Furthermore, authors such as Billings and Rudin (1994) and Boeckx and Stjepanović (1999) provide some compelling evidence against Rudin's (1988) initial theory of intervening lexical material. These authors observe that *wh*-phrases can be separated by the arguably second-position clitic *li* in Bulgarian (Boeckx & Stepanović, 1999):

Intervening li clitic:

(47) **Koj** ***li*** **kakvo** na kogo e dal? *(B)*

who INTERR.CL. what to whom is given

'Who gave what to whom, I wonder?' *(Boeckx & Stjepanović, 1999: 23)*

Furthermore, even parenthetical and adverbs can intervene in Bulgarian:

Intervening parenthetical:

(48) **Koj *sigurno* kakvo** e kupil? *(B)*

who probably what aux.PRES.3rd.sg. bought

'Who has probably bought what?' *(Boeckx & Stepanović, 1999: 23)*

Intervening adverb:

(49) **Koj *prŭv* kogo** e udaril? *(B)*

who first whom is hit?

'Who hit whom first?' *(Boeckx & Stepanović, 1999: 24)*

The argument from intervening lexical material is a weak one, and may not be an accurate diagnostic to test whether MWF languages allow multiple specifiers of CP, or multiple specifiers of IP.

3.6 CONCLUSION

This chapter examined several phenomena in CP-absorption and IP-absorption languages and compared them to the equivalent phenomena in Ukrainian. These phenomena included WCO and scrambling, WCO and *wh*-movement, and *wh*-islands, including the PCC, a brief examination of the problematic status of long-distance questions in Ukrainian, including Sequence of Tense and *wh*-movement, and subjunctive vs. indicative complement clauses. Finally, I argued that intervening lexical material is a

weak argument for dividing languages into CP-absorption or IP-absorption types. To the end of comparing Ukrainian constructions against previously established language patterns, it appears so far that Ukrainian patterns strictly as an IP-absorption language, having only one specifier of CP. This is supported by evidence that Ukrainian displays A-scrambling of non-*wh* operators and *wh*-phrases which can repair WCO violations. Furthermore, Ukrainian does not permit *wh*-islands, indicating that there is only one specifier of CP. The results of this chapter are summarized in the table as follows[15]:

(50)

	CP-ABSORPTION	IP-ABSORPTION	UKRAINIAN
1. SCRAMBLING REPAIRS WCO	-	+	+
2. *WH*-MOVEMENT REPAIRS WCO	-	+	+
3. EXTRACTION FROM *WH*-ISLANDS PERMITTED	+	-	-

Richards (2001) claims that IP-absorption languages also lack Superiority effects in local *wh*-movement. Therefore, the next obvious area to investigate is whether or not Ukrainian displays local Superiority effects. The following chapter examines cases in Ukrainian which pattern with a CP-absorption language. These include Superiority

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[15] Note that I did not include intervening word order effects (such as the ability of clitics, particles, and parenthetical phrases to break up *wh*-word sequence) since I argue that Rudin's (1988) argument for dividing languages based on this diagnostic is inconclusive. Nor do I include Sequence of Tense and *wh*-movement, and the indicative vs. subjunctive data since these were not used strictly as diagnostics for CP-absorption or IP-absorption languages.

effects and multiple *wh*-movement. The fact that Ukrainian sometimes patterns as an IP-absorption language, and sometimes patterns as a CP-absorption language causes a problem for the clear-cut distinction of MWF languages. I account for these facts in chapter 5.

CHAPTER 4

PROBLEMS WITH UKRAINIAN AS AN IP-ABSORPTION LANGUAGE

4.0 INTRODUCTION

Chapter 3 introduced several MWF constructions in Ukrainian which all suggested that Ukrainian has multiple specifiers of IP. While the previous chapter dealt with data from Ukrainian that suggest it patterns as an IP-absorption language, the goal of this chapter is to present data which cause problems for classifying Ukrainian as a clear-cut case of an IP-absorption language under Richards' (2001) theory.

As mentioned previously, Richards predicts that all and only those languages which allow local A-scrambling are those languages which do not exhibit local Superiority effects. Therefore, the next obvious area to investigate in Ukrainian is whether or not it exhibits local Superiority effects. Superiority effects in local and long-distance *wh*-movement will be examined, as well as Rudin's diagnostic of multiple *wh*-extraction from a clause.

This chapter is organized as follows. In section 4.1 I introduce the Superiority Condition, and in section 4.2 I introduce the Ukrainian data on Superiority effects. I summarize the findings in section 4.3. Section 4.4 examines multiple *wh*-extraction from a clause. Finally, in 4.5 I summarize the main points of this chapter, and discuss the outline of my analysis in chapter 5.

4.1 The Superiority Condition

As previously mentioned, one property observed cross-linguistically for multiple *wh*-questions is the restrictedness of the ordering of *wh*-phrases. As is well known, in English multiple *wh*-questions with both a *wh*-subject and a *wh*-object, the *wh*-subject is fronted, and the *wh*-object is left in situ:

(1) Who$_i$ do you think t_i hit whom?

If, however, the *wh*-object is fronted above the *wh*-subject, the sentence becomes ungrammatical:

(2) *Whom$_i$ did who hit t_i?

This restriction on the ordering of *wh*-phrases is known as Superiority, as introduced in chapter 2, section 2.1.2. Essentially, the Superiority Condition predicts that no *wh*-phrase moves past a higher *wh*-phrase.

Multiple *wh*-fronting languages differ with respect to Superiority; some languages must obey it, and others can apparently violate it. Rudin (1988) used Superiority as one of her diagnostics for dividing Slavic languages into two types, differing in the structural positions of the fronted *wh*-phrases.

As noted in 2.2.1.2, Rudin observed that fronted *wh*-words in CP-absorption languages like Bulgarian and Romanian are strictly ordered, with nominative > accusative order acceptable and an accusative > nominative word order strongly

ungrammatical. The examples in (3a-b) demonstrate the grammatical and ungrammatical orderings, respectively:

(3a) **Koj$_i$ kogo$_j$ t$_i$** vižda **t$_j$** ? *(B)*

who whom sees

'Who sees whom?'

(3b) ***Kogo$_j$ koj$_i$ t$_i$** vižda **t$_j$** ? *(Rudin, 1988: 472)*

Rudin observed that other MWF IP-absorption languages such as Serbo-Croatian, Polish, and Czech have relatively free ordering of *wh*-phrases in local constructions. (4a-b) are examples from Serbo-Croatian demonstrating that both nominative > accusative and accusative > nominative orderings are equally acceptable.

(4a) **Ko$_i$ koga$_j$ t$_i$** vidi **t$_j$** ? *(SC)*

who whom sees

'Who sees whom?'

(4b) **Koga$_j$ ko$_i$ t$_i$** vidi **t$_j$** ? *(Rudin, 1988: 449)*

As mentioned in section 2.2.2, Bošković (1997) noted that when a third *wh*-phrase is added the order of the non-initial *wh*-phrases is free:

(5a) **Koj** ***kogo*** ***kakvo*** e pital? *(B)*

who whom what is asked

'Who asked whom what?'

(5b) **Koj** ***kakvo kogo*** e pital?

(5c) ***Kogo kakvo*** **koj** e pital?

(5d) ***Kakvo*** **koj** ***kogo*** e pital? *(Bošković,1995: 13-14)*

As also noted in 2.2.2, while Serbo-Croatian and Bulgarian differ with respect to Superiority effects in local *wh*-movement, Bošković (1997, 1998, 2002) reports that Superiority effects emerge in long-distance *wh*-movement. *Wh*-phrases in Serbo-Croatian are therefore subject to strict ordering constraints in these contexts, just as in Bulgarian:

(6a) **Ko**$_i$ si **koga**$_j$ tvrdio [da t_i je istukao t_j] ? *(SC)*

who are whom claimed that is beaten

'Who did you claim beat whom?'

(6b) ***Koga**$_j$ si **ko**$_i$ tvrdio [da t_i je istukao t_j] ? *(Bošković, 1997: 5)*[16]

To account for the possibility of multiple long-distance *wh*-movement in Serbo-Croatian, Richards (2001) suggests that multiple CP specifiers may be allowed in this language, as long as none of these specifiers will be interpreted as a scope position of a

[16] As previously noted, this contradicts Rudin's (1988) claim that IP-absorption languages like Serbo-Croatian don't allow multiple *wh*-extraction; see chapter 2, section 2.2.1.3.

wh-word; multiple CP specifiers are licensed in Serbo-Croatian as long as they are only used as intermediate landing sites.

Therefore, with respect to Superiority effects, MWF languages do not entirely differ. CP-absorption languages like Bulgarian always display Superiority effects[17], while IP-absorption languages like Serbo-Croatian display Superiority effects only in long-distance constructions.

Bošković (1997, 1998 2002) and Richards (2001) provide different theories to account for the contrast not only between languages such as Bulgarian and Serbo-Croatian, but also between the ordering differences of Bulgarian *wh*2 and *wh*3, and the Superiority differences between local and long-distance *wh*-movement in Serbo-Croatian. I refer readers back to sections 2.2.2 and 2.2.3 for Bošković's and Richards' theories respectively.

4.2 UKRAINIAN SUPERIORITY

Ukrainian multiple *wh*-questions obligatorily front all *wh*-phrases; otherwise, an echo-type question or ungrammaticality results (see chapter 1, section 1.2 for more detail).

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[17] This is not entirely true. It has been shown by many authors that Bulgarian does not exhibit Superiority effects with D(iscourse)-linked *wh*-phrases such as the following:

(i)a. **Koj** aftor **koja** kniga t e napisal t ? (B)
which author which book AUX wrote
'Which author wrote which book?'
b. ?**Koja** kniga **koj** aftor t e napistal t ? *(Richards, 1997; 41, from Roumyana Izvorski, p.c.)*

This is also true in English where D-linked wh-phrases do not exhibit Superiority (Pesetsky, 1987):

(ii)a. *Which man* did you persuade to read *which book*?
b. *Which book* did you persuade *which man* to read?

I briefly discuss D-linking and *wh*-phrases in section 4.2.2.

Restrictions on the orderings of *wh*-phrases in several different contexts will be examined. Section 4.2.1 examines local Superiority, section 4.2.2 examines D-linked *wh*-phrases, section 4.2.3 examines non-initial *wh*-phrases, and section 4.2.4 examines long-distance and embedded Superiority. Animacy differences will also be examined.

4.2.1 Local Superiority

With respect to local *wh*-movement in matrix clauses, Ukrainian varies regarding its ordering constraints on fronted *wh*-phrases. Starting with *wh*-subject and *wh*-object orderings, we find that there is a strong preference for *wh*-subject > *wh*-object, as in Bulgarian, which would suggest it patterns as a CP-absorption language:

(7a) **Kto$_i$ koho$_j$** t_i bachyv t_j ?

who whom *saw*

'Who saw whom?'

(7b) ***Koho$_j$ kto$_i$** t_i bachyv t_j ?

However, when the *wh*-object is [-animate] as in *ščo* 'what' and the *wh*-subject is [+animate] as in *kto* 'who', there does not seem to be as strong an ordering preference:[18]

(8a) **Kto$_i$ ščo$_j$** t_i kupyv t_j ?

who what *bought*

Who bought what?

(8b) **Ščo$_j$ kto$_i$** t_i kupyv t_j ?

[18] Speakers report that there is a focus on the *wh*-phrase that is in clause-initial position.

This grammatical difference between animate and inanimate *wh*-objects has also been reported in the literature on Russian (e.g. Meyer, 2004). The difference could be due to animacy, or it may have something to do with the case markings. While *kto* 'who' changes its case markings for nominative and accusative functions, (see table 9), *ščo* 'what' does not:

(9)

CASE	WHO	WHAT
Nominative	kto	ščo
Accusative	koho	ščo

(URGE, 2006, 114)

If the difference in grammaticality is due to additional case markings on a *wh*-phrase (such as *kto* and *koho* 'who') then we should observe an ungrammatical accusative > nominative word order for *wh*-phrases that show case distinctions in Ukrainian.

Alternatively, if the difference is due to animacy, then we should observe a strict word order when *wh*-phrases have the same animacy. For instance, if this prediction is correct, then we would expect freely ordered *wh*-phrases only when *wh*-words in Ukrainian vary in animacy.

Further testing was done with *wh*-arguments and *wh*-adjuncts. With respect to *wh*-adjuncts and *wh*-subjects, there does not seem to be any Superiority effects in local clauses. In the following example, the adjunct *wh*-phrase does not change case markings, and as in (8), the *wh*-phrases vary in animacy:

(10a) **Jak$_j$ kto$_i$** **t$_i$** napav na Viro **t$_j$**?

how who *attack on Vera*

'How did who attack Vera?'

(10b) **Kto$_i$ jak$_j$ t$_i$** napav na Viro **t$_j$**?

With respect to *wh*-adjuncts and *wh*-objects, however, Ukrainian once again seems to display Superiority effects, as in the following:

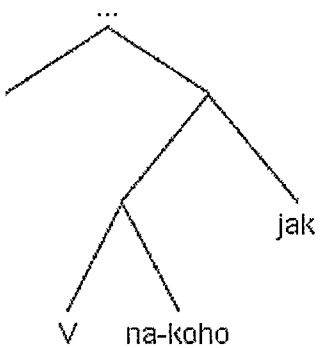
(11a) ?**Jak$_j$** na **koho$_i$** ty napav **t$_i$ t$_j$**?

how *on* ***whom*** *you attack*

'How did you attack who?'

(11b) ??Na **koho$_i$ jak$_j$** ty napav **t$_i$ t$_j$**?

(12) *Base positions: jak > na koho*



Speakers found the above examples both a little degraded; however (11b) was found to be worse than (11a). In this case, 'who' is marked as *koho*, and similar to (7a-b) above, Superiority effects arise. Thus, Superiority in Ukrainian cannot simply stem from a

preference for *wh*-subject > *wh*-object[19]. Furthermore, differing animacy does not necessarily obviate Superiority, since there were Superiority effects in (11a-b).

The ungrammaticality of the accusative > nominative word order, repeated below as (13a-b), suggest that in local clauses, Ukrainian does display Superiority effects at least in certain instances.

(13a) **Kto$_i$ koho$_j$ t$_i$** bachyv **t$_j$** ?

who whom *saw*

'Who saw whom?'

(13b) ***Koho$_j$ kto$_i$ t$_i$** bachyv **t$_j$** ?

The restriction of *wh*-word orderings in Ukrainian does not appear to be as strict as in Bulgarian. However, the contrast of (13a-b) suggests that Ukrainian patterns more like Bulgarian than like Serbo-Croatian, which does not display any Superiority restrictions in local *wh*-movement.

I take these judgments to indicate the presence of Superiority effects in Ukrainian. I argue for the presence of Superiority effects along the lines of Dornisch (1998). Contra Rudin (1988), Dornisch (1998) and Cheng (1991) claim that Polish does exhibit Superiority effects. Cheng states that while her own informants provided varied responses, many preferred a nominative > accusative ordering in Polish multiple *wh*-questions. Also, Dornisch found that her informants found the *wh*-object > *wh*-subject

[19] There could be a preference for *koho* 'whom' to follow other *wh*-phrases (such as *kto* 'who' or *jak* 'how'). One possibility, therefore, could be a preference of the "unmarked" *wh*-phrases (such as *kto* 'who' or *jak* 'how') to precede "marked" *wh*-phrases (such as *koho* 'who'). I do not explore this idea further, but leave this for future research.

degraded from the *wh*-subject > *wh*-object ordering. Thus, despite varied responses from their speakers, both Dornisch and Cheng argue that Polish displays Superiority effects. Similarly, my informants found the *wh*-object > *wh*-subject order degraded. I take this contrast in acceptability as evidence for Superiority effects in Ukrainian.

4.2.2 D-linked *wh*-phrases and Superiority

Up until now, the discussion on Superiority effects has involved non-D(iscourse)-linked *wh*-words. Non D-linked *wh*-words such as *who* are not very particular about what has been mentioned in the previous discourse. In contrast, D-linked *wh*-phrases such as *which* phrases have a presupposed context assumed by the speaker (Pesetsky, 1987). For instance, when a speaker asks '*Which book did you read?*' the range of answers is limited by a set of books that both the speaker and hearer have in mind. If the hearer is ignorant of the context assumed by the speaker, a D-linked question sounds odd.

A lack of Superiority in D-linked *wh*-phrases has been found to hold cross-linguistically (e.g. Pesetsky, 1987). Ukrainian does not exhibit Superiority effects with D-linked *wh*-phrases, as in the following:

(14a) Olena spitalasja **kotrij čolovik**$_i$ t_i pročitav **kotru knižku**?

Olena asked which man read which book

'Olena asked which man read which book?'

(14b) Olena spitalsja **kotru knižku**$_j$ pročitav **kotrij čolovik**$_i$ t_j?

While it is interesting to note that Ukrainian patterns similar to previously studied languages with D-linked *wh*-phrases, I do not explore this phenomenon further.

4.2.3 Ordering of non-initial *wh*-phrases

I now turn to the order of non-initial *wh*-phrases, *wh*2 and *wh*3. As in Bulgarian, Ukrainian displays free ordering of the non-initial *wh*-phrases but fixed ordering of the initial *wh*-phrase:

(15a) **Kto *koho de*** pobachyv?
*who **whom where** saw*
'Who saw whom where?'

(15b) **Kto *de koho*** pobachyv?

(15c) ***Koho* kto *de*** pobachyv?

(15d) ?? ***De* kto *koho*** pobachyv?

The ordering of *wh*2 and *wh*3 is also free if we replace the adjunct with an inanimate argument *ščo* 'what[20].'

---

[20] Once again, we see that there is a strong preference for the "marked" *koho* 'who' to follow other *wh*-phrases, as shown below.

(i) a. **Kto *koho ščo*** spitav?
who whom what asked
'Who asked whom what?'
(i) b. **Kto *ščo koho*** spitav?
(i) c. ***Koho* kto *ščo*** spitav?
(i) d. ***Ščo* kto *koho*** spitav?

With respect to Richards' (2001) division into CP- and IP-absorption languages, the local Superiority effects in Ukrainian seem to follow the pattern of a CP-absorption language, such as Bulgarian or Romanian. According to Richards' theory, this would mean that all *wh*-movement in Ukrainian is A-bar movement. For Richards, Superiority constrains A-bar movements, (movement to SpecCP) but not A-movement (movement to an IP projection)[21].

In his theory of CP- and IP-absorption languages, only CP-absorption languages display pure A-bar properties in local *wh*-movement, and therefore, only these languages display local Superiority effects. Under this prediction, since Ukrainian exhibits local Superiority effects, *wh*-movement in Ukrainian should always be A-bar movement. However, as we saw in the previous chapter, Ukrainian displays clear evidence that local *wh*-movement can be A-movement, as in the absence of WCO in *wh*-movement. The Ukrainian data presented here therefore pose a prima facie problem for Richards' clear-cut distinction of CP- and IP-absorption languages.

4.2.4 Long-distance and Embedded Superiority

Unlike either Bulgarian or Serbo-Croatian, in Ukrainian, speakers did not accept long-distance *wh*-movement from the embedded clause:

[21] In fact, Richards actually claims that A-scrambling movements do obey Superiority (preserve base order) in certain cases, namely: scrambling of idiom chunks and quantifier scope. Since these are outside the scope of my thesis, I refer interested readers to Richards (2001) chapter 3, sections 2.1 and 2.2 respectively. His theory, however, strictly claims that Superiority does not constrain A-scrambling, and therefore, the Ukrainian data pose a problem for this claim.

(16) *Kto$_i$ koho$_j$ ty skazav [t_i pobyv t_j]?[22]

who whom you claim beat

'Who did you claim beat whom?'

However, the ungrammaticality of (16) may be attributed to the asymmetric extraction possibilities from subjunctives and indicatives in Ukrainian, as discussed in chapter 3, section 4.3.2.1. We might expect that while multiple *wh*-extraction from indicatives is ungrammatical, multiple extraction from subjunctives may be acceptable. Rudin (1989), however, claims that Ukrainian does not allow multiple *wh*-extraction from either indicative or subjunctive clauses:

Multiple wh-extraction from Indicative

(17) *Kto$_i$ koho$_j$ vony skazaly, *ščo* t_i vdaryv t_j ? *(Ukr)*

who whom you tell IND hit

'Who did they tell you hit whom?' *(Rudin, 1989: 116)*

Multiple Wh-Extraction from Subjunctive

(18) *Kto$_i$ ščo$_j$ ty kotila b *ščob* t_i kupyv t_j ? *(Ukr)*

who what you want to SUBJ buy

'Who would you like to buy what?' *(Rudin; 1989: 116)*

[22] Note that this is surprising in the light of my findings in section 4.4.1 that Ukrainian allows multiple *wh*-extraction from a clause. I leave this contrast for future research.

There seems to be much variation with the Ukrainian long-distance Superiority and multiple *wh*-extraction data (see also section 4.4.1). This is not surprising since the same discrepancies are found between Serbo-Croatian long-distance Superiority (Bošković, 1997) and multiple *wh*-extraction data (Rudin, 1988). This is an area that needs further attention, and I leave it for future research.

With respect to Superiority in embedded interrogatives, Ukrainian also displays the same word order preference as in simple clauses[23]:

Embedded Interrogative:

(19a) Ja ne znaju, **kto$_i$ koho$_j$** t_i pobyv t_j ?

I not know, who whom beat

'I don't know who beat whom?'

(19b) *?Ja ne znaju, **koho$_j$ kto$_i$** t_i pobyv t_j ?

This is expected since embedded interrogative clauses should act like local matrix clauses with respect to *wh*-ordering.

4.3 Summary of Ukrainian Superiority Effects

Before leaving Superiority effects in Ukrainian, the following table summarizes the findings from the previous sections on Superiority:

[23] One speaker 'V' found both orders (nominative > accusative and accusative > nominative) perfectly acceptable in both the embedded and matrix examples.

(20):

	CP-ABSORPTION Bulgarian	IP-ABSORPTION Serbo-Croatian	UKRAINIAN
1. FREE ORDERING OF LOCAL *WH*-PHRASES	-	+	-
2. FREE ORDERING OF D-LINKED *WH*-PHRASES	+	+	+
3. FREE ORDERING OF EMBEDDED *WH*-PHRASES	-	+	-
4. FREE ORDERING OF LONG-DISTANCE *WH*-PHRASES	-	-	?

4.3.1 A note on Superiority

Within the literature, there is much debate on the status of Superiority, both cross-linguistically, and within a single language. More recent work by Billings and Rudin (1994) observes that Bulgarian does not always exhibit strict ordering of *wh*-phrases. There are contexts in which certain types of *wh*-phrases may be fronted in any order.

For instance, Rudin notes that data missing from the literature in Bulgarian is the multiple question with an inanimate argument and an animate argument. The Bulgarian example in (21a-b) is similar to the Ukrainian example, repeated below as (22a-b):

(21a) **Kogo$_j$** **kakvo$_i$** **t$_i$** e udarilo **t$_j$**? *(B)*

whom-ACC what-NOM CL.3SG hit.N.SG

'What hit whom?'

(21b) **Kakvo$_i$ kogo$_j$ t$_i$** e udarilo **t$_j$** ? *(Billings and Rudin, 1994: 38)*

(22a) **Ktoi ščo$_j$ t$_i$** kupyv **t$_j$** ? *(Ukr)*

who what *bought*

Who bought what?

(22b) **Ščo$_j$ kto$_i$ t$_i$** kupyv **t$_j$** ?

This is a puzzling area to investigate indeed and it is apparent that much more work needs to be dedicated to unifying the data on Superiority in the existing literature, and testing further cases that have yet to be tested across the already-studied Slavic languages. It may be the case that Superiority is one diagnostic that may not be relevant for dividing MWF languages into either CP-absorption or IP-absorption languages. I discuss this possibility in chapter 5.

The following section examines Rudin's (1988) diagnostic for MWF languages of multiple *wh*-extraction from a clause.

4.4 MULTIPLE *WH*-EXTRACTION FROM A CLAUSE

Rudin (1988) claims that Slavic MWF languages differ with respect to the possibility of extraction of multiple *wh*-words from a clause. Rudin shows that in CP-absorption languages like Bulgarian, all *wh*-phrases in a multiple question must move to the closest interrogative SpecCP. *Wh*-phrases may neither remain in situ nor move to the specifier of a non-interrogative CP.

(23a) **Koj$_i$ kude$_j$** misliš [če **t$_i$** e otišul **t$_j$**] ? *(B)*

who where think-2ND that has gone

'Who do you think that went where?'

(23b) ***Koj$_i$** misliš [če **t$_i$** e otišul **kude**] ? *(Rudin, 1988: 450)*

The only grammatical option in Bulgarian is the one where both *wh*-phrases undergo movement into the interrogative SpecCP, as in (23a). By contrast, Rudin claims that IP-absorption languages such as Serbo-Croatian, extraction of multiple *wh*-words from a clause results in ungrammaticality, as in (24b):

(24a) **Ko$_i$** želite [da vam **šta$_j$** **t$_i$** kupi **t$_j$**] ? *(SC)*

who want.2ND to you what buy.3S

'Who do you want to buy what?'

(24b) ***Ko$_i$** **šta$_j$** želite [da vam **t$_i$** kupi **t$_j$**] ? *(Rudin, 1988: 454)*

In the Serbo-Croatian examples, only one *wh*-phrase can move into the matrix SpecCP, as in (24a), otherwise the sentence becomes ungrammatical when both *wh*-phrases move into the matrix SpecCP, as in (24b). However, as mentioned in sections 2.2, 3.4 and 4.1,contrary to Rudin's observations in (24a-b), Bošković (1997) and Stepanović (1999) give examples that contradict this claim. Bošković and Stepanovic observe that multiple *wh*-movement out of a non-*wh*-clause is possible in Serbo-Croatian:

(25) **Ko$_i$** si **koga$_j$** tvrdio da **t$_i$** je istukao **t$_j$** ? *(SC)*

who AUX whom claimed that AUX beaten

'Who did you claim beat whom?' *(Bošković, 1997: 5)*

(26a) **Ko$_i$** **koga$_j$** misliš da **t$_i$** je poljubio **t$_j$** ? *(SC)*

who whom think-you that has kissed

'Who do you think kissed who?'

(26b) **Ko$_i$** misliš da **t$_i$** je **koga$_j$** poljubio **t$_j$** ? *(Stepanovic, 1999: 24)*

Russian has also been claimed not to allow more than one *wh*-phrase in the matrix of SpecCP. Compare the grammatical example in (27) where only one *wh*-phrase moves into the matrix clause, with the ungrammatical example in (28) where two *wh*-phrases move.

(27) **Kto$_i$** ty xočeš, [čtoby **t$_i$** kupil knigu] ? *(Rus)*

who you want SUBJ buy-PAST book

'Who do you want to buy a/the book?' *(Mezhevich, 2006: 191)*

(28) ***Kto$_i$** **čto$_j$** ty xočeš, [čtoby **t$_i$** kupil **t$_j$**] ?

who what you want SUBJ buy-PAST

'Who do you want to buy what?'

Under the assumption that movement across a filled SpecCP is universally barred, Rudin (1988) proposes that languages such as Bulgarian in which all *wh*-phrases move into the matrix clause have multiple specifiers of CP.[24] Therefore, each *wh*-phrase can move into an embedded SpecCP before moving into its final position in the matrix SpecCP. In contrast, languages which allow only one specifier of CP, such as Serbo-Croatian and Russian, can only have one *wh*-phrase in the embedded SpecCP, and therefore, no further *wh*-phrases can move into SpecCP in the matrix clause. As it turns out, however, this is not the case, at least for Serbo-Croatian. As we saw above, Serbo-Croatian would appear to allow multiple specifiers of CP.

As noted in 4.1, Richards (2001) accounts for the possibility of multiple long-distance *wh*-movement in Serbo-Croatian by suggesting that multiple CP specifiers may be allowed in this language, as long as none of these specifiers will be interpreted as a scope position of a *wh*-word; multiple CP specifiers are licensed in Serbo-Croatian as long as they are only used as intermediate landing sites. I follow Richards (2001) in assuming that IP-absorption languages marginally allow multiple CP-absorption in intermediate positions. I do not explore this idea further, as it is beyond the scope of my thesis; I leave this interesting issue for future research[25].

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[24] Movement across a filled SpecCP is considered to be universally barred under the Minimalist theory's Phase Impenetrability Condition (PIC). See chapter 1, section 1.1 for a review.

[25] The question regarding where these *wh*-phrases end up in the matrix clause is a puzzling one. Presumably neither is in an A-position since they do not repair WCO violations; however, presumably they are not in SpecCP either since these are final positions, not intermediate ones. One possibility is that this is A-bar scrambling. Suppose, for instance, that A-bar scrambling can be to a lower position than SpecCP and hence, via PIC, does not feed movement into a higher clause. This would account for the co-occurrence of *wh*-islands (by PIC) and marginal multiple *wh*-extraction (by allowing CP-absorption for intermediate positions in IP-absorption languages).

4.4.1 Ukrainian Multiple *Wh*-Extraction from a Clause

With respect to extraction of multiple *wh*-phrases, Ukrainian patterns like other CP-absorption languages such as Bulgarian. The examples below indicate that multiple *wh*-phrases from the embedded clause can freely move into the matrix clause.

(29a) **Kto$_i$ de$_j$** buv, ty hadaeš **t$_i$ t$_j$** ?

who where went you think

'Who do you think that went where?'

(29b) **De$_j$ kto$_i$,** ty hadaeš, buv **t$_i$ t$_j$** ?

Note that (29a-b) is contra Rudin's (1989) claim that Ukrainian does not allow multiple *wh*-extraction from a clause, as in (30) and (31) below. Rudin claims that while extraction of a single *wh*-word is grammatical out of both indicative and subjunctive clauses, multiple *wh*-extraction is impossible, even in subjunctives:

Multiple Wh-Extraction:

(30) ***Kto$_i$ koho$_j$** ty skazav **t$_i$** pobyv **t$_j$** ?

who whom you claim beat

'Who did you claim beat whom?'

Multiple Wh-Extraction from Subjunctive:

(31) ***Kto**$_i$ **što**$_j$ ty kotila b *što* t_i kupyv t_j ? *(Ukr)*

who what you want to SUBJ buy

'Who would you like to buy what?' *(Rudin; 1989: 116)*

This data at first glance is problematic. However, I should point out that multiple *wh*-extraction from a clause is a diagnostic used by Rudin (1988), but neither Bošković (1997, 1998, 2002) nor Richards (1997, 2001) use these multiple *wh*-extraction facts for dividing MWF languages into separate groups. Furthermore, as mentioned previously, Rudin's theory on multiple *wh*-extraction does not predict Bošković's observation of long-distance *wh*-extraction in Serbo-Croatian. Rudin would wrongly predict that both (32a-b) are ungrammatical in Serbo-Croatian.

Long-distance Superiority:

(32a) **Ko** si **koga** tvrdio [da je istukao] ? *(SC)*

who are whom claimed that is beaten

'Who did you claim beat whom?'

(32b) ***Koga** si **ko** tvrdio [da je istukao] ? *(Bošković, 1997: 5)*

4.5 CONCLUSION

This chapter has focused on several diagnostic tests that seem to pose problems for classifying Ukrainian as an IP-absorption language. The following table summarizes the diagnostics that this chapter focused on for Ukrainian. Since Bošković shows that even

Serbo-Croatian allows multiple *wh*-extraction from a clause, I omit this diagnostic from the chart. Long-distance Superiority in Ukrainian, and multiple *wh*-extraction need further research both in Ukrainian, and in other MWF languages.

(33):

	CP-ABSORPTION	IP-ABSORPTION	UKRAINIAN
1. LOCAL SUPERIORITY	+	-	+
2. LONG-DISTANCE SUPERIORITY	+	+	?

The following chapter will present my analysis to account for the Ukrainian facts in chapters 3 and 4, while still accounting for the Bulgarian and Serbo-Croatian data.

That's all very fine in practice
But how does it work in theory?
-Garrett FitzGerald

CHAPTER 5

THE PROPOSAL

Having discussed previous theories that account for MWF languages, I now propose my own analysis of the Ukrainian data presented in the previous chapters. In chapters 3 and 4, I explored various properties of Ukrainian. Chapter 3 examined WCO in scrambling, WCO in *wh*-movement, and *wh*-islands in Ukrainian, which all conformed to the IP-absorption language pattern, while chapter 4 examined Superiority phenomena which cause problems for classifying Ukrainian as an IP-absorption language. The focus of this chapter is to take into account the Ukrainian data, along with other Slavic MWF languages (such as Bulgarian and Serbo-Croatian) and provide an analysis of these facts.

I propose a theory that accounts for the differing properties of MWF in CP-absorption languages (like Bulgarian), in IP-absorption languages (like Serbo-Croatian) and in the new Ukrainian data presented. My theory also accounts for at least some of the problematic Russian data. While I propose an analysis to account for all the core facts presented so far in this thesis, my primary analysis will come from a two-way division between IP-absorption languages.

This chapter is organized as follows. In section 5.0 I briefly review the Ukrainian facts presented in this thesis. In section 5.1 I summarize the main problem to account for. In section 5.2 I present a brief overview of my proposal. In section 5.3 I present the proposal. Finally, in section 5.4 I summarize the main arguments in this chapter.

5.0 UKRAINIAN FACTS REVISITED

This thesis presented many different properties of *wh*-movement in Ukrainian. Before presenting my analysis of these facts, I briefly review these properties below. The *wh*-movement facts that were presented in this thesis include: *wh*-islands, WCO in scrambling, WCO in *wh*-movement, Superiority, intervening lexical material, multiple *wh*-extraction from a clause, subjunctive vs. indicative complementizers, and Sequence of Tense and *wh*-movement. The table below summarizes how Ukrainian patterns with respect to each one of these structural diagnostics.

(1)

	UKRAINIAN
1. Obeys *wh*-island constraint	+
2. Scrambling repairs WCO	+
3. *Wh*-movement repairs WCO	+
4. Local Superiority obeyed	+
5. Long distance Superiority obeyed	?
6. Embedded Superiority obeyed	+
7. Intervening lexical material allowed	+
8. Multiple *wh*-extraction allowed	?
9. Subjunctive *wh*-extraction allowed	+
10. Indicative *wh*-extraction allowed	-
11. Sequence of Tense	+

The table in (2) below illustrates how Ukrainian patterns relative to other MWF languages. I do not include Rudin's (1988) diagnostic for multiple *wh*-extraction, nor long-distance Superiority effects, since we saw that theses facts elude consensus (chapter 4, sections 4.2.4 and 4.4). Similarly, the table does not include Rudin's diagnostic for intervening lexical material, since as I discussed in chapter 3 (section 3.5.1), this is not a strong argument for classifying MWF languages. Additionally, I do not include subjunctive and indicative *wh*-extraction, nor Sequence of Tense and *wh*-movement in the table, as they were not used as diagnostics for dividing languages into one of two groups, but rather they were used to test if Ukrainian allows long distance extraction from a clause.

(2)

	CP-ABSORPTION (Bulgarian)	**IP-ABSORPTION (Serbo-Croatian)**	**UKRAINIAN**
1. OBEYS *WH*-ISLAND CONSTRAINT	-	+	+
2. SCRAMBLING REPAIRS WCO	-	+	+
3. *WH*-MOVEMENT REPAIRS WCO	-	+	+
4. LOCAL SUPERIORITY OBEYED	+	-	+

I propose that Ukrainian is an IP-absorption language (like Serbo-Croatian); however, I further argue that IP-absorption languages themselves are not all uniform. I propose that IP-absorption languages pattern in one of two ways. To lay out the facts

presented in this thesis from both Serbo-Croatian and Ukrainian, I present the following schematic chart (3) from these critical examples of these two types of IP-absorption languages. I re-examine each example in turn, from sections 5.3.1 to 5.3.3.

(3)

	SERBO-CROATIAN	UKRAINIAN
1. A-SCRAMBLING	O_i S t_i	O_i S t_i
2. *WH*-MOVEMENT	*wh*O_i S t_i	*wh*O_i S t_i
3. LOCAL SUPERIORITY	*wh*O_i *wh*S t_i	* *wh*O_i *wh*S t_i

5.1 STATEMENT OF THE PROBLEM

Essentially, Ukrainian patterns as an IP-absorption language, with multiple A-specifiers of IP. However, local Superiority effects in Ukrainian make it look more like a CP-absorption language. Richards (2001) predicts that languages which display A-scrambling do not exhibit local Superiority effects. However, as we saw in chapter 4, Ukrainian does exhibit local Superiority effects. Therefore, my goal is to account for the distinctions in Superiority effects as follows:

a) In local *wh*-movement and scrambling in Bulgarian vs. Serbo-Croatian

b) In local vs. long-distance *wh*-movement in Serbo-Croatian

c) In local *wh*-movement in Ukrainian vs. Serbo-Croatian, and

d) In A-scrambling vs. *wh*-movement in Ukrainian

5.2 Overview of the proposal

While Ukrainian generally patterns as an IP-absorption language, the binary division into CP-absorption and IP-absorption languages needs to be extended to account for the Superiority effects in Ukrainian. I propose that there are actually two types of IP-absorption languages, with some allowing free ordering of nominative and accusative *wh*-phrases (like Serbo-Croatian), and others requiring nominative > accusative order even in local *wh*-movement (like Ukrainian, certain dialects of Russian, and Polish).

Contra Richards, I propose that Superiority does *not* constrain only A-bar movement, but constrains A-movement as well. I argue that the absence of Superiority effects in IP-absorption languages is due to the lack of a [focus] feature on certain *wh*-phrases. Only those languages which allow free nominative > accusative word order, such as Serbo-Croatian, allow this [focus] feature to be optional on *wh*-phrases. In contrast, in IP-absorption languages which, like Ukrainian, exhibit local Superiority effects, the [focus] feature is obligatory on all *wh*-phrases. In section 5.3.2 I will show how this derives the difference between these two types of IP-absorption languages.

5.3 The Proposal

5.3.1 A-scrambling obeys Superiority

Richards argues that A-movement need not obey Superiority, since an object can A-scramble over a subject[26]. Contra Richards, I propose that A-scrambling actually does obey Superiority, but that an object can A-scramble over a subject that lacks the feature

[26] As noted in section 2.2.3.1, Richards has two stories about why A-movement need not obey Superiority: (a) multiple attractors (2001), or (b) *v*P 'escape hatch' (2008).

targeted by A-scrambling, which I assume is [focus], following Bošković (1997, 1998, 2002), Stepanov (1998), and McGinnis and Bashutski (2008).

I propose that Ukrainian A-scrambling involves a [focus] feature, as in the simplified version in (4). This feature helps to account for the difference in Superiority effects between A-scrambling and *wh*-movement in Ukrainian. I argue that the closest element with [focus] is targeted by the attracting head and that element is the first to move, obeying Shortest. While both the subject and object in Ukrainian can have [focus] features, in instances where the object is scrambled over the subject, as in examples (4) - (6), the subject lacks the [focus] feature, and therefore, the closest [focus] feature is on the object, which is then moved over the subject, obeying Shortest. In short, I propose that in cases where the object is able to A-scramble over the subject, the subject is lacking the [focus] feature.

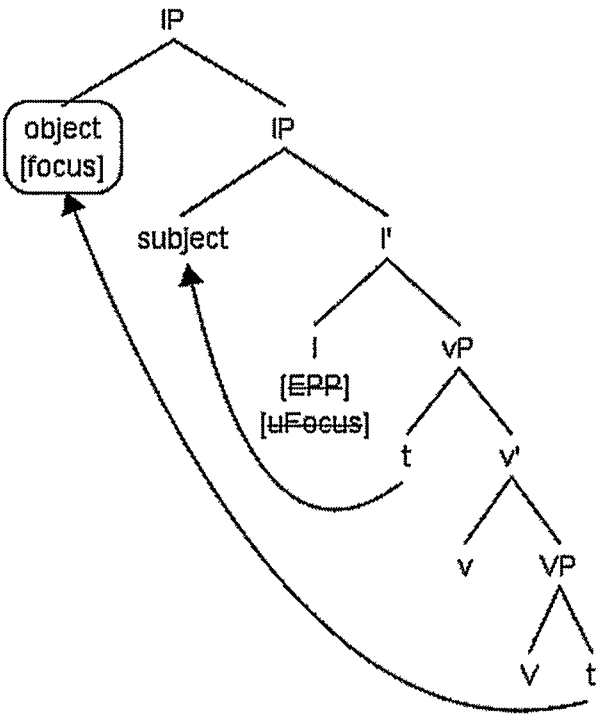
A-scrambling in Ukrainian:

(4) $Obj_{i\ [focus]}$ Subj t_i

Ukrainian A-Scrambling:

(5) **Kožnoho$_i$** ljubit yioho$_i$ mama **t$_i$**.
everyone loves his mother
'His$_i$ mother loves everyone$_i$.'

(6) A-scrambling in Ukrainian



Note that (6) might not obey Featural Cyclicity (see chapter 1, section 1.1). I discuss two possibilities for why tucking may not apply:

(a) One possibility is that Featureal Cyclicity does apply to (6). In this case, the object moves first and the subject 'tucks in' underneath it. This would involve "extrinsic ordering" of features, checked on Infl (Focus before EPP). However, this would raise the question of why the object cannot check the EPP feature also. This option is also available if A-scrambling is to a higher A-head (e.g. SpecFoc) or the subject remains in Spec*v*P.

(b) A second possibility is that tucking in occurs only when two phrases check the same feature (McGinnis, 1998). The subject moves first (checking the EPP feature), then the object moves (to check the focus feature). Since each phrase is checking a

different feature (EPP vs. focus) no tucking in would occur. This option seems in keeping with a revised version of Featural Cyclicity.

Like A-scrambling, I argue that *wh*-movement in Ukrainian involves a [focus] feature on the *wh*-phrase, which allows it to move over the subject. *Wh*-movement in Ukrainian, as mentioned in chapter 3, can involve movement of a *wh*-object over the subject, as in (7) and (8).

Ukrainian wh-movement:

(7) *wh*-obj $_i$ Subj t_i

Ukrainian wh-movement:

(8) **Koho$_i$** ljubit **yioho$_i$** sestra __?

who loves his sister

'**Who$_i$** does **his$_i$** sister love?'

In contrast, if both arguments have a [focus] feature then the object cannot scramble over the subject. It must tuck in underneath the subject in a lower SpecIP, or there would be a violation of Shortest, since the subject would be the closest phrase with a matching feature to the attracting head. I propose that *wh*-phrases in Ukrainian always have a [focus] feature, so a *wh*-object cannot scramble over a *wh*-subject; hence, we see Superiority effects in Ukrainian *wh*-movement. Examples (9)-(11) illustrate Superiority violations in Ukrainian, in which both *wh*-phrases have a [focus] feature.

Superiority violation in Ukrainian

(9) *$Obj_{i\ [focus]}$ $Subj_{\ [focus]}$ t_i

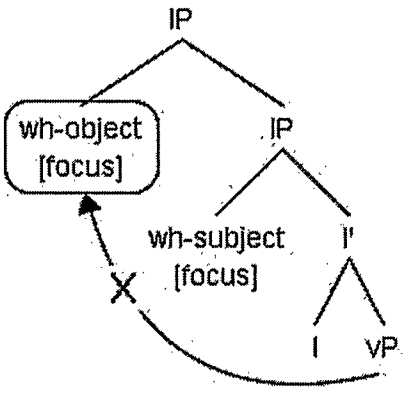
Ukrainian Superiority violation:

(10) ***Koho kto*** bachiv?

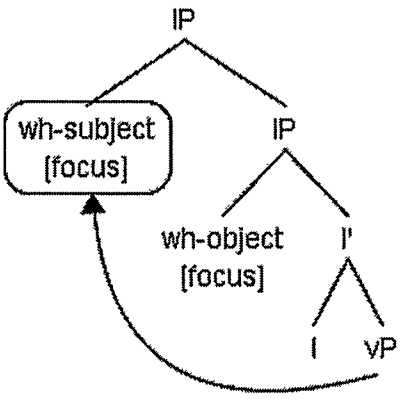
whom who see

'Who saw whom?'

(11a) Ukrainian Superiority Violation



(11b) Ukrainian Superiority Obeying



Therefore, the difference between Ukrainian A-scrambling and *wh*-movement with respect to Superiority can be attributed to the optionality or obligatoriness of the [focus] feature. The following section will account for the lack of local Superiority effects in other IP-absorption languages, such as Serbo-Croatian.

5.3.2 LOCAL SUPERIORITY EFFECTS: SERBO-CROATIAN VS. UKRAINIAN

I now concentrate on the difference between Serbo-Croatian and Ukrainian with respect to local Superiority effects.

As we have seen, Ukrainian MWF exhibits local Superiority effects, with a preferred nominative > accusative word order:

Ukrainian local Superiority:

(12) * *wh*-OBJ$_i$ *wh*-SUBJ t_i

Ukrainian Superiority violation:

(13) ***Koho kto*** bachiv?

whom who see

'Who saw whom?'

In contrast, Serbo-Croatian does not exhibit local Superiority effects: it has free ordering of *wh*-phrases in simple clauses:

Serbo-Croatian local lack of Superiority

(14) *wh*-OBJ$_i$ *wh*-SUBJ t_i

Serbo-Croatian local lack of Superiority effects (Rudin, 1988; 449)

(15a) **Ko koga** vidi?

who whom sees

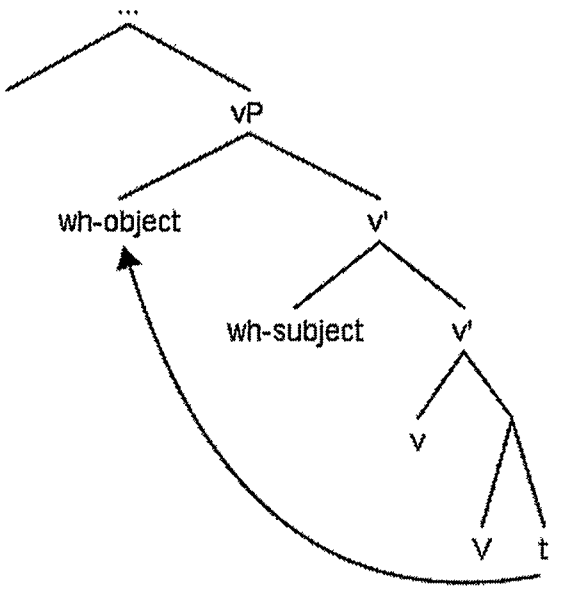
'Who sees whom?'

(15b) **Koga ko** vidi?

While Richards (2001) predicts languages which allow A-scrambling fail to exhibit local Superiority effects, the Ukrainian data show that is not always the case. As we have seen, we need to make an amendment to Richards' theory that A-scrambling actually obeys Superiority, when more than one phrase bears the [focus] feature. There are two options I will present for these facts: (a) there is a *v*P 'escape hatch' available in IP-absorption languages which do not exhibit local Superiority; and (b) a feature-theory, which allows IP-absorption languages to differ regarding [focus] features. I discuss each possibility in turn.

(a) We could suppose that IP-absorption languages which do not exhibit local Superiority effects (e.g. Serbo-Croatian) have the option of moving an object to a specifier of *v*P 'escape hatch' above the external argument (Bashutski, 2008). For example, Rackowski (2002) and Richards (2008) propose that the lower argument can move over the higher one via this intermediate position (Spec*v*P) because the external argument can Merge after the object moves. Once in the higher spec*v*P, the object is the closest argument for movement to a higher position, so the object will raise first to SpecIP, with the subject tucking in beneath it. This is illustrated below:

(16) *Serbo-Croatian local lack of Superiority effects*



According to the PIC, in order for some element to be extracted out of a phase (such as *v*P or CP), it must be located at the edge (see chapter 1, section 1.1) of that phase, either by Merging or moving into that position. In the accusative > nominative Serbo-Croatian example in (16) the object first raises to Spec*v*P and then the subject Merges. We could suppose that the movement of the object could be attributed to an optional EPP feature on *v* which forces the object to moves to the outer specifier of *v*. Alternatively, this movement could be attributed to a strong uninterpretable [focus] feature on *v* that attracts the [focus] feature on the object. Even if the subject also has [focus], the object will be able to check the [*u*Focus] feature on *v* if the subject has not yet Merged. I do not concern myself with the type of feature here, since the same outcome is reached regardless of the type of feature on *v*. By allowing the object to move first to Spec*v*P, the object becomes closer to SpecIP than the subject, and therefore, there is no violation of

Shortest for the following case in Serbo-Croatian, with accusative > nominative, as in (17) and (18):

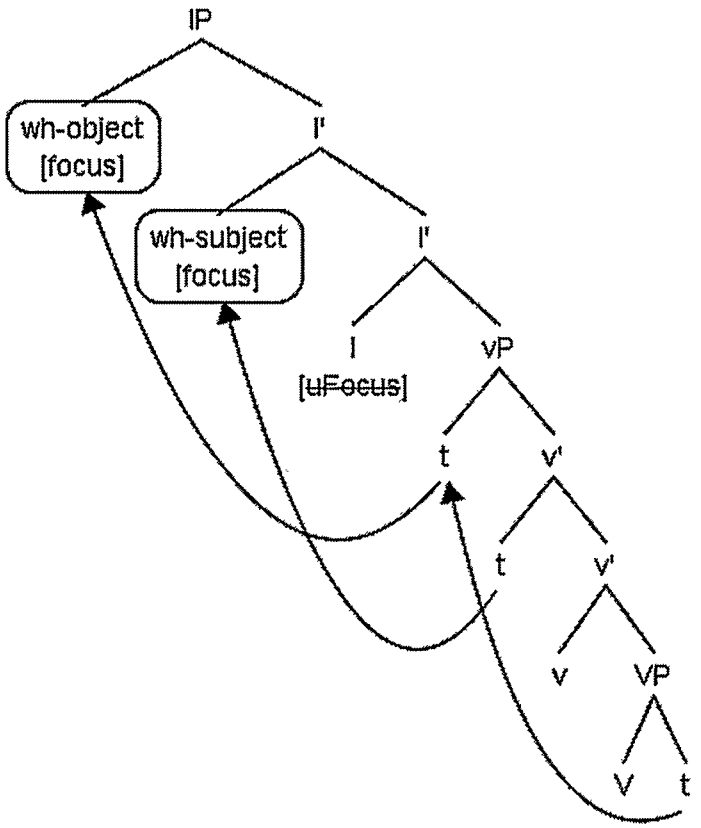
Serbo-Croatian local MWF, accusative > nominative (Rudin 1988: 473)

(17) **Koga ko** vidi?

whom who sees

'Who sees whom?'

(18) Serbo-Croatian local MWF, accusative > nominative[27]



[27] The [focus] feature on I could be an Attract All Feature which forces all *wh*-phrases (with [focus]) to move to SpecIP. Alternatively, Infl could have a separate [wh]-attracting feature.

On the other hand, in languages which exhibit local Superiority effects (like Ukrainian), the object moves to the lower specifier of *v*P and 'tucks in' under the external argument. Further movement to SpecCP would violate Shortest if the *wh*-object moves in Ukrainian, correctly deriving local Superiority effects.

However, since Serbo-Croatian displays long-distance Superiority effects, as in (19a-b), this *v*P 'escape hatch' would still be available in long-distance cases and therefore would allow Superiority violations in matrix clauses, which is not the case. I return to long-distance Superiority effects and my analysis in section 5.3.3. On these grounds, I reject the 'escape hatch' theory.

Long-distance Superiority:

(19a) **Ko** si **koga** tvrdio [da je istukao] ? *(SC)*

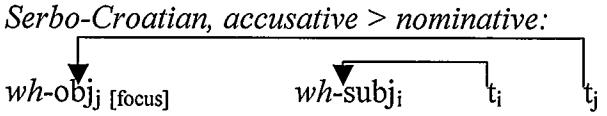
who are whom claimed that is beaten

'Who did you claim beat whom?'

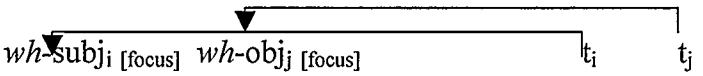
(19b) ***Koga** si **ko** tvrdio [da je istukao] ? *(Bošković, 1997: 5)*

(b) Another possibility is that there is an optional [focus] feature on *wh*-phrases in Serbo-Croatian (just as on non-*wh*-phrases in Ukrainian, in section 5.3.1). While the [focus] feature on *wh*-phrases is optional in Serbo-Croatian (20a-b), it is obligatory in Ukrainian, and CP-absorption languages like Bulgarian (20c):

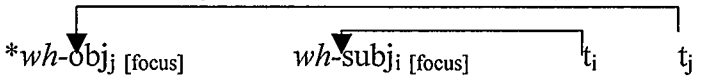
(20a) *Serbo-Croatian, accusative > nominative:*



(20b) *Serbo-Croatian, nominative > accusative*



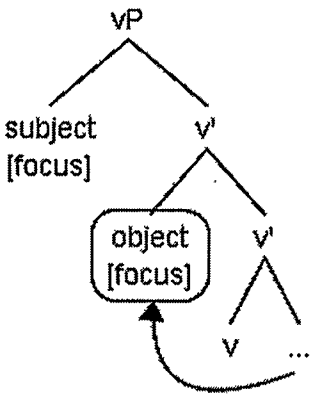
(20c) *Ukrainian, Bulgarian (and Serbo-Croatian)*



This predicts that Subj [focus] > Obj [focus] will be grammatical, but Obj [focus] > Subj [focus] will be ungrammatical in both types of IP-absorption languages, as in (20b-c) (McGinnis and Bashutski, 2008).

Assuming Featural Cyclicity, if the subject has [focus] (optionally in Serbo-Croatian, or obligatorily in Ukrainian or Bulgarian) then the object 'tucks in' under the external argument into the lower specifier of *v*P, as illustrated in (21). Further movement of the object over the subject to SpecIP or SpecCP would then violate Shortest.

(21) *Serbo-Croatian, Ukrainian, Bulgarian, subject > object*



This feature-account for local Superiority effects fits nicely with my analysis of Ukrainian A-scrambling, which also allows optional [focus] features. The feature-based account also works with Serbo-Croatian long-distance Superiority effects, as we will see in section 5.3.3 below, and can also handle the contrast between CP-absorption languages, like Bulgarian, and IP-absorption languages, like Serbo-Croatian. However, this option requires that IP-absorption languages, like Serbo-Croatian and Ukrainian, differ regarding optional or obligatory [focus] features on *wh*-phrases. While this makes the right predictions in Serbo-Croatian and Ukrainian *wh*-movement, it is nevertheless should be mentioned that it is arguably strange that some *wh*-phrases in MWF languages are focused (Ukrainian) while others are only optionally so (Serbo-Croatian).

5.3.3 LONG-DISTANCE SUPERIORITY EFFECTS

As previously mentioned, Bošković (1997) reports that in long-distance *wh*-movement, Serbo-Croatian displays Superiority effects, as repeated below:

Long-distance Superiority:

(22a) **Ko** si **koga** tvrdio [da je istukao] ? *(SC)*

who are whom claimed that is beaten

'Who did you claim beat whom?'

(22b) ***Koga** si **ko** tvrdio [da je istukao] ? *(Bošković, 1997: 5)*

This observation allows us to decide between options (a) and (b) above. As mentioned, the *v*P 'escape hatch' in Serbo-Croatian must still be available in the embedded clause.

Therefore, if this *v*P 'escape hatch' theory is adopted, we would wrongly predict no Superiority violations in long-distance Serbo-Croatian clauses, which is not the case.

In contrast, if we adopt the feature-based theory, the Serbo-Croatian long-distance Superiority facts can be accounted for. Therefore, the [focus] feature-based theory is the one that I adopt. Following McGinnis and Bashutski (2008) I propose that A-scrambling does obey Superiority, but, as mentioned, an object can A-scramble over a subject that lacks the feature targeted by A-scrambling (which I assume is [focus]). By hypothesis, this is the case in (23):

Local Lack of Superiority, accusative > nominative

(23) **Koga ko** vidi? *(SC)*

whom who sees

'Who sees whom?' *(Rudin 1988: 473)*

However, if both the object and the subject have [focus], the object cannot A-scramble over the subject, as the Ukrainian example shows:

Ukrainian Superiority violation:

(24) ***Koho kto** bachiv?

whom who see

'Who saw whom?'

I propose that A-bar scrambling also targets focus. If both *wh*-phrases A-bar scramble into a matrix clause, as in (25a), both phrases must have [focus], so the object cannot scramble over the subject, even within the embedded clause. This rules out (25b).

Long-distance Superiority:

(25a) **Ko** si **koga** tvrdio [da je istukao] ? *(SC)*

who are whom claimed that is beaten

'Who did you claim beat whom?'

(25b) ***Koga** si **ko** tvrdio [da je istukao] ? *(Bošković, 1997: 5)*

With respect to long-distance Superiority violations in Ukrainian, it appears that they are also ungrammatical, which can be explained once again by adopting the feature-based theory. If both *wh*-phrases A-bar scramble into a matrix clause, both phrases must have [focus], so the object cannot scramble over the subject, even within the embedded clause. It might be, however, that except for subjunctives, Ukrainian does not allow long-distance movement at all, as mentioned in chapter 3, section 3.4.2.

As mentioned in 4.3.2, Superiority effects are a tricky area to establish and vary widely both cross-linguistically and across speakers within a language. Authors such as Rudin and Richards have proposed separate theories regarding the Superiority contrast. Rudin derives the contrast by arguing that *wh*-phrases targeting CP form a single constituent (which entails Superiority, on her assumptions), while *wh*-phrases which target IP form separate constituents. Rudin cites evidence from intervening lexical material to argue this distinction; however, as I argued in chapter 3, the facts concerning

intervening lexical material are less clear-cut than she suggests. Richards derives the Superiority contrast by arguing for multiple attractors in IP-absorption but not CP-absorption languages (see section 2.2.3.1 for a brief description). Neither of these theories predicts that the Superiority contrast follows from the IP- vs. CP-absorption distinction. Perhaps the Superiority Condition itself is not a good diagnostic in which to use for classifying different types of MWF languages.

For instance, a child learning a MWF language would not be able to rely on Superiority to distinguish between a CP-absorption or an IP-absorption language, since IP-absorption languages display varying behaviour with respect to Superiority. Instead, children learning a MWF language would have to rely mostly on the differences in the binding effects from scrambling to distinguish if their language is either CP-absorption or IP-absorption. Another account for the differences in Superiority could be that CP-absorption languages also have fewer case markings than IP-absorption languages (p.c. Elena Bratishenko) which might effect the stricter word order permutations in languages like Bulgarian. I leave the status of Superiority in MWF languages, and long distance movement out of Ukrainian subjunctives for further research.

5.3.4 Focus in Minimalism

A commonly used definition of focus is that it is new information, commonly referred to as "information focus" (e.g. Kiss, 1998). In other words, focus is the non-presupposed part of the sentence which constitutes information new to the hearer. As mentioned previously, it is arguably strange that MWF languages differ as to whether or not *wh*-phrases are focused. If this prediction is borne out, this might mean that in

languages like Serbo-Croatian, only some *wh*-phrases represent new information, while in languages like Ukrainian all *wh*-phrases represent new information. Perhaps *wh*-phrases cross-linguistically are not as uniform as we would believe[28]. In languages like Ukrainian, for instance, all *wh*-phrases might represent new information, while in languages like Serbo-Croatian only the initial *wh*-phrase might represent new information. One possibility is that in cases in which *wh*-phrases do not represent new information, *wh*-phrases may be D-linked. This is an interesting topic of interest which I leave for future research.

Certain authors have proposed that focused *wh*-phrases actually move to a Focus Phrase (FocP) (e.g. Rizzi's Split CP hypothesis, 1997). However, since FocP is generally assumed to be associated with an A-bar position (Rizzi, 1997), I maintain that *wh*-phrases in IP-absorption MWF languages move to SpecIP, not to SpecFocP. If a *wh*-phrase were to undergo A-bar movement to SpecFocP first to check the [focus] feature, further movement to SpecIP would result in improper movement, an illegitimate operation (movement from an A-bar to an A-position). This allows us to maintain Richards' (2001) original link between A-scrambling and the possible absence of local Superiority effects.

[28] The obvious alternative to this suggestion is that the semantics of *wh*-questions are actually identical in the various languages, but rather that the mapping from morphosyntax and semantics varies instead. Two possibilities presented are: (a) that different semantic features ([focus], [wh], etc.) trigger syntactic movement in different languages, or (b) that the semantic values of morphosyntactic features varies from one language to another, i.e. what matters is a syntactic feature [F], which only roughly corresponds to semantic focus.

5.4 Conclusion

We saw that the previous theories on MWF languages were unable to account for the Ukrainian data presented in chapters 3 and 4. I propose that while Richards (2001) is correct that A-bar *wh*-movement necessarily yields Superiority effects, A-scrambling also obeys Superiority when more than one phrase has the feature targeted by scrambling (which I assume is [focus]). I propose that Ukrainian patterns as an IP-absorption language, with multiple specifiers of IP, and generally only one specifier of CP. It differs from Serbo-Croatian in that *wh*-phrases in Ukrainian always have [focus] and therefore, we see Superiority effects in local clauses. The different behaviours of these two types of IP-absorption languages can be accounted for by the optionality or obligatoriness of the [focus] feature on *wh*-phrases. The feature-based theory should be the one adopted since it correctly captures the Serbo-Croatian long-distance *wh*-movement facts, unlike the *v*P 'escape hatch' theory. While the feature-based theory is not without potential problems, it allows us to capture the following distinctions, as laid out in section 5.1:

a) In local *wh*-movement and scrambling in Bulgarian vs. Serbo-Croatian
b) In local vs. long-distance *wh*-movement in Serbo-Croatian
c) In local *wh*-movement in Ukrainian vs. Serbo-Croatian, and
d) In A-scrambling vs. *wh*-movement in Ukrainian

The following chapter summarizes the main findings in this thesis, and outlines theoretical implications and direction for further research.

CHAPTER 6

CONCLUSION AND ISSUES FOR FURTHER RESEARCH

6.0 INTRODUCTION TO THE CONCLUSION

In chapters 3 and 4, I reported on several cases of MWF in Ukrainian and in chapter 5, I offered my analysis of these facts. I summarize the main findings of this thesis in section 6.1, outline theoretical implications in section 6.2, and discuss directions for future research in section 6.3.

6.1 GENERAL FINDINGS AND SUMMARY

This research has explored several different cases of MWF in Ukrainian. The primary goal of this thesis was to account for the *wh*-movment facts in Ukrainian, while still being able to account for previously studied MWF languages such as Bulgarian and Serbo-Croatian. Another goal of this thesis was to document previously unstudied MWF cases in Ukrainian.

Chapter 3 examined cases in Ukrainian that patterned unambiguously like an IP-absorption language, which included WCO in scrambling and *wh*-movement, *wh*-islands, and intervening lexical material. Chapter 4 presented Superiority data in Ukrainian that typically are attributed to CP-absorption languages. The following table summarizes the Ukrainian MWF cases examined in this thesis:

(1)

	UKRAINIAN
1. Obey *wh*-island constraint	+
2. Scrambling repairs WCO	+
3. *Wh*-movement repairs WCO	+
4. Local Superiority obeyed	+
5. Long distance Superiority obeyed	?
6. Embedded Superiority obeyed	+
7. Intervening lexical material allowed	+
8. Multiple *wh*-extraction allowed	?
9. Subjunctive *wh*-extraction allowed	+
10. Indicative *wh*-extraction allowed	-
11. Sequence of Tense	+

We saw that the previous theories on MWF languages were unable to account for the Ukrainian data presented in chapters 3 and 4. In chapter 5, I proposed that while Richards (2001) is correct that A-bar *wh*-movement necessarily yields Superiority effects, A-scrambling also obeys Superiority when more than one phrase has the feature targeted by scrambling (which I assume is [focus]).

I proposed that Ukrainian patterns as an IP-absorption language, with multiple specifiers of IP, and generally only one specifier of CP. It differs from Serbo-Croatian in that *wh*-phrases in Ukrainian always have [focus] and therefore, we see Superiority effects in local clauses. The different behaviours of these two types of IP-absorption

languages can be accounted for by the optionality or obligatoriness of the [focus] feature on *wh*-phrases.

While the feature-based theory is not without potential problems, it allows us to capture the following distinctions in Superiority effects:

a) In local *wh*-movement and scrambling in Bulgarian vs. Serbo-Croatian
b) In local vs. long-distance *wh*-movement in Serbo-Croatian
c) In local *wh*-movement in Ukrainian vs. Serbo-Croatian, and
d) In A-scrambling vs. *wh*-movement in Ukrainian

6.2 Theoretical Implications

This thesis has brought to light previously unstudied MWF cases in Ukrainian. To this end, we found that while Ukrainian does exhibit properties of IP-absorption languages, it also displays local Supeirority effects, which is indicative of CP-absorption languages. A primary conclusion from this tehsis is that A-scrambling does obey Superiority. Most importantly, Ukrainian shows that there must be more than a binary division between CP-absorption and IP-absorption MWF languages. I propose that there are actually two types of IP-absorption languages, those which do not exhibit Superiority effects (like Serbo-Croatian), those that do (like Ukrainian, and some dialects of Polish and Russian).

6.3 Directions for Future Research

One of the issues addressed in this thesis which seems the most problematic in MWF languages is their varying behaviour with respect to Superiority. Within the literature

there is much debate on the status of Superiority, both on how a particular language patterns, and how languages pattern cross-linguistically. Rudin (1994) found that even in Bulgarian, there is not always a strict ordering of *wh*-phrases. For instance, Rudin notes that in certain cases, as repeated below, Bulgarian does not exhibit Superiority:

(2a) **Kogo** **kakvo** e udarilo? *(B)*

whom-ACC what-NOM CL.3SG. hit.N.SG

'What hit whom?'

(2b) **Kakvo kogo** e udarilo? *(Rudin, 1994: 38)*

This has proved to be a puzzling area to investigate indeed and it is apparent that much more work needs to be dedicated to unifying the data on Superiority in the existing literature. Perhaps a meta-analysis of previous studies on Superiority would help to unify the various data, methods, and dialects. A meta-analysis study would be extremely useful to future researchers since while there is plenty of data on Superiority, there is no uniform way of testing or interpreting these facts.

Furthermore, it may be interesting to pursue the idea that Superiority differences may result from animacy differences, or "marked" cases, as briefly explored in chapter 4, section 4.2.1. Another avenue for future research would be to explore the possibility of forcing D-linked readings for typically non-D-linked *wh*-phrases such as *who* and *what*. If D-linked readings can be forced (through context) for typically non-D-linked *wh*-phrases, it might be another possible explanation to account for the variable Superiority effects in IP-absorption languages like Ukrainian.

Another area of research to pursue in light of my proposal, in chapter 5, is how *wh*-words can vary with respect to [focus] cross-linguistically. Many authors have pursued the idea that [focus] plays a key role in *wh*-movement, such as Bošković (2002), Stepanov (1998), Horvath (1986), and Kiss (1998). Furthermore, several of my native speakers mentioned that the difference in word order is due to what they said was the focus of the sentence. While my analysis of MWF works for both CP-absorption, and the two types of IP-absorption languages, future research on the differences of [focus] across languages would nevertheless shed more light onto MWF languages.

Another puzzling area worthwhile to pursue is the seemingly contradictory evidence regarding multiple *wh*-extraction, as described by Rudin (1988) and Bošković (1997, 2002):

(3a) **Ko$_i$** želite [da vam **šta$_j$** kupi **t$_i$** **t$_j$**] ? *(SC)*

who want.2ND to you what buy.3S

'Who do you want to buy what?'

(3b) ***Ko$_i$** **šta$_j$** želite [da vam kupi **t$_i$** **t$_j$**] *(Rudin, 1988: 454)*

(4) **Ko$_i$** si **koga$_j$** tvrdio da **t$_i$** je istukao **t$_j$** ? *(SC)*

who AUX whom claimed that AUX beaten

'Who did you claim beat whom?' *(Bošković, 1997: 5)*

Furthermore, I also found this contrast in Ukrainian between multiple wh-extraction and long-distance Superiority somewhat puzzling.

Long-distance Superiority

(5) ***Kto koho*** ty skazav pobyv? *(Ukr)*

who whom you claim beat

'Who did you claim beat whom?'

Multiple Wh-Extraction:

(6a) **Kto de** buv, ty hadaeš? *(Ukr)*

who where went you think

'Who do you think that went where?'

(6b) **De kto**, ty hadaeš, buv?

I leave these seemingly contradictory facts from Serbo-Croatian and from Ukrainian for future research.

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APPENDIX A

UNIVERSITY OF CALGARY

CERTIFICATION OF INSTITUTIONAL ETHICS REVIEW

This is to certify that the Conjoint Faculties Research Ethics Board at the University of Calgary has examined the following research proposal and found the proposed research involving human subjects to be in accordance with University of Calgary Guidelines and the Tri-Council Policy Statement on *"Ethical Conduct in Research Using Human Subjects"*. This form and accompanying letter constitute the Certification of Institutional Ethics Review.

File no:	5272
Applicant(s):	**Kara M. Bashutski**
Department:	**Linguistics**
Project Title:	**A Study of Multiple Wh-Fronting in Ukrainian: A Minimalist Perspective**
Sponsor (if applicable):	

Restrictions:

This Certification is subject to the following conditions:

1. Approval is granted only for the project and purposes described in the application.
2. Any modifications to the authorized protocol must be submitted to the Chair, Conjoint Faculties Research Ethics Board for approval.
3. A progress report must be submitted 12 months from the date of this Certification, and should provide the expected completion date for the project.
4. Written notification must be sent to the Board when the project is complete or terminated.

Janice Dickin

Janice Dickin, Ph.D, LLB,
Chair
Conjoint Faculties Research Ethics Board

25 September 2007
Date:

Distribution: (1) Applicant, (2) Supervisor (if applicable), (3) Chair, Department/Faculty Research Ethics Committee, (4) Sponsor, (5) Conjoint Faculties Research Ethics Board (6) Research Services.