ISSUES IN THE SYNTAX OF MOVEMENT: CROSS-CLAUSAL DEPENDENCIES, RECONSTRUCTION, AND MOVEMENT TYPOLOGY

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This dissertation is a study of the syntax of phrasal movement and its effects on interpretation. Specifically, it argues that the reconstruction patterns in Mongolian scrambling and raising (ECM), which cannot be easily subsumed under the standard A/A'-distinction, emerge from independent properties of grammar. On the basis of a detailed empirical study of Mongolian phrase structure and movement, the current work also explores a series of interrelated issues including free word order, movement typology, Binding Condition C reconstruction, radical reconstruction, case assignment, and feature valuation.

Chapters 2 and 3 present an overview of Mongolian syntax, with a special focus on the free word order phenomenon in this language. I demonstrate that short scrambling in Mongolian shows consistent A-properties, but intermediate and long distance scrambling show mixed A/A'-properties.

Based on the empirical findings in Chapters 2 and 3, Chapter 4 focuses on Condition C reconstruction effects in scrambling. Mongolian scrambling displays paradoxical patterns in terms of Condition C reconstruction which cannot be easily subsumed under the standard A/A'-distinction. Building on Takahashi and Hulsey (2009), I argue that Condition C reconstruction effects in Mongolian do not track movement types, but are instead directly tied to the language's case system, which controls the applicability of Wholesale Late Merger (WLM). In particular, accusative case in Mongolian is assigned as a dependent

case, and nominative is assigned via Agree (cf. Baker and Vinokurova 2010). I suggest that this case assignment mechanism in Mongolian has nontrivial consequences for how Condition C is interpreted in scrambling chains. The novel data presented in this chapter strongly suggest that a WLM-based account of reconstruction effects requires a fine-grained view of the case mechanism of the language in question. Further, the direction pursued in this chapter contributes a new perspective to the study of reconstruction effects in different types of movement, especially long distance scrambling.

Chapter 5 builds on the results obtained in the preceding chapters and discusses some well-known issues concerning the A/A'-distinction and the syntax of exceptional case marking (ECM). I present additional novel data on the interaction between ECM and *wh/topic* licensing in Mongolian, which cannot be easily related to the standard A/A'-distinction. I propose an Agree-based analysis for Mongolian ECM, which derives the relevant movement properties from the features involved in Agree relations, without directly appealing to the A- or A'-status of syntax positions. In addition, I also investigate the differences among raising (ECM), scrambling, and other types of movement in terms of Condition C reconstruction and radical reconstruction. I propose that the relevant contrasts can be accounted for based on case assignment and Agree relationships involved in different types of phrasal movement.

BIOGRAPHICAL SKETCH

Zhiyu Mia Gong was born in Chongqing, China in 1993. She graduated from Beijing Language and Culture University with a B.A. in English and moved to Newark, DE in 2015 to attend the University of Delaware, where she received an M.A. degree in Linguistics in 2017. During her Master's program, she received training in theoretical syntax and developed fieldwork skills with a focus on syntax and morphology under Peter Cole and Gabriella Hermon, which laid the foundation for her Ph.D. research at Cornell University. In 2017, she entered Cornell University's graduate program in linguistics, where she started her own fieldwork projects on Mongolic languages. The members of her dissertation committee are Miloje Despić (chair), John Whitman, and Sarah Murray. During her time as a Ph.D. student, she conducted on-site fieldwork on Dagur (endangered) and Chakhar Mongolian in various regions of Hulun Buir, Inner Mongolia, and worked with native speakers of Khalkha Mongolian in Mongolia (remotely) and the United States. Her research centers on theoretical syntax and the syntax-morphology interface. Broadly, her research aims to provide novel insights into how certain fundamental issues in syntactic theory can be evaluated given new theoretical advances and a wider range of empirical data. Her strong commitment to fieldwork allows her to bring together novel theoretical contributions and empirical facts from understudied and underrepresented languages. She will join the department of linguistics at the University of California, Santa Cruz as Assistant Professor in July, 2022.

This dissertation is dedicated to the memory of Mufan Cao (1912-1993).

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I wish to thank Miloje Despić, my advisor, for his unwavering support and guidance at every stage of my life at Cornell. His mentorship throughout the years has guided me to become a better researcher. Miloje is very often the first person to listen to my ideas, and his comments and suggestions always help me gain new perspectives and see further possibilities to improve my work. Conversations with Miloje about syntax and the field are always invigorating because of his knowledge, genuine interest in linguistics, and keen insight to see deep connections of core issues. As an advisor, Miloje has read numerous drafts of my papers (including various versions of this dissertation) in great detail and has provided constructive feedback and criticism on all aspects of my work. I thank him for the incredible amount of time and effort he spent advising me and for believing in me and the value of my work. I hope I could become a mentor to my future students in the same way Miloje has been to me.

I was particularly fortunate to have John Whitman on my committee. Over the years I have benefited immensely from John's vast knowledge of linguistics and East Asian languages. Much of this dissertation is informed by previous research on Japanese and Korean, and much of what I know about JK syntax, I owe to John. John has also helped me become a better linguist by constantly pushing me to think about the bigger question behind what is at the surface. I

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I was lucky to have the privilege of studying Mongolian. I was deeply inspired by all my Mongolian teachers, friends, and many Mongolian scholars. In particular, I am indebted to Tserenchunt Legden, who has been my most important Mongolian teacher. As a student, I have benefited from Tserenchunt bagš's outstanding teaching practice and her incredible patience and enthusiasm. In addition, I thank György Kara for teaching me about the Mongolic languages and encouraging me to continue my research. I am also very grateful to Serenbat. Serenbat bagš was the first to put pressure on me to seriously learn the Mongolian language. I have benefited in numerous ways from such a decision. Many thanks to my other teachers Tseverhas, Bold-Erdene Byambaa, Gerelmaa Altangerel, and D. Tumur, who have taught and helped me in many ways.

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At various stages, I have had the opportunity to present different versions and components of this dissertation at conferences, workshops, and other linguistic events, some of which are WAFL15, NELS50, PLC45, the LSA Institute, and the Workshop on Word Order and Scrambling (Syracuse University, Cornell University). These occasions have allowed me to meet with many great lin-

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TABLE OF CONTENTS

LIST OF ABBREVIATIONS

1/2/3	-first/second/third person
ABL	-ablative
ACC	-accusative
CAUS	-causative
COMIT	-comitative
COMP/C	-complementizer
COP	-copula
CVB	-converb
DAT	-dative
ERG	-ergative
FOC	-focus particle
GEN	-genitive
INCL	-inclusive
INESS	-inessive
INST	-instrumental
LOC	-locative
NEG	-negation
NOM	-nominative
NPST	-non-past
PL	-plural
POSS	-possessive
PRES	-present tense
PRO	-pronoun
PROG	-progressive
PST	-past tense
PTCP	-participle
Q	-question particle
RECIP	-reciprocal
REFL	-reflexive
SG	-singular
WISH	-verbal ending indicating wish/intention
-	-morpheme boundary

CHAPTER 1

INTRODUCTION

This dissertation investigates the syntax and interpretation of movement chains from both theoretical and empirical perspectives. From a theoretical standpoint, it addresses three questions: (i) what makes scrambling, an operation with mixed A/A'-effects, possible in the grammar? (ii) what are the sources of different types of reconstruction effects? (iii) what are the implications of (i) and (ii) for a general movement typology based on the A/A'-distinction? The investigation into these questions is based on a detailed empirical study of phrasal movement in Khalkha and Chakhar, two major dialects of Mongolian. As I will demonstrate, Mongolian scrambling displays a number of properties diverging from the standard A/A'-typology of movement, which have not been documented in the previous literature on the language. I approach an investigation into these properties from three directions. First, I relate some of the key empirical facts to major previous approaches to scrambling developed within the Government and Binding theory and the Minimalist Program, with a special focus on reconstruction effects. Second, I connect a series of special reconstruction effects in Mongolian scrambling with the case and agreement system in this language. Finally, these results are considered in light of an additional case study on the interaction between exceptional case marking (ECM) and *wh/topic* licensing in Mongolian. A comparison between scrambling and ECM further illuminates the core issues (i-iii) in that it examines the driving force behind distinct types of movement, the correlation between reconstruction and other aspects of the syntax such as case and agreement, and the implications of the current results on a general theory of phrasal movement. In this introductory chapter, I present a brief outline of the core topics of the dissertation and the

major findings of the current study.

1.1 Outline of the Dissertation

1.1.1 The Free Word Order Phenomenon

Since Ross (1967), "free word order" or "scrambling" has been an extensively studied area within generative grammar. Despite these cover terms, the free word order phenomenon displays considerable variation both within individual languages and cross-linguistically. Precisely how this phenomenon and its parametric variation are to be characterized and explained remains an important research agenda. Chapter 3-4 are concerned with this issue. In particular, these two chapters deal with the free word order in Mongolian, exemplified in (1), a phenomenon which has not been systematically investigated in previous research on the language.

(1) Word order permutation in a Mongolian finite declarative clause

a. S-Adv-O-V

Aaw öndör duu-gaar khüükhd-üüd-iig duud-san
father.NOM loud voice-INST child-PL-ACC call-PST
'Father called the children with a loud voice.'

b. S-O-Adv-V

Aaw khüükhd-üüd-iig öndör duu-gaar duud-san

c. Adv-S-O-V

Öndör duu-gaar aaw khüükhd-üüd-iig duud-san

d. Adv-O-S-V

Öndör duu-gaar khüükhd-üüd-iig aaw duud-san

e. O-Adv-S-V

   Khüükhd-üüd-iig öndör duu-gaar aaw duud-san

f. O-S-Adv-V

   Khüükhd-üüd-iig aaw öndör duu-gaar duud-san

An important point that will be demonstrated throughout Chapters 3 and 4 is that despite being apparently free, word order permutation in Mongolian is systematically regulated by various factors in the grammar. This task is achieved by addressing three dimensions of research on scrambling. The first is the locus of the free word order phenomenon in the grammar. Ross (1967) proposes that word order freedom is derived by a stylistic scrambling rule that is not part of the core syntax. In Whitman (1979), the free word order in languages such as Japanese is attributed to the absence of a configurational structure, and scrambling is derived via lexical insertion. The proposal in Whitman (1979) precedes later work which derives free word order without Ross's scrambling rule, particularly Hale (1980) and Farmer (1980). Hale (1980) observes that languages with free word order all show certain typological characteristics such as *pro*-drop and discontinuous constituents. Under Hale's analysis (also see Farmer 1980), different word orders can be freely base-generated without appealing to a scrambling rule. In addition to Hale and Farmer, subsequent research has also proposed base-generation analyses for free word order in various languages, although with updates and revisions (e.g., Bošković and Takahashi 1998, Bayer and Kornfilt 1994). In contrast to the base-generation analysis, it has been argued that in languages such as Japanese and German all the non-canonical word orders are derived from a single base order via movement (e.g., Saito and Hoji 1983 for Japanese, Webelhuth 1985 for German). For studies that adopt a movement approach to free word order, as does

the current work, one of the major goals is to accurately characterize scrambling as a type of phrasal movement. In addition to a review of these major previous approaches, Chapter 3 presents novel data from my fieldwork, which I use to argue for (i) a configurational structure for Mongolian syntax, (ii) a movement-based approach to Mongolian free word order. I treat Mongolian scrambling as a part of core syntax, and show that it observes well-known syntactic constraints on phrasal movement such as subjacency.

Second, on the assumption that scrambling is derived by movement within core syntax, its movement properties become an important issue. Specifically, much research attention has focused on how scrambling can be related to an important distinction made in the theory of syntax: A-movement vs. A'-movement (e.g., Chomsky 1981). It is well-known that scrambling cross-linguistically cannot be easily subsumed under the standard A/A'-distinction (e.g., Mahajan 1990, 1994, Webelhuth 1985, Saito 1992, Tada 1993, among many others). In Chapter 3, I show that Mongolian scrambling shares this characteristic. Scrambling may be characterized into several subtypes depending on the length of movement dependency: short scrambling, which often refers to the word order alternation between objects; intermediate scrambling, which refers to movement within the same clause but targets somewhere beyond the subject; and long distance scrambling, which proceeds out of a finite clause. The main empirical finding is that Mongolian short scrambling shows consistent A-properties, but intermediate and long distance scrambling show mixed A/A'-properties.

To summarize, the main takeaway from Chapter 3 is that Mongolian scrambling patterns in a way that is similar in certain respects to Japanese/Korean

(JK) scrambling. In addition to these similarities to JK scrambling, Mongolian also possesses several unique grammatical properties, which presents a novel empirical domain for the investigation into the syntax of phrasal movement. I focus on one such empirical domain in Chapter 4, which deals with binding Condition C reconstruction effects in scrambling. This consists of the third dimension which the current study addresses with respect to how Mongolian word order variation is constrained in the grammar. I turn to an overview of this topic in the next section.

1.1.2 Reconstruction and the Copy Theory of Movement

On the basis of the above empirical findings, an observation that emerges is that Mongolian displays additional paradoxical properties in terms of Condition C reconstruction which cannot be easily explained under the A/A'-distinction. It is well-known that A-movement typically does not exhibit Condition C reconstruction effects, whereas some instances of A'-movement do (e.g., Chomsky 1993, Lebeaux 1988, Sauerland 1998, Fox 1999). A well-studied contrast which helps illustrate this restriction is between raising and *wh*-movement in English. First, (2a) exemplifies an instance of Condition C violation – the pronoun in the subject position binds the R-expression *John*. In (2b), the object containing the R-expression has undergone *wh*-movement, an instance of A'-movement, to the sentence-initial position. The surface order no longer violates Condition C, but the sentence is still ungrammatical. That is, the moved *wh*-phrase in (2b) behaves for the purpose of binding as if it had not moved, exhibiting what is called a Condition C reconstruction or connectivity effect. In contrast, no such effect is observed in the raising construction (3). In (3b), the raised element containing

the R-expression bleeds Condition C.

(2) *wh*-movement (A′)

a. *He$_1$ thinks Mary saw John's$_1$ mother.

b. *[Whose$_1$ mother]$_2$ does he$_1$ think Mary saw $\_\_{}_2$?

(3) raising to subject (A)

a. *It seems to him$_1$ that John's$_1$ mother is intelligent.

b. [John's$_1$ mother]$_2$ seems to him$_1$ [$\_\_{}_2$ to be intelligent].

Due to the contrast illustrated above, the presence or absence of Condition C reconstruction effects has been taken to be an indication of whether the movement in question is A-movement or A′-movement. In particular, Condition C reconstruction is often utilized as a diagnostic for the A/A′-properties of scrambling. In Chapter 4, I revisit some relevant issues and show that the previously assumed correlation between Condition C and A/A′-movement is dubious. As I will demonstrate, Mongolian scrambling poses additional puzzles within this larger question. On the basis of Wholesale Late Merger (Takahashi and Hulsey 2009), which builds on the copy theory of movement, I present a case-based analysis of Condition C reconstruction effects in Mongolian scrambling, without appealing to the A/A′-distinction. Specifically, I use a set of novel empirical data to motivate a hybrid case assignment model (based on Baker and Vinokurova 2010) for Mongolian, and show that this model is directly connected to the behavior of scrambling in terms of Condition C reconstruction. The case-based approach naturally explains the fact that the same type of scrambling shows conflicting reconstruction effects depending on how binding Condition C is violated at the base order. In addition, it also explains

why Mongolian shows Condition C effects different from those in languages like English. Under my account, this is attributed to the fact that Mongolian has a different case assignment system from English. The current approach predicts that variation in Condition C reconstruction effects across languages is ultimately tied to variation in case systems. While such a prediction remains to be tested with much larger scale cross-linguistic studies, the direction pursued in this chapter provides a new perspective to investigate reconstruction effects in different types of movement, especially long distance scrambling.

1.1.3 The A/A′-Distinction

The third topic which this dissertation deals with concerns the implications of the current empirical findings on the A/A′-distinction. In the Government and Binding (GB) theory, the subsystem of principles included in (4) holds for representations of sentences and the rule Move α, which applies freely.

(4) Chomsky (1981: 5)

a. bounding theory

b. government theory

c. θ-theory

d. binding theory

e. case theory

f. control theory

In studying how these principles apply throughout the derivation, an empirical generalization that is often invoked is the distinction between A- and A′-

positions, defined based on the nature of the head which hosts the moved phrase. [1] It is shown that movement types targeting these two kinds of positions differ systematically, and their respective properties are characterized in terms of the principles in (4) or by certain derivatives of them. In the Minimalist Program (Chomsky 1993), the four levels of representation (D-structure, S-structure, Logical Form, and Phonetic Form) are reduced to two interface levels, LF and PF. As a result, the relevant constraints ensuring wellformedness must be reformulated as conditions on either of the two interface levels or on the derivation itself. Notably, movement no longer comes for free, and must be motivated by reasons such as feature checking. As the theory of movement develops in Minimalist syntax, the distinction between A- and A'-positions no longer has an independent status and essentially reduces to descriptive taxonomy (e.g., Chomsky 1993: 178-180; Chomsky 1995: 253; Chomsky 2004: 125 footnote 30).

Along with this development, an important question arises as to whether the A/A'-distinction is still necessary in the study of scrambling or phrasal movement in general. Within the realm of scrambling, multiple studies have been conducted aiming to capture its core properties without appealing to the A/A'-distinction (e.g., Abe 1993, Bošković and Takahashi 1998, Saito 2003). More generally, based on the idea that Internal Merge requires the establishment of an Agree relation (Chomsky 2000, 2001, 2004, 2007), an emerging body of literature has focused on deriving the A-/A'-distinction from the Agree mechanism (implemented in one way or another, by e.g., Obata and Epstein 2011, van Urk 2015, Keine 2016, 2019; see also Zyman 2018, Wurmbrand 2019). In particular, it has been proposed that A-movement behaves distinctly from A'-movement

[1] More precisely, in GB the A/A'-distinction applies both to landing sites of movement and base-generated (e.g., argument vs. adjunct) positions.

because the former involves ϕ-feature agreement but the latter is driven by A'-features such as *topic* or *wh* (e.g., Obata and Epstein 2011, van Urk 2015). Chapter 5 focuses specifically on this latter line of research. Specifically, the chapter explores the question of whether a feature-based approach to the A/A'-distinction is more explanatory and more advantageous in terms of empirical coverage. It does so by examining the interaction between exceptional case marking (ECM) and *wh/topic* licensing in Mongolian finite embedded clauses. In particular, I propose an Agree-based analysis to account for such interaction, and show that it better captures the empirical data than a traditional position-based approach to A/A'-distinction. Notably, under the Agree-based approach, the differences between various types of movement operations are reduced to differences in features involved in the Agree relations, without directly appealing to the A/A'-distinction.

In addition, this chapter also considers the open question of how scrambling, an apparently optional operation, fits into this general picture. This question is twofold. First, how does Mongolian ECM differ from scrambling, given the current Agree-based analysis? I approach this question by drawing on radical reconstruction, a core property which distinguishes scrambling from other kinds of feature-driven phrasal movement. I will show that while scrambling has the radical reconstruction property, ECM and subject movement to Spec TP do not. On the other hand, since scrambling, ECM, and movement to Spec TP can in principle feed case assignment, they all have the potential to bleed Condition C given appropriate structural contexts. This observation suggests that Condition C reconstruction (which can be seen as a type of partial reconstruction) and radical (total) reconstruction are likely to have distinct sources in the grammar. I suggest that the above contrasts can be explained if we attribute radical recon-

struction effects to the absence of feature checking (following Saito and Fukui 1998, Saito 2004), and attribute Condition C reconstruction effects to case assignment.

Second, and more generally, if free word order arises from the application of movement operations, a natural question arises as to what motivates it. This question becomes more acute under the Minimalist assumption that movement only takes place in order to satisfy some conditions (Last Resort). The issue of optionality has attracted much research attention in previous literature. A number of studies suggest that scrambling involves feature-driven movement in the syntax proper, hence not an optional operation (e.g., Miyagawa 1994, 1997, 2001, 2003, 2005a; Grewendorf and Sabel 1999; Sabel 2001; Kitahara 2002; Ko 2007, among others; also see Bailyn 2006 for relevant discussions). In contrast, researchers such as Saito (2004, 2009), Fukui (1993b), and Tada (1993) have defended the view that scrambling is an optional movement in syntax and is not driven by feature checking (in particular, see e.g., Saito 2004, Saito and Fukui 1998). Since scrambling cross-linguistically is not a homogeneous phenomenon, to what extent it can be characterized on a par with standard feature-driven movement remains an open question, and more detailed investigations into individual languages would be needed to further elucidate this issue. While it is not the goal of this dissertation to resolve this debate, I synthesize the empirical results obtained here and speculate on their implications for the nature of scrambling within this larger context.

CHAPTER 2

BACKGROUND ON MONGOLIAN SYNTAX

2.1 Introduction

In this chapter, I present an overview of the syntax of Mongolian. The purpose of this chapter is mainly to provide background for the rest of this dissertation. I begin by introducing Mongolian and the Mongolic language family, specifying the linguistic and fieldwork context of the current study. Then, I review Mongolian clausal syntax, including the structure of basic finite declarative clauses, tense/aspect endings, complement clauses, as well as flexible word order which figures prominently in this dissertation. Then, I give an overview of the structure of the nominal domain, focusing on definiteness marking, binding of reflexives, and their morphosyntactic characteristics.

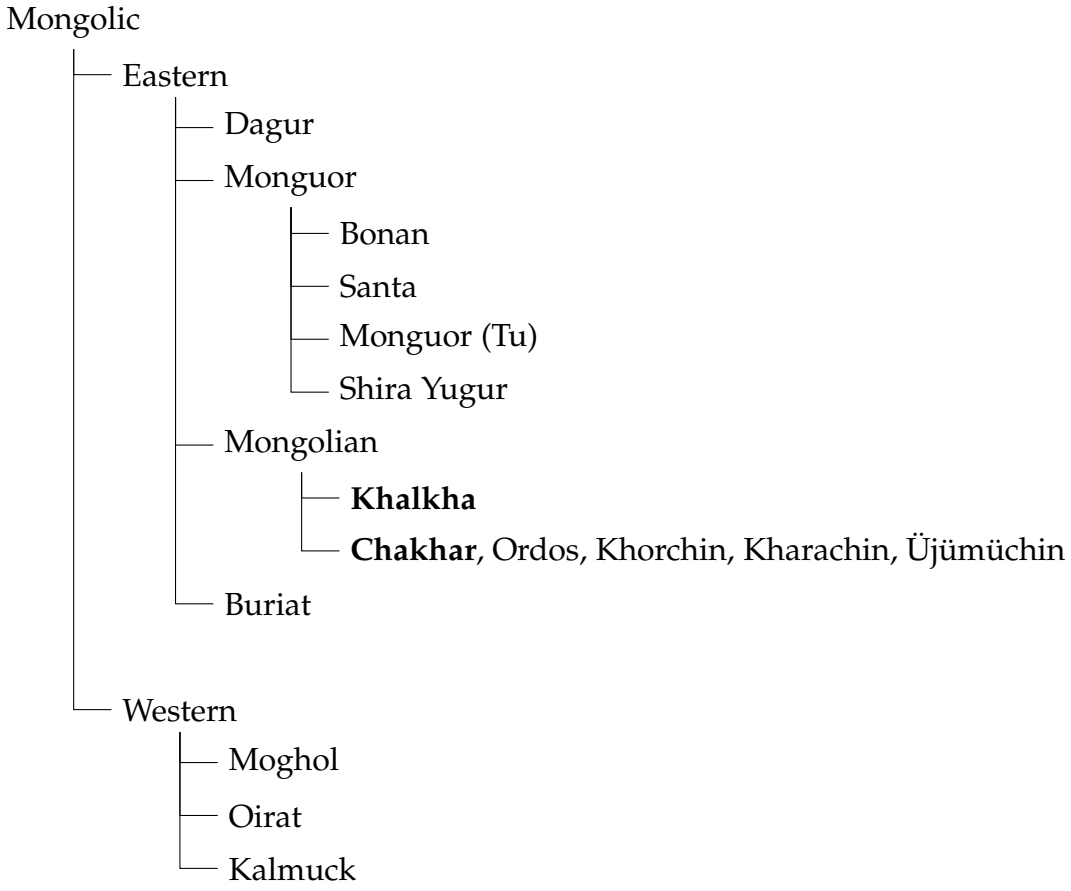
2.2 Linguistic and Fieldwork Context

2.2.1 Mongolian in the Mongolic Language Family

The Mongolic languages are a group of languages spoken in various regions of Central and Northeast Asia. The Mongolic language family comprises the Mongolian language (including all its dialects such as Khalkha and Chakhar) and several other languages. The classification in (5), adopted from Poppe (1955, 1970) and Vladimirtsov (1929), is based on the geographical distribution of the Mongolic languages. For alternative classifications and descriptions

of the status of each language/dialect, the readers may refer to work such as Bertagaev (1968), Binnick (1987), Nugteren (1997), Svantesson (2000), Rybatzki (2003), Atwood (2004: 373-374), Janhunen (2006), and Lewis (2009).

(5) The Mongolic Family (based on Poppe 1955, 1970)



The Mongolian data in the current dissertation are drawn from the two largest dialects of Mongolian: Khalkha Mongolian, which is the official dialect of Mongolia; and Chakhar Mongolian, the official dialect of Inner Mongolia. For comprehensive descriptive studies on Mongolian and the Mongolic languages, the readers are referred to Ramstedt (1902); Vladimirtsov (1929); Poppe (1955, 1974); Street (1963); Sanzheev (1973); Činggeltei (1980, 1991b); Janhunen (2006, 2012);

Svantesson (2003); Binnick (1979, 2011), and references therein.

2.2.2 Orthographic Conventions and Transcription

While Khalkha and Chakhar dialects are mutually intelligible and parallel in many respects in terms of syntax, they use different orthography with different transliteration systems. In Mongolia, the old vertical script of Uighur origin was used until the adoption of the Cyrillic system in 1941. Currently, Khalkha Mongolian is primarily written in the Mongolian Cyrillic script. Unlike the Cyrillic system which reflects the Khalkha spoken dialect, the vertical script reflects an archaic form of Mongolian, going back to the thirteenth century and (phonologically) very different from spoken Mongolian. In Inner Mongolia where Chakhar Mongolian is spoken, the vertical script is still used as the primary writing system. However, spoken Chakhar is also phonologically different from the written vertical script. For a detailed discussion of written Mongolian including its phonological features, see Svantesson, Tsendina, Karlsson, and Franzén (2005), Chapter 4, also see Poppe (1970), Kara (2005), Atwood (2004: 376).

The transcription system for Mongolian used in this dissertation is adapted from the THL Simplified Transliteration of Mongolian Script (The Tibetan & Himalayan Library n.d.), which is based on the Vladimirtsov-Mostaert system and the Library of Congress System. For details regarding the transliteration convention used in the current work, see Appendices A and B. Due to the different writing systems Khalkha and Chakhar adopt, in some cases the same morpheme may show distinct allomorphy. I give a reference table of the transcription differences below, which shows some of the surface variations

most commonly encountered in this dissertation.

(6) Cyrillic script and vertical script transcription reference

	Cyrillic script	Vertical script	Gloss
[1]	*-AA*	*-beng/-iyAn*	REFL.POSS
[2]	*-sAn*	*-gsAn*	PST
[3]	*-w*	*-bA*	PST
[4]	*bie bie*	*bey bey*	lit. body body 'each other'
[5]	*öör*	*öber*	self
[6]	*-ig/-iig/-g*	*-i/-yi*	ACC

2.2.3 Fieldwork Context and General Methodology

The Mongolian data without citation come from the Khalkha and Chakhar Mongolian speakers with whom I have worked over the course of four years, beginning in summer of 2018. My on-site fieldwork during 2018-2020 was mostly conducted in Hulun Buir League, Inner Mongolia (particularly the city of Hailar) and Hohhot, Inner Mongolia, where I worked with native speakers of Chakhar Mongolian. I traveled to Inner Mongolia about twice a year and resided there for one to two months at a time. During the Covid-19 pandemic which started in spring 2020, the Chakhar speakers and I transitioned to online meetings, which persisted until 2022. Since the summer of 2020, I have been working remotely with native speakers of Khalkha Mongolian who either reside in Mongolia (specifically Erdenet and Ulaanbaatar) or were working/studying in the United States. The data in this dissertation mainly come from transcribed narratives and elicited speech. Most of the scrambling data were elicited by directly

asking for grammaticality and felicity judgments. Contexts were provided in Mongolian, English, or Mandarin Chinese depending on the task. I primarily conducted one-on-one interviews with speakers rather than working with groups. In-person elicitation sessions occurred in the houses or offices of the language consultants, or in local libraries. Online elicitation sessions primarily took place on Zoom. The native speakers' Zoom environment was either their home where there were often family members present, or a private room in their workspace, such as a classroom or an office. I have also frequently asked speakers for grammaticality judgments via emails and text messages. For Chakhar Mongolian, I have primarily worked with three Mongolian college students who majored in Mongolic studies, and one university professor. After transitioning online, I have been working with two Chakhar speakers remotely. For Khalkha Mongolian, I have frequently worked with a professor of Mongolian language, and two Mongolian language teachers who currently reside in Mongolia. I have also consulted other speakers, such as Mongolian international students in Ithaca, New York, and other native speakers in Mongolia on an irregular basis. All speakers whom I have worked with are native speakers of Chakhar or Khalkha Mongolian, many of whom have intermediate or advanced proficiency in either Mandarin Chinese or English (learned at school or other educational institutions).

2.3 Clausal Syntax

Mongolian is an agglutinative, SOV language – namely, a language in which the basic word order of transitive sentences is S(ubject)-O(bject)-V(erb). As a member of the Mongolic language family, Mongolian shares a number of typo-

logical features with languages of the Turkic, Tungusic, and Uralic families, as well as Korean (Koreanic) and Japanese (Japonic). In this section, I present basic properties of Mongolian matrix and embedded clausal structure which will be relevant for the subsequent discussion on scrambling and cross-clausal movement. In addition, I review some of the tense/aspect suffixes that will appear frequently in the data reported in subsequent chapters. Finally, I give a preview of the phenomenon of word order flexibility in Mongolian.

2.3.1 Basic Finite Declarative Clauses

Examples of typical Mongolian finite declarative constructions instantiating SOV order are presented in (7). In both sentences the subjects bear nominative case, which is morphologically unmarked on regular DPs (7b) and marked on personal pronouns (e.g., first person singular nominative *bi* in (7a), cf. accusative *namaig* in (7b)). Due to differential object marking, definite or specific objects such as 'that book' in (7a) and the personal pronoun in (7b) are marked with accusative case; objects that are not definite or specific are unmarked.

(7) Finite declarative clauses

a. Bi önöödör ter nom-ig aw-san
I.NOM today that book-ACC buy-PST
'I bought that book today.'

b. Bat namaig khar-san
B.NOM 1SG.ACC see-PST
'Bat saw me.'

Unlike some other members of the Mongolic family (e.g., Dagur, Buriat), Mongolian does not show overt ϕ-agreement between the subject and the pred-

icate. Nevertheless, arguments can be dropped in Mongolian when they can be inferred from the context – to what extent Mongolian patterns with radical *pro* drop languages like Chinese and Japanese remains to be investigated in future research.

(8) a. Ø önöödör ter nom-ig aw-san
today that book-ACC buy-PST
'*pro* bought that book today.'

b. Bat Ø aw-san
B.NOM buy-PST
'Bat bought p*ro*.'

Differential Object Marking (DOM)

In Mongolian, indefinite, non-specific objects generally do not take the ACC case marking. Definite nouns, such as possessed DPs, personal pronouns, proper-names, are marked with ACC case (for further discussions on Mongolian DOM, see Guntsetseg 2016).

(9) a. Indefinite non-specific DPs are not marked with ACC

Bat neg nom aw -san.
B.NOM one book buy -PST
'Bat bought a book.'

b. DPs with ACC are interpreted as specific

Bat neg nom**-ig** aw -san.
B.NOM one book-ACC buy -PST
'Bat bought a certain (specific) book.'

c. Definite DPs, proper names, pronouns are marked with ACC

Bi Bat**-ig** /ter mašin**-ig** /tüün-**iig** khar -san.
1SG.NOM Bat-ACC /that car-ACC /3SG-ACC see -PST
'I saw Bat/that car/him.'

In addition, nonfinite embedded clauses also require ACC case. Example (10) shows a nonfinite embedded clause serving as a complement of the matrix predicate *medeegui* ('did not know'). Accusative case marking is obligatory on the embedded clause (also see, e.g., Sakha 'participial clauses' in Baker and Vinokurova 2010: 616-618, particularly footnote 19).

(10) Nonfinite embedded clauses require ACC case

Bi [tüün-ii ir-sn] -iig med-ee-gui
1SG.NOM 3SG-GEN come-PST.PTCP -ACC know-PST-NEG
'I did not know that he had come (lit. I did not know his having come)'

2.3.2 Tense and Aspect Endings

The rich verbal system of Mongolic languages constitutes a long-standing challenge for descriptive research. While there have been several large-scale studies on the topic over the past century (e.g., Ramstedt 1902; Poppe 1955, 1974; Činggeltei 1980, 1991b; Janhunen 2006, 2012; Binnick 2011), to my knowledge there has not been a general consensus on a unified characterization of the system. The part of the Mongolian verbal system as presented in this section reflects my own descriptive generalizations in light of both previous research and my fieldwork on the Mongolian oral speech. In particular, I focus on the verbal endings typically associated with tense and aspect (for an organized complete list of verbal endings see e.g., Tserenpil and Kullmann 2015). The tense markers that appear on finite verbs are summarized in (11).

(11) The tense markers (capitalized letter *A* indicates four-way vowel harmony a/e/o/ö)

[1]		[2]	
-jee/-čee	past	*-sAn*	past
-w	(recent) past		
-lAA	(recent) past/immediate future		
-nA	nonpast		

Column [1] includes the standardly recognized finite verbal endings (e.g., Poppe 1974, Činggeltei 1991a, Janhunen 2012). I give some examples illustrating the properties of each ending. First, *-jee/-čee* indicates past tense, with evidential meaning in Khalkha Mongolian. In contrast, in Chakhar Mongolian *-jee/-čee* is a general past tense marker without evidential meaning.

(12) Khalkha: Past tense with evidential meaning

[Context: the speaker opens the door in the morning and sees snow on the ground]

Tsas or-jee
snow fall-PST
'It snowed. (I inferred from the snow on the ground)'

(13) Chakhar: Regular past tense without evidential meaning

Tende arbin kümün bai-jee
there abundant people COP-PST
'There were a lot of people.'

Second, *-w* indicates (perfect) recent past (Poppe 1974: 92-93), most often used in literary language.

(14) Bi suu-w
1SG.NOM sit-PST
'I (just) sat down.'

Third, *-lAA* is used for directly perceived recent past or immediate future. The precise nature of this ending is debated (for example, it is called *präsens perfekti* 'present of the perfect' by Ramstedt 1902; also see Binnick 2011). For the purpose of this dissertation, it suffices to indicate its finite status and most commonly associated interpretations.

(15) Bat öröö-nd or-loo
B.NOM room-DAT enter-LOO
[Recent past interpretation: Bat entered the room just now and I saw it]
[Immediate future interpretation: Bat is about to enter the room right now and I am witnessing it]

The last ending in column [1] of the table in (11), *-nA*, is a finite verbal suffix indicating present (16) or future (17).

(16) Awdobus gadaa bai-na
bus outside COP-NPST
'The bus is outside.'

(17) Bat Mongol-d ir-ne
B.NOM Mongolia-DAT come-NPST
'Bat will come to Mongolia.'

The ending *-sAn* in column [2] is typically regarded as a perfect participial suffix in traditional descriptive literature. However, it has also been noted that *-sAn* can be a general past tense suffix (e.g., Janhunen 2012; Binnick 2011) which appears on matrix main verbs just as the tense endings in column [1]. Consider the following example.

(18) *-sAn* as a finite past tense ending

Bi üüniig čam-d ög-sön
1SG.NOM this.ACC 2SG-DAT give-PST
'I gave this to you.'

As noted in Binnick (2011), in constructions such as (18) *ögsön* is essentially a finite verb, and that "there is ample reason to regard the *-sen* suffix as a fourth past tense marker, alongside the finite tense endings *-jee, -lee*, and *-v*" (Binnick 2001: 9-10; Binnick's *-sen* equals to *-sAn*; *-lee* equals to *-lAA*; *-v* equals to *-w* in the current transcription system).

Therefore, following Binnick (2011), I distinguish between one variant of *-sAn* as a finite past tense ending, and another *-sAn* as a participial ending indicating perfect aspect, along with other aspectual endings summarized in (19). I give examples illustrating each of these aspect endings below.

(19) Some of the Mongolian aspect markers

-sAn	perfect
-kh	futuritive (or infinitival)
-dAg	habitual
-AA	imperfect

Aside from being a finite verbal ending indicating general past tense, another variant of *-sAn* is used in nonfinite contexts indicating perfect aspect. It may appear in nonfinite argument clauses or other nonfinite environments such as a relative clause. In (20a), the 3SG.POSS is used to nominalize the subject clause and does not have a possessive meaning. A literal translation of the sentence is 'your having come early is very good', with the perfect participle ending *-sAn* used on the verb of the nonfinite subject clause. Finite tense markers such as *-jee* and *-laa* are not acceptable in this environment. Similarly, *-sAn* can also appear inside relative clauses, and typical finite tense markers are not available in the same environment.

(20) a. Based on Tserenpil and Kullmann (2015): 143

Činii ert ir-sen/-*jee/-*laa in ikh sain
2SG.GEN early come-PST.PTCP/PST/PST 3SG.POSS very good
'It is very good that you've come early' Lit. 'Your having come early is very good'

b. [$_{RC}$ Minii unš-san/-*jee/-*laa] nom
1SG.GEN read-PST.PTCP/PST/PST book
'the book which I have read'

The futuritive (or infinitival) ending *-kh* is commonly used in "dictionary forms" of verbs (21a), and it may not appear as a finite matrix verb ending in a declarative clause (21b). It may be used in infinitival clauses with no specific temporal reference (21c). The terminology is debated in the descriptive literature: Poppe (1974) argues against referring to *-kh* as an infinitival suffix, while it is glossed as infinitival in work such as Binnick (2011). For the purpose of this work it suffices to note that *-kh* may not serve as the ending of a finite verb in a declarative sentence, so I will gloss it as INF. See Poppe (1974), Janhunen (2012), Janhunen (2006) for further discussion on this suffix.

(21) a. yar-ikh
talk-INF
'to talk'

b. *Bat yar-ikh
B.NOM talk-INF
Int. 'Bat talks/will talk/...'

c. Bi [tsamts aw-akh] kheregtei
1SG.NOM clothes buy-INF need
'I need to buy clothes'

-dAg expresses habitual aspect, indicating a situation which is characteristic of a continued stretch of time (22a). It is used with a past tense copula when expressing habitual actions in the past (22b).

(22) a. Bat Ulaanbaatar khot-od amidar-dag
B.NOM U city-DAT live-HABIT
'Bat lives in Ulaanbaatar.'

b. Bat Ulaanbaatar khot-od amidar-dag bai-san
B.NOM U city-DAT live-HABIT COP-PST
'Bat lived in/used to live in Ulaanbaatar.'

2.3.3 Complement Clauses and the Complementizer *gej*

Mongolian has finite as well as nonfinite complement clauses. The finite complement clauses that I primarily focus on are those headed by the particle *gej*. While *gej* is glossed as a complementizer in the current work, its nature requires some further clarification. *Gej* (Classical Mongolian *kemejü*, modern Inner Mongolian in vertical script *gejü*, Written Oirat "clear script" *giji*, modern Buriat *geže*; György Kara, p.c.) is derived from the verb *ge-* 'to say'. More precisely, *gej* is originally a converbial form (i.e., *ge-j* 'say-CVB') of the verb *ge-* 'to say' (for a description of Mongolian converbs see e.g., Poppe 1974). However, its extensive use in subordinating constructions suggest that it is developing, or in my view has developed, into a general quotative particle (also see e.g., Janhunen 2012: 283-84). The following examples show that *gej* is ambiguous between a marker of direct quotation and a complementizer for finite embedded clauses.

(23) Direct quotation

Bi "Bat(*-ig) ter nom-ig unš-san" **gej** khel-sen
1SG.NOM B(-*ACC) that book-ACC read-PST *gej* say-PST
'I said, "Bat read that book".'

(24) Indirect speech

Bi [$_{CP}$ Bat(-ig) ter nom-ig unš-san **gej**] khel-sen
1SG.NOM B-ACC that book-ACC read-PST C say-PST
'I said that Bat read that book.'

Sentence (23) and (24) consist of the same string of words, but the former is a direct quotation, and the latter is indirect speech. That (23) is a direct quotation is also suggested by the fact that accusative case marking on the subject, which can be regarded as a type of Exceptional Case Marking (ECM, to be discussed in detail in Chapter 5), is not available. In contrast, ECM is possible in (24).

Another example of a *gej*-clause as an indirect quotation is provided in (25), in which the matrix subject *bagš* ('teacher') is coindexed with the third person singular pronominal possessive inside the embedded CP. The coindexing ensures that the embedded *gej*-clause is not a direct quotation.

(25) Pronoun binding into the embedded CP

Bagš$_1$ [$_{CP}$ Bat(-ig) offis-t ni$_1$ khoyor nom-ig unši-j
Teacher.NOM B.NOM office-DAT 3S.POSS two book-ACC read-CVB
duusga-san **gej**] khel-sen
finish-PST C say-PST
'The teacher$_1$ said that Bat finished reading two books in his$_1$ office.'

In the above respects, *gej* in Mongolian resembles *to* in Japanese (Činggeltei 1991a, Saito 2010). In addition, *gej* is not strictly limited to appearing in embedded reported speech clauses. The following (26-28) provide a few example where embedded CPs headed by *gej* serve as various kind of complement clauses.

(26) [$_{CP}$ Üzegchid minii awiyaas-ig ünel-deg yum bai-na
audience 1SG.GEN talent-ACC appreciate-HABIT PART COP-NPST
gej] ikh bayarla-san
C very be.glad-PST
'(I am) very happy [$_{CP}$that the audience appreciate my talent].'

[source: https://undrah.com/post/16452]

(27) [$_{CP}$ Khuukhd-ee sain khun bol-oosoi **gej**] khus-deg (bol...)
child-REFL.POSS good person become-wish C hope-HABIT (if...)

'(If) one wishes [$_{CP}$ that one's child become a good person] ...'

[source: http://mongolcom.mn/read/10948]

(28) (Bi) [$_{CP}$ Erönkhii said šudarga, zöw šiidwer garga-san
1SG.NOM Prime Minister fair correct decision bring.about-PST
gej] üze-j bai-na
C reckon-CVB COP-NPST
'(I) reckon [$_{CP}$ that the Prime Minister made a fair and correct decision].'

[source: https://newspress.mn/v1/%D0%A3%D0%BB%D1%81-%D1%82%D3%A9%D1%80/news/27197]

The verbs in the embedded CPs headed by *gej* are compatible with all the finite verbal endings in (11), suggesting these embedded CPs are finite. An example with embedded verb carrying the nonpast finite verbal ending *-nA* is given below.

(29) Bi [$_{CP}$ Bat-ig ter nom-ig unš-na gej] khel-sen
1SG.NOM B-ACC that book-ACC read-NPST C say-PST
'I said that Bat will read that book.'

So far, I have been referring to the *gej*-clauses as CPs. That the embedded clause headed by *gej* structurally projects a CP is supported by the fact that they can accommodate embedded questions. As shown below, the *gej*-clauses can host embedded *wh*-scope (30), as well as an embedded multiple *wh*-question (31).

(30) Embedded *wh*-question

Dorj [$_{CP}$ Zaya-g ali kino-g üz-meer baina we gej]
D.NOM Z-ACC which movie-ACC watch-want.to COP.NPST Q C
asuul-w
ask-PST
'Dorj asked which movie Zaya wants to watch.'

(31) Embedded multiple *wh*-quesion

Bold [$_{CP}$ khen yu(-g) khar-san be gej] asuul-w
B.NOM who.NOM what(-ACC) see-PST Q C ask-PST
'Bold asked who saw what.'

In addition to finite clauses, Mongolian also has nonfinite embedded clauses as shown in (32). When the matrix and embedded clause share the same subject, the embedded subject is dropped, with a reflexive possessive marker surfacing on the entire nonfinite embedded clause, coindexed with the matrix subject. In the context of (32a), when the embedded clause carries a reflexive possessive suffix, the accusative is not overtly spelled out. When the embedded clause and the matrix clause have distinct subjects, as in (32b), the embedded subject can be marked with either accusative or genitive case. The entire nonfinite embedded clause is marked with accusative case.

(32) Nonfinite embedded clauses (Legden, Luethy, and Bold-Erdene 2008: 51)

a. Bat$_1$ [*pro*$_1$ önöödör öglöö ir -sn] -ø -ee$_1$
B.NOM today morning come -PST.PTCP -ACC -REFL.POSS
nadad khel-ee-gui
1SG.DAT say-PST-NEG
'Bat$_1$ did not tell me that he$_1$ has come this morning.'

b. Bi [bagš-iig/-iin ir-ekh]-iig med-ee-gui
1SG.NOM teacher-ACC/-GEN come-INF-ACC know-PST-NEG
'I did not know that the teacher would come'

2.3.4 The Free Word Order Phenomenon

As will be demonstrated throughout this dissertation, Mongolian is a language with flexible word order, which can be subsumed under the more general free word order phenomenon observed in languages such as Japanese, Korean, and

Hindi. As shown in (33), a finite declarative clause allows a number of word order permutations. While the verb remains clause-final, the relative order among the subject, adverb, and object may freely alternate.

(33) Word order permutation in a finite declarative clause

a. S-Adv-O-V

Aaw öndör duu-gaar khüükhd-üüd-iig duud-san
father.NOM loud voice-INST child-PL-ACC call-PST
'Father called the children with a loud voice.'

b. S-O-Adv-V

Aaw khüükhd-üüd-iig öndör duu-gaar duud-san

c. Adv-S-O-V

Öndör duu-gaar aaw khüükhd-üüd-iig duud-san

d. Adv-O-S-V

Öndör duu-gaar khüükhd-üüd-iig aaw duud-san

e. O-Adv-S-V

Khüükhd-üüd-iig öndör duu-gaar aaw duud-san

f. O-S-Adv-V

Khüükhd-üüd-iig aaw öndör duu-gaar duud-san

2.4 Binding and the Structure of the Nominal Domain

In this section, I present properties of the nominal structure of Mongolian. I also discuss strategies for definiteness marking and reflexive binding in Mongolian. It will be established that Mongolian reflexive possessive is locally subject-oriented, distinguished from an elsewhere case. This point will be assumed in

subsequent investigation on the interaction between scrambling and binding.

2.4.1 Basics of the Nominal Structure

Descriptively, Mongolian possesses seven cases, as shown in (34). The surface forms of each case ending reflect allomorphy in Khalkha Mongolian as written in Cyrillic script. For a list of case allomorphy in vertical script, see Činggeltei (1991: 152-55).

(34) Mongolian case inventory (capitalized letters indicate vowel harmony)

NOM	*-ø* on regular nouns, marked on pronouns
GEN	*-in/-iin/-i/-ii/-n*
DAT	*-t/-d*
ACC	*-ig/-iig/-g*
ABL	*-AAc*
INST	*-AAr*
COMIT	*-tAi*

Mongolian is an articleless language in which a bare noun may directly function as an argument. The head noun usually does not bear plural suffixes if it is modified by a numeral. The possessor, numeral, and adjective usually precede the head noun, as shown in (35).

(35) Minii akh-in gurwan bor mori
1SG.GEN older.brother-GEN three brown horse
'My older brother's three brown horses'

Genitive pronouns have their own post-nominal enclitic forms. The paradigm is given in (36).

(36) Genitive pronouns and their enclitic forms

	genitive pronouns	enclitics
1SG	*minii*	*mini*
2SG	*činii*	*čini*
3SG	*tüünii*	*ni*
1PL	*manai*	*mani*
2PL	*tanai*	*tani*
3PL	*tednii*	*ni*

A possessive DP can either be expressed with a genitive pronoun or its corresponding enclitic form, as exemplified in (37). Notice also that in (37b) the possessive pronoun enclitic linearly follows the plural suffix and the case suffix.

(37) a. Bat minii nom-uud-ig unš-san
B.NOM 1SG.GEN book-PL-ACC read-PST
'Bat read my books.'

b. Bat nom-uud-ig mini unš-san
B.NOM book-PL-ACC 1SG.POSS read-PST

The possessive enclitics are arguably pronouns subjected to Binding Condition B, rather than being agreement suffixes (cf. other Mongolic languages such as Dagur as discussed in Gong 2021; also see e.g., Turkish as discussed in Kornfilt 2013). As shown in (38), the 1SG genitive pronoun and the corresponding possessive enclitic may not co-occur, modifying the same head noun simultane-

ously. The ungrammaticality of (38) is expected if the enclitic *mini* is a full pronoun and the construction violates Binding Condition B.

(38) *Bat **minii** nom-uud-ig **mini** unš-san
B.NOM 1SG.GEN book-PL-ACC 1SG.POSS read-PST
Int. 'Bat read my books.'

2.4.2 Definiteness Marking and the 3SG.POSS Enclitic

Mongolian lacks prenominal (article-like) definiteness marking but has a set of demonstratives *ene* ('this'), *ter* ('that'), *(t)edgeer* ('these'/'those'). Nouns that co-occur with these demonstratives are interpreted as definite.

(39) DP with demonstrative in object position

Bi ene nom-ig aw-laa
1SG.NOM this book-ACC buy-PST
'I bought this book.'

(40) DP with demonstrative in subject position

Ter nom maš sonirkholtoi
that book.NOM very interesting
'That book is very interesting.'

A bare noun can have definite interpretation even if there is no demonstrative or other special markings present. For example, bare nouns can be used as uniqueness definites, such as (41), taken from an online news report about the Prime Minister of Mongolia. The same bare noun with definite interpretation is marked with accusative case in object position (42), due to DOM.

(41) Unique definite DP in subject position

Erönkhii said "Top-100" aj akhui-n negjiin
prime minister-NOM top-100 enterprise-GEN unitary.GEN
tölöölöl-tei uulza-v.
representative-COMIT meet-PST
'The Prime Minister (of Mongolia) met with the representatives of the Top 100 companies.'

[source: https://montsame.mn/en/read/295167]

(42) Unique definite DP in object position

a. Bi **erönkhii said-ig** khar-san
1SG.NOM prime minister-ACC see-PST
'I saw the Prime Minister (of Mongolia)'

While in (41) the bare noun has a definite interpretation in a context referring to the unique Prime Minister of Mongolia, a bare noun can also receive an indefinite interpretation in contexts such as (43).

(43) **Khün** erüül baikh-in tuld sain amrakh kheregtei
person more healthy-GEN in.order.to good rest need
'In order to be healthy, **a person/one** needs to rest well.'

The data so far shows that in the absence of definite articles, a bare noun can have indefinite or definite interpretation, depending on the context. In addition, my fieldwork data indicate that the third person singular possessive enclitic *-ni* is used in definite environments as an indication of definiteness (cf. Hashimoto 2006; also see Fraurud 2001 for possible diachronic source of using possessive as definite markers in typologically similar languages). The subject *qagan* ('king') followed by 3SG.POSS in (44a) does not have a possessive interpretation, but instead presupposes a group of people or a nation of which the subject *qagan* is the king. Without 3SG.POSS and without any further specification of the context,

the bare noun *qagan* in (44b) has an indefinite interpretation and can refer to any king.

(44) a. Written Mongol (Poppe 1974)

Qagan inu tere ekener-i qatun-iyan bolga-bai
king 3SG.POSS that woman-ACC wife-REFL.POSS make-PST
'The king made that woman his wife.'

[Interpretation: A certain king of some people or nation that are familiar from the context]

b. **Qagan** tere ekener-i qatun-iyan bolga-bai
king that woman-ACC wife-REFL.POSS make-PST
[Interpretation: (without further specification) any king]

In addition, the presence of 3SG.POSS also gives rise to interpretive differences in N′-ellipsis (or NP ellipsis) contexts. In (45a), the second occurrence of the noun *palto* ('coat') is omitted. Despite the fact that Mongolian has differential object marking, the accusative case marking is obligatory in N′-ellipsis contexts, even though the interpretation of *khar-ig* in (45a) is 'a black one', an indefinite interpretation. In the surface form, the accusative case suffix directly leans onto the remnant of N′-ellipsis, in this case the adjective. The obligatory presence of accusative case marking in (45a) can be seen as an instantiation of previous generalization that overt inflection licenses N′-ellipsis (e.g., Lobeck 1993, 1995, Kester 1996, 1998, Corver and Van Koppen 2011, cf. Saab and Lipták 2016, Murphy 2018). As shown in (45b), the appearance of 3SG.POSS in the N′-ellipsis context gives rise to the interpretation that Mary wants to buy the black version of whatever coat John wants to buy. In the presence of 3SG.POSS, the elided NP is interpreted as definite, and its interpretation depends on that of the preceding noun *palto* ('coat').

(45) a. Jon [ulaan palto] aw -maar baina, Mari [**khar -ig**] aw -maar
John red coat buy -WISH COP.NPST Mary black -ACC buy -WISH
baina
COP.NPST
'John wants to buy a red coat. Mary wants to buy a black one.'

b. Jon [ulaan palto] aw -maar baina, Mari [**khar -ig ni**]
John red coat buy -WISH COP.NPST Mary black -ACC 3SG.POSS
aw -maar baina
buy -WISH COP.NPST
'John wants to buy a red coat. Mary wants to buy the black version of that (i.e., a black one of whatever John buys).'

[Interpretation: Same coat, different color]

Such anaphoric-definite-like interpretation (e.g., Hawkins 1978, Schwarz 2009) does not always require a linguistic antecedent. It is possible to construe an example such as (46), where *ulaan-ig ni* ('the red one') is a definite description referring to the red coat salient in the context.

(46) [At a shop, a customer wants to buy a coat, and the shop assistant shows him a red coat and a blue coat, the customer says:]

Bi ulaan -ig ni aw -maar baina.
I red -ACC 3SG.POSS buy -WISH COP.NPST
'I want to buy the red one.' (red coat is in the context)

In contrast, as shown in (47), the speaker can only utter (47a) without the 3SG.POSS when talking about a green-colored coat that is not present in the context, and using 3SG.POSS as shown in (47b) is not felicitous (these examples can be further considered in light of the research on deep and surface anaphora Hankamer and Sag 1976; also see Lobeck 1995 for discussions of these issues in ellipsis in noun phrases).

(47) [At a shop, a customer wants to buy a coat, and the shop assistant shows him a red coat and a blue coat, the customer says: these look nice, but ***I want to buy a green one***, do you have it?]

a. Bi nogoon -ig aw -maar baina.
I green -ACC buy -WISH COP.NPST
'I want to buy a green one.'

b. #Bi nogoon -ig ni aw -maar baina.
I green -ACC 3SG.POSS buy -WISH COP.NPST
'I want to buy the green one.' (no green coat in the context)

The data so far indicates that the 3SG.POSS can be used to signal definiteness of different kinds. For example, we have seen it appearing on a definite DP unique in a larger situation (44a), and in N'-ellipsis contexts signaling anaphoric definiteness (45-47). In addition, The 3SG.POSS is also used in partitive contexts.

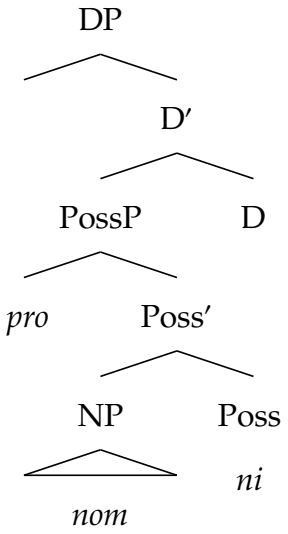
(48) Ene khoyor bilet -nii **ali** **ni** khyamdkhan be?
this two ticker -GEN which 3S.GEN cheap Q
'Between these two tickets which one is cheap? '

Given the above facts, it seems reasonable to suggest that 3SG.POSS in Mongolian displays properties beyond those of a simple possessive enclitic. Specifically, it can be used in various contexts signaling definiteness.

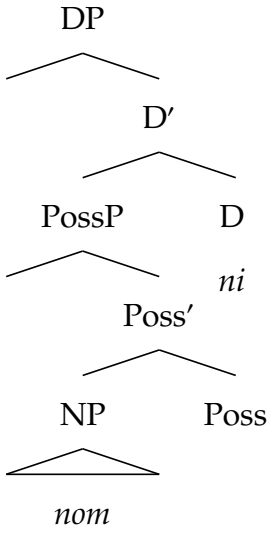
The fact that 3SG.POSS in Mongolian may function as a definite marker in addition to its regular function as a possessive marker has implications for the structure of the nominal domain of this language. To facilitate later discussion, I assume the following DP structure for Mongolian. Following the analysis of Hungarian possessives proposed in Szabolcsi (1981, 1983, 1994), I assume possessive is projected under D (see also Kayne 1994). In a regular possessive construction such as *nom ni* ('his/her book'), shown in (49), 3SG.POSS is located on

Poss^0, where it obtains the regular third person singular possessive meaning. In contexts where 3SG.POSS signals definiteness with no possessive interpretation, as in (50) *nom ni* ('the book'), I assume 3SG.POSS occupies D^0.

(49) *nom ni*
book 3SG.POSS 'his book'



(50) *nom ni*
book 3SG.POSS 'the book'

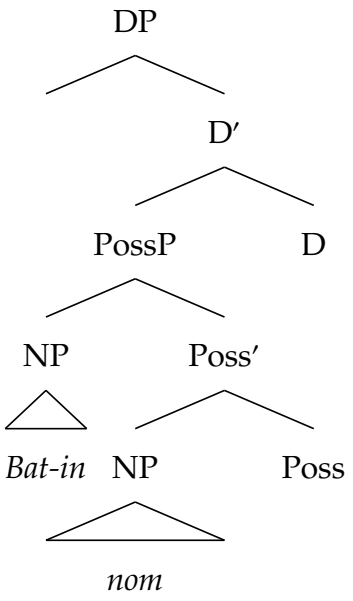


In addition, a possessive expression such as *Bat-in nom* ('Bat's book') is assumed to have a structure depicted in (51). [1]

(51) *Bat-in nom*

[1]More specifically, in subsequent chapters, especially Chapter 4, I will assume that expressions that denote an individual are overt/covert definite descriptions, following Elbourne (2001, 2005) and Takahashi and Hulsey (2009), and the possessive DP in (51) is analyzed as containing a covert definite determiner which occupies D^0. Thus, *Bat-in nom* is assumed to have the structure [THE [*Bat-in nom*]], where THE indicates the covert determiner at D^0.

Bat-GEN book 'Bat's book'



2.4.3 Binding of Reflexives

Binding of reflexives by subjects in Mongolian requires the subject-oriented reflexive possessive suffix, which takes the form *-AA* in Khalkha Mongolian (*-iyAn/-beng* in vertical script). The following examples (52-53) are taken from Guntsetseg (2011), with the transcription and gloss adapted to the current system. In addition to actual possessive forms (52), the reflexive possessive suffix is also required on self-pronouns, as in (53).

(52) Guntsetseg (2011:3)

John$_1$ bagš-aas-**aa**$_1$ asuu-san
J.NOM teacher-ABL-REFL.POSS ask-PST
'John$_1$ asked self's$_1$ teacher. '

(53) Guntsetseg (2011:3)

John$_1$ **öör-iig-öö**$_1$ šüümjil-sen
J.NOM self-ACC-REFL.POSS criticize-PST
'John$_1$ criticized self$_1$'

The fact that REFL.POSS (*-AA/-iyAn/-beng*) is locally subject-oriented can be illustrated with (54-55). In (54) the self-pronoun is marked with REFL.POSS, and therefore can only be coindexed with the subject *Baatar*, not the dative argument *Čemeg*. When the self-pronoun is not (locally) subject-oriented, the REFL.POSS suffix is substituted with the 3SG.POSS enclitic *ni*, as exemplified in (55) (the *kh* in *khni* is an epenthetic consonant). As a result, the self-pronoun (*öberin khni* in vertical script, *öörin-khni* in Cyrillic) can only be bound by a non-subject, in this case *Čemeg*; and cannot be bound by the subject *Baatar*. In my view, *oberin khni/öörin-khni* is best regarded as an elsewhere case, rather than an anti-subject-oriented reflexive anaphor proper. The first reason is that it is not the case that *oberin khni/öörin-khni* can never be bound by a subject. As will be show immediately below, *oberin khni/öörin-khni* can be bound by a non-local subject. In addition, as will be shown in Chapter 3, the complex pronoun *oberin khni/öörin-khni*, in addition to functioning as a reflexive that is not subject-oriented, also exhibits some properties of a pronoun. Therefore, I will be referring to the type of self-pronoun in (54) as the (locally) subject-oriented reflexive possessive self-pronoun, and the self-pronoun in (55) as an elsewhere case.

(54) Locally subject-oriented reflexive

Baatar$_1$ Čemeg-d$_2$ **öber-in -iyen**$_{1/*2}$ tukhai khel -be
Baatar Čemeg-DAT self-GEN-REFL.POSS about tell -PST
'Baatar$_1$ told Čemeg$_2$ about (him)self$_1$'

(55) Elsewhere reflexive

Baatar$_1$ **Čemeg-d**$_2$ **öber-in khni**$_{*1/2}$ tukhai khel -be
Baatar Čemeg-DAT self-GEN 3SG.POSS about tell -PST
'Baatar$_1$ told Čemeg$_2$ about (her)self$_2$'

As mentioned above, the subject-oriented REFL.POSS suffix can only be

bound by a local subject. For example, in nonfinite embedded clauses (56-57), the subject-oriented reflexive pronoun can only be bound by the embedded subject but not by the matrix subject (56). In order to be bound by the matrix subject, the reflexive pronoun inside the embedded nonfinite clause must not be subject-oriented (57) – the elsewhere case is used instead.

(56) Guntsetseg (2011:28)

John$_1$ [**Mary-g$_2$ öör-iig-öö**$_{*1/2}$ zur-sn] -ig khar-san
J.NOM M-ACC self-ACC-REFL.POSS draw-PST.PTCP -ACC see-PST
'John$_1$ saw that **Mary**$_2$ drew **(her)self**$_2$'

(57) Guntsetseg (2011:28)

John$_1$ [Mary-g$_2$ **öör-iig ni**$_{1/*2}$ zur-sn] -ig khar-san
J.NOM M-ACC self-ACC 3SG.POSS draw-PST.PTCP] -ACC see-PST
'**John**$_1$ saw that Mary$_2$ drew **(him)self**$_1$'

Similarly, in finite embedded clauses headed by *gej*, the reflexive pronoun can only be bound by the local subject. Long-distance binding by the matrix subject requires the elsewhere case.

(58) Bat$_1$ [**Zaya-g$_2$ öör-iig-öö**$_{*1/2}$ šüümjil-sen gej] khel-sen
B.NOM Z-ACC self-ACC-REFL.POSS criticize-PST C say-PST
'Bat$_1$ said that **Zaya**$_2$ criticized **(her)self**$_{*1/2}$'

(59) **Bat**$_1$ [Zaya-g$_2$ **öör-iig ni**$_{1/*2}$ šüümjil-sen gej] khel-sen
B.NOM Z-ACC self-ACC 3SG.POSS criticize-PST C say-PST
'**Bat**$_1$ said that Zaya$_2$ criticized **(him)self**$_{1/*2}$'

Genitive subjects of relative clauses can also locally bind a subject-oriented reflexive, as shown in (60).

(60) [**Baatar-in**$_1$ **öör-in** šawi -d **-aa**$_1$ ilgee-sen] nom bol ikh
Baatar-GEN self-GEN student -DAT -REFL.POSS send-PST book TOP one

sain nom
good book
'The book that **Baatar**$_1$ sent to **self's**$_1$ student is a good book.'

However, it is not the case that all genitive marked DPs can be considered as a subject for binding purposes. In (61), the genitive noun phrase *Baatar* may not bind a subject-oriented reflexive, and only the elsewhere case is possible.

(61) **Baatar-in**$_1$ **ober-in** **khni**$_1$**/*-iyen**$_1$ tuqai üliger ni
Baatar-GEN self-GEN 3SG.POSS/REFL.POSS about story 3SG.POSS
tuni$_1$ joba-ga-be
3SG.ACC sad-CAUS-PST
Baatar's$_1$ story about **himself**$_1$ made him$_1$ sad.'

2.5 Summary of Chapter 2

In this chapter, I have presented an overview of the nominal and clausal syntax of Mongolian. I have reviewed aspects of Mongolian clausal syntax, including the structure of basic finite declarative clauses, tense/aspect endings, differential object marking, complement clauses, and flexible word order. I also gave an overview of the structure of Mongolian nominal domain, as well as the properties of definiteness marking and reflexive binding. Several points established throughout this chapter, such as the locally subject-oriented nature of REFL.POSS, the distinction between finite and nonfinite embedded clauses, and the nature of the complementizer *gej*, will be assumed and referenced throughout this dissertation. Due to the introductory nature of this chapter, the discussion on the formal properties of clausal and nominal syntax remains at a general level, with details regarding a number of important topics concerning reflexible binding, definiteness, and N'-ellipsis left open for future research.

CHAPTER 3

SCRAMBLING

3.1 Introduction

This chapter provides a systematic introduction to (leftward) scrambling in Mongolian. In particular, two empirical issues are examined: (i) what are the main characteristics of scrambling in Mongolian? (ii) what constraints does Mongolian scrambling obey? The empirical study of this chapter is guided by a survey of major previous theoretical approaches to scrambling. Previous studies on Hindi, Japanese, Korean, and German will also be reviewed and considered in light of the Mongolian data.

One of the major theoretical issues addressed in the early studies on scrambling is the problem of configurationality. In one of the first theoretical attempts to account for the free word order phenomenon, Whitman (1979) suggests that the surface free word order is associated with a nonconfigurational structure, an idea which was further explored and formalized in Hale (1980) and Farmer (1980). Under the nonconfigurationality hypothesis, all possible word order permutations are base-generated without invoking a scrambling rule (Ross 1967). However, later it was demonstrated that free word order languages such as Japanese indeed have a configurational structure, and scrambling was shown to be an instance of Move α (e.g., Saito and Hoji 1983, Hoji 1985, Saito 1989), subject to syntactic constraints just as more familiar movement types such as *wh*-movement. Although scrambling and other cases of phrasal movement share a lot in common (e.g., they all observe subjacency, Empty Category Principle, Coordinate Structure Constraint, Proper Binding Condition,

etc.), much research in the 1980s and 90s demonstrated that scrambling does not exactly fit into the standard typology of A- and A'-movement. A common cross-linguistic observation is that the same type of scrambling often exhibits mixed properties, seemingly behaving like both A- and A'-movement (e.g., Webelhuth 1989, Mahajan 1990, Saito 1992).

Similarly, scrambling in Mongolian shows various syntactic and semantic properties that cannot be directly subsumed under the standard A/A'-distinction. In this chapter, I report novel empirical facts drawn from fieldwork which show that Mongolian exhibits a wide range of word order flexibility that provides a rich set of data for the general study of scrambling. I demonstrate that Mongolian has three types of DP scrambling: short scrambling, intermediate scrambling, and long distance scrambling. Specifically, I demonstrate that short scrambling in Mongolian shows consistent A-properties, but intermediate and long distance scrambling show mixed A/A'-properties. I also argue that Mongolian has clausal scrambling in which an embedded CP scrambles to matrix pre-subject positions. Clausal scrambling, unlike DP scrambling, shows highly consistent reconstruction effects.

This chapter is organized as follows: In 3.2, I review some prominent theoretical issues in the research on scrambling, including the problem of configurationality, syntactic constraints on scrambling, and the issue of how scrambling is related to the A/A'-distinction. Throughout the discussion, I draw on a number of major theoretical approaches and discuss their predictions. In 3.3, I address local scrambling in Mongolian. First, I show that intermediate scrambling exhibits mixed A/A'-properties. Then, I turn to VP-internal word order permutation and argue for the existence of short A-scrambling in Mongolian. In

3.4, I show that Mongolian has long distance scrambling, which proceeds out of a finite embedded clause. Departing from the common cross-linguistic observation that long distance scrambling is uniformly A'-movement, Mongolian long distance scrambling shows mixed A/A'-properties.

3.2 Some Major Theoretical Issues

3.2.1 The Problem of Configurationality

It is well-known that a number of languages such as Japanese, Korean, German, Persian, and Hindi exhibit flexible word order. For example, all the surface orders in the Japanese example (62) are possible. This is the case in Mongolian as well – an illustration is given in (63).

(62) Japanese (Saito 1985: 23)

a. John-ga naihu-de Bill-o sasita
John-NOM knife-with Bill-ACC stabbed
'John stabbed Bill with a knife.'

b. John-ga Bill-o naihu-de sasita

c. Naihu-de John-ga Bill-o sasita

d. Naihu-de Bill-o John-ga sasita

e. Bill-o Naihu-de John-ga sasita

(63) Mongolian

a. Aaw öndör duu-gaar khüükhd-üüd-iig duud-san
father.NOM loud voice-INST child-PL-ACC call-PST
'Father called the children with a loud voice.'

b. Aaw khüükhd-üüd-iig öndör duu-gaar duud-san

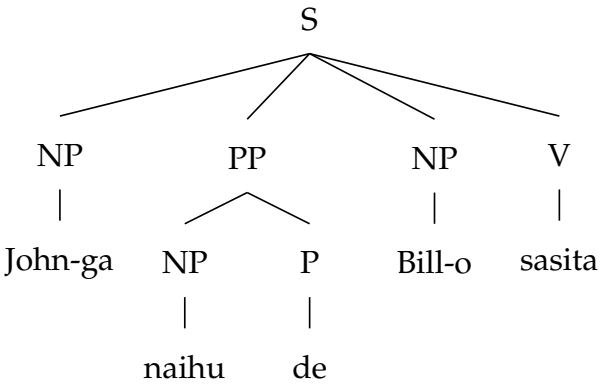
c. Öndör duu-gaar aaw khüükhd-üüd-iig duud-san

d. Öndör duu-gaar khüükhd-üüd-iig aaw duud-san

e. Khüükhd-üüd-iig öndör duu-gaar aaw duud-san

In the earliest theoretical attempts to account for the phenomenon of flexible word order, researchers such as Whitman (1979) and Hale (1980) suggested that languages like Japanese are nonconfigurational, meaning that they have a flat structure, unlike English. Closely connected to the nonconfigurational analysis is the hypothesis that Japanese or similar head-final languages lack VP (e.g., Hinds 1973, building on Schwartz 1972). Assuming the language lacks VP, the sentence in (62a) has the flat structure of (64).

(64) A flat phrase structure representation of (62a), from Saito (1985)



Under the nonconfigurational lack-of-VP hypothesis (e.g., Hale 1980, Farmer 1980), the word order permutation exemplified in (62) can be freely base-generated, without appealing to a scrambling rule (e.g., Ross 1967). For systematic discussions about the configurationality parameter in connection with the role of VP, see work such as Hale (1980), Farmer (1980), Miyagawa (1980), C. Kitagawa (1982), Whitman (1987), Jelinek (1984), and references therein.

However, subsequent work has presented abundant evidence that languages such as Japanese are indeed associated with a configurational structure very much like English (e.g., Saito 1983, Saito and Hoji 1983, Saito 1985, Hoji 1985). Evidence suggesting configurational asymmetries comes from the distribution of PRO (Saito 1982, Kuroda 1983), pronominal coreference (Saito 1985, Whitman 1987), the existence of strong and weak crossover effects (Saito and Hoji 1983), subject-object asymmetry in quantifier float (Haig 1980, Kuroda 1983, Miyagawa 1989), among many others. Many of these findings have been employed as diagnostics for the existence of a configurational structure and generalized to other free word order languages (they are, for example, directly extended to Korean, see an overview of the literature in Ko 2018). As will be shown in this chapter, word order variation in Mongolian exemplified in (63) is constrained by various conditions and factors at the syntax proper. Word order variation also affects pronominal coreference and exhibits crossover effects, clearly suggesting a configurational structure.

The debate surrounding the role of VP and the problem of configurationality predate the rich body of literature on the A/A'-movement properties of scrambling.[1] While the nonconfigurational analysis is no longer a dominant approach, a number of assumptions and predictions from that era carried over to later research on scrambling, some of which still remain as active areas of investigation. I review three of them below in (65). Items (65a-65b), as summarized by Miyagawa (1997), are two important assumptions underlying the early nonconfigurational analysis. First, under such an analysis the possible word orders are all base-generated (the base-generation idea is further pursued in research mentioned in footnote 1). Second, the choice among the possible word orders is strictly optional. After the nonconfigurationality era, the idea of optionality in

(65b) has been recast into the proposal that scrambling as a *movement* operation is fully optional (e.g., Saito 1989, Fukui 1993b, Tada 1993; cf. Miyagawa 1994, 1997). This is an important issue still under debate; I will postpone a discussion of this until Chapter 5.

(65) a. *Base-generation*: The possible word orders are all *base-generated*.

b. *Optionality*: The choice among the word orders is *optional*. (to be addressed in Chapter 5)

c. *Clause-boundedness*: The free word-order obtains only *clause-internally*. That is, scrambling is *clause-bounded*.

The last item, (65c), as summarized by Saito (1985: (28)), states that the non-configurational analysis predicts scrambling to be clause-bound. This is an issue related to the early debate on whether the so-called "long-distance preposing" (or what Haig 1976 calls "emphatic fronting") should also be subsumed under scrambling. According to Tonoike (1980) and Miyara (1982), there should be a separation between a bounded rule, scrambling, and another unbounded movement rule which displaces a phrase out of an embedded clause ("long-distance preposing"). The main reason behind such a proposal is that "long-distance preposing" seems to behave in a much more restricted manner than clause-internal scrambling, and therefore should be treated as a separate phenomenon. In contrast, Saito (1985) argues that "long distance preposing" shares a number of properties with clause-internal scrambling, and therefore should

[1] An alternative to the mainstream movement analysis is to adopt a fully configurational structure of the language in question, but preserve Whitman's and Hale's insights that the word order permutation is freely base-generated. Some representative work along this line includes Bayer and Kornfilt (1994), Bošković and Takahashi (1998), Neeleman and Reinhart (1998), Bošković (2004), Fanselow (2001), among others. See e.g., Corver and van Riemsdijk (1994) for an overview.

be regarded as a subcase of scrambling, in support of the idea that scrambling is not clause bound as originally proposed by S. I. Harada (1977). Under Saito's (1985) proposal, long distance scrambling, like local scrambling, is an instance of Move α, and a number of empirical differences between the two are in fact derived from independent constraints on phrasal movement. I turn to a review of some of these constraints in the next section.

3.2.2 Syntactic Constraints on Scrambling

The research on the problem of configurationality and related issues, as reviewed in the preceding section, was among the earliest attempts to systematically study the phenomenon of free word order in Japanese and similar languages and its implications for general syntactic theory. While the very idea of nonconfigurationality is no longer widely assumed, [2] a number of topics from that era (e.g., those reviewed in (65)) remain relevant. In particular, it was once suggested that "long distance preposing" is not as free as local scrambling, and thus the two must be separated (Tonoike 1980, Miyagawa 1980). On the other hand, under the movement-based approach advanced by Saito (1985), there is in fact no need to maintain such a distinction. The key points of Saito's approach are summarized in (66).

(66) a. Scrambling is an instance of S-structure Move α.

b. Due to (66a), scrambling observes general constraints on phrasal movement just like other movement.

[2]For discussions on the problem of configurationality and arguments for a configurational analysis in other free word order languages, see e.g., Webelhuth (1985) for German, Bailyn (1995) for Russian.

c. The difference between long distance scrambling and local scrambling falls out of these general constraints. Therefore, there is no need to stipulate that scrambling is strictly clause-bound (in Japanese and similar languages).

Given (66), scrambling can be studied on a par with more familiar types of phrasal movement such as *wh*-movement. Much subsequent research reveals that scrambling cross-linguistically is indeed subject to a number of general syntactic constraints on movement, some of which are given below (for a more comprehensive list see e.g., Bailyn 2006). In addition to Japanese, a number of languages have been observed to exhibit long distance scrambling, for example Hindi (Mahajan 1990, 1994), Persian (Browning and Karimi 1994, Karimi 2008), among others (cf. German, in which scrambling is local, see e.g., Müller 1995, Müller and Sternefeld 1994).

(67) Some of the syntactic constraints on scrambling

a. Proper Binding Condition (Saito 1985)

b. Subjacency (Saito 1985, Webelhuth 1989)

c. The Empty Category Principle (e.g., in German as in Webelhuth 1989)

d. Coordinate Structure Constraint (Webelhuth 1989, Bailyn 1995)

... ...

If one adopts the view that scrambling is an instance of Move α, then it is expected to be subject to general constraints on phrasal movement. A natural question then arises as to what kind of movement is involved in scrambling. Traditionally, different kinds of movement are distinguished based on

whether they target A- or A′-positions (assuming for now the definitions made in Chomsky 1981: 47). According to such a distinction, passivization and raising are typical cases of A-movement, whereas *wh*-movement is a typical case of A′-movement. However, it has been observed early on that scrambling does not neatly fit into the A/A′-dichotomy (e.g., Webelhuth 1989, Mahajan 1990, Saito 1992, Tada 1993, among many others; see Corver and van Riemsdijk 1994 for an overview). I turn to a review of this discussion in the next section.

3.2.3 The Nature of Scrambling

The Distinction between A- and A′-Movement

Different kinds of movement are traditionally distinguished based on whether they target A- or A′-positions, defined based on the nature of the head which hosts the moved phrase. A-movement (e.g., passivization, subject raising) typically targets positions such as Spec IP. A′-movement (e.g., *wh*-movement, topicalization) usually targets non-θ positions such as Spec CP or adjoined positions. Generally speaking, A-movement typically takes place for Case/EPP reasons, whereas A′-movement takes place for *wh*-interpretation, scope, or other discourse reasons. In addition, while A′-movement is potentially unbounded, A-movement is usually taken to be strictly clause-bound. These properties are summarized in (68).

(68) Classical definitions/intrinsic properties

	A-movement	A'-movement
what moves	nominals	nominals & others
landing sites	Spec IP, etc.	Spec CP, adjoined positions, etc.
locality	local	long-distance
examples	subject raising, passivization	*wh*-movement, topicalization

In addition to the definitional properties in (68), there is also a set of phenomena regarding which A- and A'-movement typically differ. They can be regarded as a set of "correlational properties" of A/A'-movement, often employed as diagnostics for movement types. For example, in English A-movement (e.g., raising, passivization) does not exhibit weak crossover (WCO) effect, whereas A'-movement (e.g., *wh*-movement) does (Postal 1971, Wasow 1972; also see e.g., Chomsky 1976, Higginbotham 1980, Reinhart 1983, Koopman and Sportiche 1982, Safir 1984, 2017 for general discussion on the formal nature of WCO effect). The following examples illustrate such a distinction.

(69) English *wh*-movement exhibits WCO
??[$_{CP}$ Who$_1$ [did [[his$_1$ mother] [praise t$_1$]]]]?

(70) A-movement does not show WCO
[$_{CP}$ Who$_1$ [$_{IP}$ t$_1$ [seems [to his$_1$ mother] [$_{IP}$ t$_1$ to be a genius]]]]?

In addition, A-movement typically feeds new anaphor binding relationships, whereas A'-movement does not.

(71) English *wh*-movement does not feed anaphor binding

*Which students$_1$ did each other$_1$'s teachers criticize t$_1$?

(72) A-movement feeds new anaphor binding relationship

The students$_1$ seem to each other$_1$'s teachers t$_1$ to be intelligent.

Another frequently discussed contrast is that A'-movement can license parasitic gaps in languages that have them, but A-movement does not. The following examples are taken from Safir (2019).

(73) English A'-movement licenses parasitic gaps

Who$_1$ did John trust t$_1$ before he spoke to *pg*?

(74) A-movement does not license parasitic gaps

*Mary$_1$ seemed t$_1$ to be happy before John spoke to *pg*.

There are a number of phenomena aside from the ones mentioned above that are argued to be correlated with A/A'-movement types, such as the capacity to undergo reconstruction for Binding Condition C. While I will ultimately argue in Chapter 4 that Condition C reconstruction is in fact not correlated with A/A'-movement types, for the purpose of exposition it suffices to assume for now the list of correlational properties in (75).

(75) Correlational properties ("diagnostics")

Does it...	A-movement	A'-movement
induce WCO effects?	✗	✓
create new A-binding relationship?	✓	✗
reconstruct for anaphor binding?	✗	✓
license parasitic gaps?	✗	✓
show Condition C reconstruction?	✗	✓

It has long been observed that scrambling differs from the better-studied movement types (e.g., raising, *wh*-movement) reviewed above in that it does not neatly fit into the standard typology of A- and A'-movement. The diverse properties of scrambling have received much attention in the literature. In particular, there has been long-standing discussion with regard to how scrambling observed cross-linguistically can be related to the A/A'-distinction (e.g., Saito 1985, 1992, Déprez 1989, Webelhuth 1989, 1992, Gurtu 1992, Tada 1993, Mahajan 1990, 1994, Dayal 1994, Bhatt and Anagnostopoulou 1996, Müller and Sternefeld 1994, Müller 1995, Kidwai 2000, Miyagawa 1994, 1997, 2001, Cho 1994b, Y.-S. Lee 1993, Ko 2018, Browning and Karimi 1994; Karimi 2003, 2008; see Corver and van Riemsdijk 1994, Sabel and Saito 2005 for a review of perspectives on scrambling). A number of studies cited here attempt to show that despite surface irregularities, scrambling can nevertheless be characterized based on the A/A'-distinction or by certain modifications of it. I turn to a review of some of the major approaches below.

Scrambling and the A/A′-Distinction

As alluded to earlier, scrambling can be divided into several subtypes depending on the length of the dependency. *Local scrambling* targets a landing site within the same clause, which can be further divided to *short scrambling*, typically referring to the situation where a direct object scrambles over an indirect object but below the subject; and *intermediate scrambling*, which targets a landing site above the subject but is nevertheless within the same clause. Local scrambling is defined in opposition to *long distance scrambling*, which proceeds out of a finite clause. In a number of languages, these subtypes of scrambling exhibit a diverse range of properties and do not show a uniform pattern. For example, it is observed in languages such as Japanese and Hindi that short scrambling behaves like A-movement, intermediate scrambling shows both A and A'-properties, while long distance scrambling is always A'-movement (e.g., Saito 1992, Tada 1993, Mahajan 1990, 1994). This is not the only way in which subtypes of scrambling vary. In Korean, for example, not only clause-internal scrambling but also long-distance scrambling shows mixed A/A'-properties (see e.g., Ko 2018 for an overview). The diverse properties of scrambling pose a unique challenge to the attempt to establish a uniform theory of movement, and numerous proposals have been made in response to this challenge. While the discussion here will by no means be comprehensive, I will review some major work on this topic below.

Much of the research in the 1980s and 90s about the formal nature of scrambling can be traced back to the proposal that scrambling is an instance of adjunction (e.g., Saito and Hoji 1983, Saito 1985, Webelhuth 1985, 1989). Under such a proposal, the scrambling operation usually involves adjunction to S (e.g., Saito

1985), VP, or IP (cf. Müller and Sternefeld 1994 for a discussion of parametrization of scrambling adjunction sites cross-linguistically). A potential problem that was recognized early on for the adjunction analysis is that scrambling sometimes seem to display both A- and A'-properties. This is unexpected if scrambling uniformly involves XP-adjunction, hence creating A'-chains. A representative case that illustrates this problem is the *Webelhuth's paradox* (coined by Müller and Sternefeld 1994). In Webelhuth (1989), scrambling is analyzed as an instance of adjunction (A'-movement). However, he also observes that a scrambled quantified expression seems to be able to simultaneously license a parasitic gap (a typical A'-movement property), and A-bind a pronoun, circumventing a weak crossover effect (Webelhuth 1989:409-412; cf. Mahajan 1990: 56-61 and Müller and Sternefeld 1994: 373 for alternative interpretation of this piece of data). This observation is illustrated with (76).

(76) German (Webelhuth 1989: (187G))

?Peter hat jeden Gast$_1$ [ohne e$_1$ anzuschauen] seinem$_1$ Nachbarn t$_1$
Peter has every guest without to-look-at his neighbor
vorgestellt
introduced
'Peter introduced every$_1$ guest to his$_1$ neighbor without looking at'

Based on observations such as the one in (76), Webelhuth suggests that scrambling can potentially target a position that is neither A' nor A. In particular, scrambling can target a third type of hybrid position from which both A- and A'-binding is possible at the same time. Webelhuth proposes to replace the typology of A- and A'-positions in Chomsky (1981) with a three-way distinction.

(77) Webelhuth's (1989) three-way distinction

a. *Argument positions*: Only A-binding is possible from this position

(e.g., subject or complement positions);

b. *Operator positions*: Only operator-binding is possible from this position (specifically, Spec CP);

c. *Adjoined positions*: A position that is neither an argument position nor an operator position, hence not subjected to restrictions on argument or operator positions.

According to Webelhuth, scrambling targets exactly the kind of adjoined positions defined in (77c). Therefore, scrambling to such a position is capable to show both A- and A'-binding at the same time.

Different parts of Webelhuth's (1989) proposal were further developed and modified in a number of directions in later research. One of the directions is the continuation of treating scrambling as A'-movement proper. For example, Müller and Sternefeld (1994) and Müller (1995) argue in support of the idea that scrambling is uniformly an adjunction operation, hence A'-movement. They suggest that there is no need to introduce a third type of position, and that the apparent evidence for an A-movement analysis of scrambling in German in fact does not hold upon closer scrutiny. Under the view that scrambling is uniformly A'-movement, a number of differences between scrambling and other A'-movement types can be derived from independent principles such as the Principle of Unambiguous Binding (Müller and Sternefeld 1993: 461; Müller 1995: 23). Such an idea is taken to hold among scrambling languages in general. Following Müller and Sternefeld (1993, 1994), Kidwai (2000) makes a similar proposal in Hindi that scrambling should be regarded as XP-adjunction. Kidwai distinguishes scrambling from *wh*-movement, topicalization, and QR. Her theory suggests an internal typology within A'-movement, both in terms

of the intrinsic properties of movements, and the structural configurations in which moved elements appear.

The second direction is represented by Saito (1992) who adopts a mixed type of approach to scrambling, in light of Japanese data. Saito's account combines both Webelhuth's proposal, specifically that in (77), and the theory developed in Mahajan (1990, 1994). I will first review Mahajan's core proposal, then turn to Saito's account.

Mahajan (1990, 1994) demonstrates that Hindi intermediate scrambling has properties of A-movement. For example, in Hindi, scrambling to the pre-subject position suppresses underlying weak crossover (WCO) violations. At the same time, intermediate scrambling also displays properties of A'-movement, in that sometimes scrambled DPs can reconstruct. Based on these observations, Mahajan (1990, 1994) proposes that Hindi local scrambling can either be A- or A'-movement, but not simultaneously both as in Webelhuth's proposal. Specifically, he provides the following arguments against the existence of a mixed position proposed by Webelhuth (1989). First, he shows that in Hindi, a *wh*-in-situ language, locally scrambled *wh*-words can remedy a WCO effect. In (78), the in-situ *wh*-phrase 'which servant' is co-indexed with the pronoun 'his' in the possessor position of a higher DP, inducing a WCO effect, provided that the *wh*-phrase moves at LF. In (79), the WCO effect disappears when the *wh*-phrase undergoes scrambling to the sentence-initial position.

(78) Hindi WCO effect with a simple sentence (Mahajan 1994: 314)

*[us aadmii-ne jo uske$_1$ pitaa-ko jaantaa hE] kOn saa naukar$_1$ naukrii se nikaal diyaa
that man who his father knows which servant service from dismissed
'Which servant$_1$ did [the man who knows his$_1$ father] dismiss from the

service?'

(79) WCO disappears when the DO is fronted (Mahajan 1994: 314)

kOn saa naukar$_1$ [us aadmii-ne jo uske$_1$ pitaa-ko jaantaa hE] $\_\_{}_1$
which servant that man who his father knows
Nokrii se nikaal diyaa
service from dismissed
'Which servant$_1$ did [the man who knows his$_1$ father] dismiss from the service?'

In addition, local scrambling also reconstructs for reflexive binding.

(80) An instance of Hindi reflexive binding (Mahajan 1994: 314)

[us aadmii-ne$_1$ jo uske pitaa-ko jaantaa hE] apnaa$_1$ naukar naukrii
that man who his father knows self's servant service
se nikaal diyaa
from dismissed
'The man$_1$ who knows his father dismissed self's$_1$ servant from the service.'

(81) Reflexive binding preserved under reconstruction (Mahajan 1994: 314)

[apnaa$_1$ naukar]$_2$ [us aadmii-ne$_1$ jo uske pitaa-ko jaantaa hE] $\_\_{}_2$
self's servant that man who his father knows
naukrii se nikaal diyaa
service from dismissed
'The man$_1$ who knows his father dismissed self's$_1$ servant from the service.'

In addition, a complex in-situ *wh*-phrase that also contains a reflexive shows a WCO effect, but the reflexive contained within it can be bound at surface structure (82) (Mahajan 1994: 315). Mahajan takes this to indicate that LF *wh*-movement must be reconstructible, since otherwise reflexive binding would not obtain.

(82) in-situ *wh*-phrase show WCO but with successful reflexive binding

[us aadmii-ne$_1$ jo uske$_2$ pitaa-ko jaantaa hE] apnaa$_1$ kOn saa naukar$_{*2}$
that man who his father knows self's which servant
naukrii se nikaal diyaa
service from dismissed
lit. 'The man$_1$ who knows his$_2$ father dismissed self's$_1$ which servant$_2$ from the service'

Given the above background, consider the crucial example (83) – when the complex phrase containing the reflexive is fronted, reflexive binding is preserved, but the WCO effect does not disappear (83) (Mahajan 1994: 315). Under Webelhuth's proposal, scrambling targets a third type of position from which both A- and A'- binding is possible at the same time. This proposal predicts that in (83) both reflexive binding and obviation of WCO effect should be possible, the former being an A'-property and the latter being an A-property. In other words, if the fronted position can be a mixed position with both A- and A'-properties, then (83) should not show WCO effect. This prediction is not borne out – (83) does show a WCO effect.

(83) Scrambling of *wh*-phrase containing reflexive does not remedy WCO

[apnaa$_1$ kOn saa naukar]$_2$ [us aadmii-ne$_1$ jo uske$_{*2}$ pitaa-ko
self's which servant that man who his father
jaantaa hE] ___$_2$ naukrii se nikaal diyaa
knows service from dismissed
lit. 'The man$_1$ who knows his father dismissed self's$_1$ which servant$_2$ from the service'

Thus, Mahajan maintains that there is no unitary mixed position as proposed by Webelhuth (1989). Instead, scrambling can be two distinct operations – A or A', but not both at the same time, as demonstrated by examples such as (83). Furthermore, Mahajan proposes that while local scrambling can be A-movement,

long distance scrambling is uniformly A'-movement. He notes that scrambling can in principle target either A- or A'-positions, and attributes the impossibility of long-distance A-scrambling to general constraints of Binding Theory.

Saito (1992), building on Tada (1993), argues that both Webelhuth's and Mahajan's proposals are necessary for the analysis of scrambling in Japanese. Based on a series of facts in Japanese, he arrives at the following hybrid hypothesis for Japanese scrambling.

(84) Saito's (1992) main proposal

a. Clause-internal scrambling is ambiguous between A- and A'-movement, while "long distance" scrambling must be A'-movement. (Mahajan's hypothesis)

b. A'-scrambling differs from *wh*-movement and topicalization in that it is movement to a non-operator position (A revised version of Webelhuth's hypothesis)

The first part of Saito's proposal (84a) extends Mahajan's (1990) analysis to Japanese data. Like Hindi, WCO effects can be remedied by intermediate scrambling in Japanese (Yoshimura 1989, 1992). The contrast in (85) illustrates this point. The sentence in (85a) is an example of WCO. If intermediate scrambling can only be A'-movement, then we do not expect (85b) to be improved compared to (85a), contrary to fact.

(85) Japanese intermediate scrambling remedies WCO (Saito 1992: 73)

a. ?*[[Soitu$_1$-no hahaoya]-ga [dare$_1$-o aisiteru]] no
the guy-GEN mother-NOM who-ACC love Q
'His$_1$ mother loves who$_1$'

b. ?Dare$_1$-o [[soitu$_1$-no hahaoya]-ga [t_1 aisiteru]] no
who-ACC the guy-GEN mother-NOM love Q
'Who$_1$, his$_1$ mother loves t_1'

In addition, intermediate scrambling in Japanese feeds new anaphor binding relationships. Consider (86): the anaphor in (86a) is not bound and hence violates Binding Condition A. In (86b), the object *karera-o* ('they-ACC') is scrambled to the sentence-initial position, and the sentence is significantly improved. This suggests that the anaphor is A-bound in (86b) but not in (86a), implying that scrambling can be A-movement.

(86) Intermediate scrambling feeds anaphor binding (Saito 1992: 74-5)

a. ?*[[Otagai$_1$-no sensei]-ga [karera$_1$-o hihansita]] (koto)
each other-GEN teacher-NOM they-ACC criticized fact
'Each other's$_1$ teachers criticized them$_1$'

b. ?[Karera-o$_1$ [[otagai$_1$-no sensei]-ga [t_1 hihansita]]] (koto)
they-ACC each other-GEN teacher-NOM criticized fact
'Them$_1$, each other's$_1$ teachers criticized t_1'

In the meantime, Saito observes that intermediate scrambling can also be A'-movement. As shown in (87), if the scrambled object *zibunzishin-o* ('self-ACC') is in an A-position, this sentence should constitute a violation of Binding Condition C. However, (87) is well-formed, suggesting that the scrambled object can be reconstructed back to its base position, an A'-property.

(87) Intermediate scrambling can be A'-movement (Saito 1992: 76)

Zibunzisin-o$_1$ [Hanako-ga t_1 hihansita] (koto)
self-ACC Hanako-NOM criticized fact
'Herself$_1$, Hanako$_1$ criticized t_1'

While local scrambling can be A- or A'-movement, Saito argues that long distance scrambling is necessarily A'-movement, on the basis of examples such as

the ones in (88). The sentence in (88a) contains an unbound anaphor and is therefore in violation of Binding Condition A. However, unlike the local scrambling example (86a), long distance scrambling of the embedded object *karera-o* ('they-ACC') does not improve the sentence (88b).

(88) Long distance scrambling does not feed anaphor binding (Saito 1992: 75-6)

a. *[[Otagai$_1$-no sensei]-ga [$_{CP}$[$_{IP}$ Hanako-ga karera$_1$-o hihansita] to] itta] (koto)
each other-GEN teacher-NOM Hanako-NOM they-ACC criticized COMP said fact
'Each other's$_1$ teachers said that Hanako criticized them$_1$'

b. *[Karera-o$_1$ [otagai$_1$-no sensei]-ga [$_{CP}$[$_{IP}$ Hanako-ga t$_1$ hihansita] to] itta]] (koto)
they-ACC each other-GEN teacher-NOM Hanako-NOM criticized COMP said fact
'Them$_1$, each other's$_1$ teachers said that Hanako criticized t$_1$.'

Therefore, Japanese patterns similarly with Hindi in that its local scrambling can be A- or A'-movement, but long distance scrambling cannot be A-movement. The next question then is what exactly is the nature of long distance scrambling, and what implications does it have for the general theory. This question is addressed in the second part of Saito's proposal (84b). The core data in support of a separated treatment of scrambling and English *wh*-movement/topicalization concerns the so called *radical reconstruction* property of scrambling, which states that scrambling need not establish a semantically significant operator-variable relation and can be literally "undone" at LF (to be discussed further in Chapter 5). This property is illustrated in (89), which is a declarative sentence with an embedded *wh*-question. In (89b), the *wh*-phrase *dono hon-o* ('which book'-ACC), which originates in the embedded clause, undergoes long distance scrambling to the matrix-initial position. The sentence is acceptable, although slightly de-

graded. Since the matrix clause is a declarative sentence, the *wh*-phrase cannot be licensed in the scrambled position. As a result, the *wh*-phrase must be interpreted within the embedded clause even though at S-structure it occupies a position outside of it.

(89) Scrambling can be undone at LF (Saito 1992: 84)

a. [Masao-ga [$_{CP}$[$_{IP}$ Hanako-ga dono hon-o tosyokan-kara
Masao-NOM Hanako-NOM which book-ACC library-from
karidasita] ka] siritagatteiru] koto
checked-out Q want-to-know fact
'the fact that Masao wants to know [Q [Hanako checked out which book from the library]]'

b. ?[Dono hon-o$_1$ [Masao-ga [$_{CP}$[$_{IP}$ Hanako-ga t_1 tosyokan-kara
which book-ACC Masao-NOM Hanako-NOM library-from
karidasita] ka] siritagatteiru]] koto
checked-out Q want-to-know fact
'the fact that which book$_1$, Masao wants to know [Q [Hanako checked out t_1 from the library]]'

Independently, Saito argues that all movement operations, including English *wh*-movement and topicalization, are subjected to the Proper Binding Condition (90).

(90) Traces must be bound. (Fiengo 1977, May 1977)

On this view, the scrambled *wh*-phrase in (89b) does not lower at LF since such an operation will leave an unbound trace, violating the Proper Binding Condition. Therefore, the overt movement in (89b), as Saito argues, is literally "undone" at LF as if long distance scrambling has never taken place. On the basis of the radical reconstruction property of scrambling, Saito concludes that scrambling needs to be distinguished from English *wh*-movement/topicalization in

that the former is movement to a non-operator position, as Webelhuth originally suggested. Saito's core generalizations about Japanese scrambling are summarized below.

(91) Summary of Saito's (1992) core generalizations about Japanese

Local scrambling	• remedies WCO (A) • feeds anaphor binding (A) • reconstructs for binding (A')	can be A or A'
Long distance scrambling	• does not feed anaphor binding • shows radical reconstruction	non A and non-operator

Given the above picture, Mongolian scrambling adds some novel and potentially illuminating data to the discussion. The remainder of this chapter will mainly be concerned with revisiting previous generalizations about scrambling in light of the data from Mongolian. I first discuss intermediate scrambling and clarify some assumptions regarding pronoun binding. Then, I demonstrate that short (A-)scrambling exists in Mongolian. Finally, I address long distance scrambling and clausal scrambling, and present their major properties.

3.3 Local Scrambling in Mongolian

3.3.1 Introduction

Similar to scrambling in Hindi (Mahajan 1990, 1994; Bhatt and Anagnostopoulou 1996), Japanese (Saito 1985, 1992; Tada 1993), and Korean (Cho 1994b; Ko 2018), scrambling in Mongolian is not a unitary phenomenon. In this section, I present novel data from fieldwork concerning the properties of local scrambling in this language. As in the discussion above, I distinguish between *short scrambling* (SS), where the linear order between indirect object (IO) and direct object (DO) alternates, and *intermediate scrambling* (IS), whereby an object moves to precede the subject.

As reviewed in the preceding chapters, the movement approach to scrambling assumes that there is one underlying word order (this can be seen as the "unmarked", "basic", or "neutral" word order), and all other word order possibilities are derived from the underlying one via transformation. The fact that there exists one basic SOV word order in Mongolian can be demonstrated on several grounds. First, one of the arguments Bailyn (1995) provides in favor of an underlying SVO analysis for Russian concerns the default word order appearing in a neutral context. I make an argument for Mongolian here in a similar spirit. Most descriptive grammars take Mongolian to be SOV (e.g., Binnick 1979, Činggeltei 1991a, Janhunen 2012, Tserenpil and Kullmann 2015). This view is grounded in the fact that the SOV order appears in most neutral contexts, such as unsolicited statements. The following example, taken from an online news article describing the current state of affairs of herders and the mining sector instantiates the neutral word order.

(92) Neutral SOV order

[S Uul uurkhain salbar] [O malč-d-iin erkh ašg-iig] notstoi-goor [V
mining sector herder-PL-GEN interests-ACC severe-INST
zörchi-j bai-na]
violate-CVB COP-NPST
'The mining sector is severely violating the interests of herders.'

[source: https://news.mn/r/2561835/]

Another piece of evidence for underlying SOV order as well as the movement approach to scrambling comes from scope. In Mongolian, the scope is rigid in sentences with the order SOV. As shown in (93), only the surface scope interpretation is available. In order to express the other scope possibility, the object must appear overtly above the subject, as shown in (94). The sentence (94) has ambiguous scope. This contrast would be difficult to explain if both SOV and OSV are base-generated orders, but follows straightforwardly if the scope ambiguity is induced by movement.

(93) SOV

Neg suragč bagš bur -ii khundule-deg
one student teacher every -ACC respect-HABIT
'A student respects every teacher.' (one > every; *every > one)

(94) OSV

Bagš bur -ii neg suragč khundule-deg
teacher every -ACC one student respect-HABIT
'Every teacher, a student respects. ' (one > every; every > one)

Similar patterns can also be observed in VP-internal word order permutations. While (95) with the word order S-IO-DO-V only allows the surface scope reading, the order S-DO-IO-V exhibits scope ambiguity. These patterns are expected if scrambling gives rise to scope ambiguity (as observed in a number of other scrambling languages, e.g., Hindi Mahajan 1997, Japanese Hoji 1985, also see e.g., Bobaljik and Wurmbrand 2012, Wurmbrand 2010 and references therein).

(95) S-IO-DO-V

Bat neg khün-d boodol bolgon-ig ög-sön
B.NOM one person-DAT package every-ACC give-PST
'Bat gave a person every package' (one > every; *every > one)

(96) S-DO-IO-V

Bat boodol bolgon-ig neg khün-d ög-sön
B.NOM package every-ACC one person-DAT give-PST
'Bat gave a person every package' (one > every; every > one)

Adopting a general movement approach to the free word order phenomenon in Mongolian, the rest of this section will proceed as follows. First, I clarify some assumptions regarding pronoun binding in Mongolian and show that IS behaves like A-movement in terms of anaphor binding, variable binding, and weak crossover (WCO), but behaves like A'-movement in that a scrambled reflexive possessive phrase can undergo reconstruction. Then, I motivate the existence of SS in Mongolian, especially in light of the base-generation analysis of word order alternations in Japanese ditransitive sentences advanced in Miyagawa (1997) and Miyagawa and Tsujioka (2004). Additionally, I show that Mongolian SS behaves like A-movement in terms of anaphor binding, variable binding, and WCO. As I will ultimately argue for a separate treatment of the Condition C reconstruction effects, particularly arguing that they cannot be employed as a reliable A/A'-diagnostic, I postpone the discussion of Condition C to Chapter 4.

3.3.2 Intermediate Scrambling

As introduced at the beginning of this chapter, the word order of subject and object is flexible in Mongolian. Therefore, both orders in (97) are grammatical.

(97) a. Bat Zaya-g khar-san
B.NOM Z-ACC see-PST
'Bat saw Zaya.'

b. Zaya-g Bat khar-san
Z-ACC B.NOM see-PST

Early work on scrambling (Saito and Hoji 1983, Hoji 1985, Saito 1985, Yoshimura 1992) argues that weak crossover (WCO) effects indeed exist in Japanese and are affected by the word order permutation exemplified in (97), in support of the views that i) scrambling is an instance of Move α; ii) a free word order language such as Japanese is indeed configurational, contra Hale (1982) and Farmer (1980). According to Yoshimura (1992), the fact that intermediate scrambling can "remedy" WCO effects suggests that scrambling can be A-movement. This point can be independently demonstrated in Mongolian. Before moving on to the WCO data, I first introduce and clarify some assumptions regarding three types of pronouns in Mongolian (98). For additional descriptive generalizations about these pronouns see Chapter 2.

(98) Three types of pronouns in Mongolian

a. 3SG full pronoun: *ter*

b. complex self-pronoun (not subject-oriented): *öör ni*;

c. 3SG.POSS enclitic: *ni*

First, the three pronouns share similar syntactic distributions in that they can be co-indexed with a c-commanding non-local R-expression. In (99-100), the matrix R-expression *Horča* does not locally bind the pronominal possessive in the embedded object position. The # sign indicates that the judgment of (99) is mixed: the speakers I consulted seem to have different judgments about the acceptability of (99). For certain Khalkha speakers, (99) sounds degraded, but for

some other Khalkha as well as Chakhar speakers, (99) is completely acceptable. The mixed judgments could potentially be attributed to dialectical differences. In comparison, the form in (100) is acceptable to all speakers consulted. Therefore, we observe that *öör ni*, despite literally meaning 'self 3SG.POSS', can be non-locally bound like the full pronoun *ter* (genitive form *tüünii*) in (99-100).

(99) 3SG full pronoun non-locally bound

#Horča$_1$ [$_{CP}$ bagš-iig tüün-ii$_1$ duu-g magt-san gej] bod-son
H.NOM teacher-ACC 3SG-GEN sister-ACC praise-PST C think-PST
'Horča$_1$ thought that the teacher praised his$_1$ sister.'

(100) Complex self-pronoun *öör in* non-locally bound

Horča$_1$ [$_{CP}$ bagš-iig öör-iin duu-g ni$_1$ magt-san gej]
H.NOM teacher-ACC self-GEN sister-ACC 3SG.POSS praise-PST C
bod-son
think-PST
'Horča$_1$ thought that the teacher praised his$_1$ (own) sister.'

In addition, the 3SG.POSS enclitic can also be non-locally bound in the same environment, as shown in (101).

(101) 3SG.POSS enclitic

Horča$_1$ [$_{CP}$ bagš-iig duu-g ni$_1$ magt-san gej] bod-son
H.NOM teacher-ACC sister-ACC 3SG.POSS praise-PST C think-PST
'Horča$_1$ thought that the teacher praised his$_1$ sister.'

Second, the complex self-pronoun *öör ni* not only patterns with the regular 3SG pronouns in the environment of (99-101), but also in (102-103), suggesting that *öör ni*, despite literally meaning 'self 3SG.POSS', does not always require a c-commanding antecedent.

(102) 3SG pronoun co-indexed with a non-c-commanding R-expression

[Zaya-giin tüünd$_1$ khairtai baisan ni] Bat-ig$_1$ bayarl-uul-san
Zaya-GEN 3SG.DAT love COP.PST 3SG.POSS Bat-ACC happy-CAUS-PST
'(The fact) that Zaya loved him$_1$ made Bat$_1$ happy.'

(103) complex self-pronoun co-indexed with a non-c-commanding R-expression

[Zaya-giin öör-t ni$_1$ khairtai baisan ni] Bat-ig$_1$
Zaya-GEN self-DAT 3SG.POSS love COP.PST 3SG.POSS Bat-ACC
bayarl-uul-san
happy-CAUS-PST
'(The fact) that Zaya loved self$_1$ made Bat$_1$ happy.'

A prominent difference among the three pronouns though, is that the complex pronoun *öör in* (genitive form *öör-iin khni* 'self-GEN 3SG.POSS') and the 3SG possessive pronoun enclitic *ni* can be bound as variables in environments where the 3SG full pronoun *ter* (genitive form *tüünii*) cannot. First, compare (99) with (104). While the pronoun *tüünii* (3SG.GEN) may co-index with a non-local c-commanding R-expression in (99), the construction becomes ungrammatical when the R-expression is substituted with a quantified expression intended to bind the pronoun *tüünii* (104).

(104) *Zaluu bur$_1$ [$_{CP}$ bagš-iig tüün-ii$_1$ duu-g magt-san gej]
guy.NOM every teacher-ACC 3SG-GEN sister-ACC praise-PST C
bod-son
think-PST
Int. 'Every guy$_1$ thought that the teacher praised his$_1$ sister.'

In contrast, (105) is grammatical under the interpretation that the self-pronoun *öör ni* is bound as a variable by 'every guy'.

(105) Zaluu bur$_1$ [$_{CP}$ bagš-iig öör-iin duu-g ni$_1$
guy.NOM every teacher-ACC self-GEN sister-ACC 3SG.POSS

magt-san gej] bod-son
praise-PST C think-PST
'Every guy$_1$ thought that the teacher praised his$_1$ (own) sister'

In addition, the post-nominal enclitic possessive pronoun *ni* can also be bound as a variable in the same environment, as shown in (106). The difference between (104) and (106) can be further considered in connection to the observation made by Montalbetti (1984) that clitics can often easily function as variables, but strong pronouns are unacceptable in similar contexts (see also Despić 2011, 2013).

(106) Zaluu bur$_1$ [$_{CP}$ bagš-iig duu-g ni$_1$ magt-san gej] bod-son
guy.NOM every teacher-ACC sister-ACC 3SG.POSS praise-PST C think-PST
'Every guy$_1$ thought that the teacher praised his$_1$ sister.'

Now consider the following patterns. While (107a), (108a), and (109a) are all ungrammatical, IS improves the sentences in (108b) and (109b), where the self-pronoun *öör ni* and the (weak) possessive pronoun enclitic *ni* are involved. However, in (107b) where the strong pronoun *tüünii* is involved, intermediate scrambling does not improve the sentence. Given these data, I attribute (108-109) to the possibility that intermediate scrambling can remedy WCO effects. In contrast, the result in (107) is independent of WCO, and is instead related to the fact that the full pronoun cannot be bound as a variable.

(107) full pronoun *ter*

a. *__Tüün-ii__$_1$ bagš __khen-iig__$_1$ magta-san be?
3SG-GEN teacher.NOM who-ACC praise-PST Q
Int. '__His__$_1$ teacher praised __who__$_1$? '

b. *__Khen-iig__$_1$ __tüün-ii__$_1$ bagš ___$_1$ magta-san be?
who-ACC 3SG-GEN teacher.NOM praise-PST Q
Int.'**Who**$_1$, **his**$_1$ teacher praised?'

(108) complex self-pronoun *öör-in khni*

a. *__Öör-in khni__$_1$ bagš **khen-iig**$_1$ magtasan be?
self-GEN 3SG.POSS teacher.NOM who-ACC praise-PST Q
Int. '**His**$_1$ (own) teacher praised **who**$_1$? '

b. **Khen-iig**$_1$ **öör-in khni**$_1$ bagš ___$_1$ magtasan be?
who-ACC self-GEN 3SG.POSS teacher.NOM praise-PST Q
'**Who**$_1$, **his**$_1$ (own) teacher praised?'

(109) possessive enclitic pronoun *ni*

a. Bagš **ni**$_1$ **khen-iig**$_1$ magta -san be?
teacher.NOM 3SG.POSS who-ACC praise -PST Q
'**Who**$_1$, **his**$_1$ teacher praised?'

b. **Khen-iig**$_1$ bagš **ni**$_1$ ___$_1$ magta -san be?
who-ACC teacher.NOM 3SG.POSS praise -PST Q
'**Who**$_1$, **his**$_1$ teacher praised?'

Using quantified expressions in (110-111) shows very similar patterns. These data suggest that IS in Mongolian has properties of A-movement.

(110) IS feeds variable binding (using self-pronoun *öör -in khni*)

a. *__[Öör -in khni]__$_1$ bagš **[oyutan bolgon -ii]**$_1$ magta -ba.
self -GEN 3SG.POSS teacher.NOM student every -ACC praise -PST
Int. '**His**$_1$ (own) teacher praised **every student**$_1$.'

b. **[Oyutan bolgon -ii]**$_1$ **[öör -in khni]**$_1$ bagš ___$_1$ magta
student every -ACC self -GEN 3SG.POSS teacher.NOM praise
-ba.
-PST
'**Every student**$_1$, **his**$_1$ (own) teacher praised.'

(111) IS feeds variable binding (using possessive enclitic pronoun *ni*)

a. *Bagš **ni**$_1$ **[oyutan bolgon -ii]**$_1$ magta -ba.
teacher.NOM 3SG.POSS student every -ACC praise -PST
Int.'**His**$_1$ teacher praised **every student**$_1$.'

b. **[Oyutan bolgon -ii]**$_1$ bagš **ni**$_1$ ___$_1$ magta -ba.
student every -ACC teacher.NOM 3SG.POSS praise -PST
'**Every student**$_1$, **his**$_1$ teacher praised.'

In addition, IS also behaves like A-movement in terms of anaphor binding (112). The sentence in (112a) is ungrammatical because the anaphor in the possessor position of the subject is not bound, and the object R-expression is bound. In (112b), the object 'those two' is scrambled to the sentence-initial position from which it c-commands the reciprocal. The sentence becomes acceptable under coindexed reading between 'those two' and 'each other'.

(112) Intermediate scrambling (IS) feeds anaphor binding

a. *__[Bey beye -u khni]__$_1$ bagš __[ter qoyar -i]__$_1$ magta -ba.
body body-GEN 3SG.POSS teacher.NOM that two-ACC praise -PST
Int. '**Each other**$_1$'s teacher praised **those two**$_1$, .'

b. **[Ter qoyar -i]**$_1$ **[bey beye -u khni]**$_1$ bagš ___$_1$ magta -ba.
that two-ACC body body-GEN 3SG.POSS teacher.NOM praise -PST
'**Those two**$_1$, **each other**$_1$'s teacher praised.'

Finally, Mongolian IS also show A'-properties. A reflexive-possessive phrase may undergo IS while still being properly bound. The data presented in this section indicate that Mongolian IS has mixed A/A'-properties.

(113) IS reconstructs for reflexive possessive binding

a. Bat$_1$ öčigdör geriin daalgawr-aa$_1$ khii-gee-gui
B.NOM yesterday home.GEN work-REFL.POSS do-PST-NEG
'Bat$_1$ did not do his$_1$ (own) homework yesterday.'

b. Geriin daalgawr-aa$_1$ Bat$_1$ öčigdör ___$_1$ khii-gee-gui
home.GEN work-REFL.POSS B.NOM yesterday do-PST-NEG
'His$_1$ (own) homework, Bat$_1$ did not do yesterday.'

3.3.3 Short Scrambling

Motivating the Existence of Short Scrambling in Mongolian

A typical Mongolian ditransitive construction with the verb *ögsön* ('give') is exemplified in (114). Both goal-theme and theme-goal are possible orders.

(114) Two possible orders in ditransitive construction

a. Bagš [$_{goal}$ Čemeg-d] [$_{theme}$ ter nom-ig] ög-sön.
teacher.NOM Č-DAT that book-ACC give-PST
'The teacher gave Čemeg that book.'

b. Bagš [$_{theme}$ ter nom-ig] [$_{goal}$ Čemeg-d] ög-sön.
teacher.NOM that book-ACC Č-DAT give-PST

There are two analytical options to consider with regard to the VP-internal word order permutations in (114). One is to suggest that (114b) is derived from (114a) via movement (short scrambling). Another option is that both (114a) and (114b) are base-generated. With regard to similar data in Japanese, both analytical options have been advanced in previous literature. For example, Hoji (1985), Takano (1998), Saito (1985, 1992), Tada (1993), Yatsushiro (2003) argue in support of the movement analysis that involves one underlying structure in which goal is base-generated higher than theme, and that the other surface word order is derived via short scrambling. In contrast to the movement analysis, Ito (2007), Miyagawa (1997), Miyagawa and Tsujioka (2004) argue for a base-generation account, in which both orders theme-goal and goal-theme are base-generated. One of the main arguments for the base-generation analysis is based on Rizzi's (1986) Chain Condition. Assuming that A-chains are subjected to the Chain Condition, Miyagawa (1997) points out that Japanese intermediate scrambling and passivization exhibit Chain Condition effects. However, VP-internal word

order permutation does not, suggesting the absence of (A-)movement. I illustrate these observations with parallel Mongolian examples. The sentence (115) exemplifies a case of IS, in which the ACC-marked object is scrambled to the left of the subject. This sentence is ungrammatical.

(115) Chain Condition effect in IS

*[Dorji bolon Saruul -ii]$_1$ bey beye ni$_1$ t$_1$ qara -gsan
[Dorji and Saruul -ACC]$_1$ body body 3SG.POSS t$_1$ see -PST
'Dorji and Saruul$_1$, each other$_1$ saw t$_1$.'

In Rizzi (1986), well-formedness conditions on chains are discussed in connection with the Thematic (θ) Criterion (Chomsky 1981), which ensures that exactly one thematic role is assigned to exactly one argument.[3] Therefore, a chain containing exactly one argument must receive exactly one θ-role. In addition to the θ Criterion, Rizzi states that chain formation may not skip intervening binders. This restriction is formally stated in (116):

(116) C = (a_1 ... a_n) is a chain iff, for $1 \leq i < n$, a_i is the local binder of a_{i+1}.

(Rizzi 1986: 66)

Under this proposal, a chain formation process applied to the S-structure of (115) can give rise to any of the following sets of chains: [4]

(117) a. (Dorji and Saruul) (each other, t)

[3]According to Rizzi, arguments include referential NPs, pronominals including PRO, variables, clitics, overt anaphors, and clauses. Expletives and NP/clitic traces do not count as arguments.

[4]Technically, there is also an option forming the *chain structure* (as defined in Rizzi 1986: 67) (Dorji and Saruul), (each other), (t). This chain structure is also ruled out by the θ Criterion since the argument *Dorji and Saruul* belongs to a chain which is not assigned a θ-role, and a θ-role is assigned to the chain (t) which does not contain an argument.

b. (Dorji and Saruul, each other) (t)

c. (Dorji and Saruul, each other, t)

None of the above chains satisfies the θ Criterion. In (117a), the chain (Dorji and Saruul) does not have a θ-position. In (117b), the chain (Dorji and Saruul, each other) has two argument positions, but only one θ position (i.e., the subject position occupied by 'each other'). In addition, the chain (t) has only one θ position but does not have an argument position. Finally, in (117c), there are two θ and two argument positions, again violating the θ Criterion. The only possible chain that does not violate the θ Criterion is (Dorji and Saruul, t). But this chain violates (116), because it skips over an intervening binder which shares the same index. Therefore, (115) is ruled out by the θ Criterion and the Chain Condition.

In contrast, a sentence like (118) does not violate the Chain Condition – the reciprocal *bey beye* ('each other') is in the possessor position embedded within the subject, hence it does not count as a potential intervening binder for the chain (those two, t). As a result, the sentence is grammatical. The fact that anaphor binding is possible from the IS landing site in (118) suggests that IS can be A-movement.

(118) No Chain Condition effect in IS with reflexive possessor

[Ter khoyor-ii]$_1$ [bey beye$_1$-nu khni bagsi] t$_1$ magata-ba
[that two-ACC]$_1$ [body body$_1$-GEN 3SG.POSS teacher] t$_1$ praise-PST
'Those two$_1$, each other's$_1$ teacher praised t$_1$.'

The above two examples (115) and (118) show that IS in Mongolian can be A-movement and exhibits Chain Condition effects. Under Miyagawa's (1997) assumption that all A-chains are subject to the Chain Condition, such a result is

expected. However, the Chain Condition does not seem to apply to cases where the order between IO and DO is changed:

(119) Absence of Chain Condition effect in VP-internal free word order

a. *Bi [bey beye-d ni]$_1$ [sorogči-ud-yi]$_1$ tanilčagul-jee
I [body body-DAT 3SG.POSS]$_1$ [student-PL-ACC]$_1$ introduce-PST
'I introduced the students$_1$ to each other$_1$.'

b. Bi [sorogči-ud-yi]$_1$ [bey beye-d ni]$_1$ tanilčagul-jee
I [student-PL-ACC]$_1$ [body body-DAT 3SG.POSS]$_1$ introduce-PST

The ungrammaticality of (119a) is not surprising: the reciprocal *bey beye ni* ('each other 3SG.POSS') is not bound, but the R-expression 'student' is bound. However, under a movement analysis the fact that (119b) is grammatical is unexpected: suppose that the base order of Mongolian double object construction is IO-DO, then the order in (119b) is derived via the movement of DO from its base position to the left of IO. Under the movement analysis, (119b) has the following structure:

(120) (119b) under the movement analysis

Bi [sorogči-ud-yi]$_1$ [bey beye-d ni]$_1$ t_1 tanilčagul-jee
I [student-PL-ACC]$_1$ [body body-DAT 3SG.POSS]$_1$ t_1 introduce-PST
'I introduced the students$_1$ to each other$_1$'

If the DO has undergone A-movement to precede IO, as depicted in (120), the result should be ungrammatical due to a violation of the Chain Condition, in the same fashion as described in the intermediate scrambling case (115). If the movement in (120) were A'-movement, then the A'-moved DO should not be able to A-bind the anaphor from the landing site, contrary to fact. According to Miyagawa (1997) and Miyagawa and Tsujioka (2004), the fact that sentences

like (119b) are in fact grammatical suggests that movement of IO as depicted in (120) has never occurred, and that the DO-IO order in (119b) is base-generated.

Under the assumption that A-movement must observe the Chain Condition, Miyagawa (1997) further demonstrates that classic A-movement such as passivization displays a Chain Condition effect. As shown in (121), when the direct object of a transitive verb is passivized, the sentence is ungrammatical. Since passivization involves the movement of the D-structure object *Baatar bolon Čemeg* to the surface subject position, "crossing over" the coindexed reciprocal (*bey beye-d-beng* 'each other-DAT-REFL.POSS'), the result violates the Chain Condition.

(121) Passivization shows Chain Condition effect

*[Baatar bolon Čemeg]$_1$ bey beye-d-beng$_1$ t$_1$ uj-gde-jee
[Baatar and Čemeg]$_1$ body body-DAT-REFL.POSS$_1$ t$_1$ see-PASS-PST
'Baatar and Čemeg$_1$ were seen by each other$_1$'

In contrast, if the direct object of a ditransitive verb is passivized, with the reflexive (i.e., *bey beye -beng* 'each other-REFL.POSS') being the indirect object, the sentence is grammatical:

(122) No Chain Condition effect if reflexive is in IO position

[Baatar bolon Čemeg]$_1$ bagsi-ber bey beye-d-beng$_1$
[Baatar and Čemeg]$_1$ teacher-INST body body-DAT-REFL.POSS$_1$
tanilčagul-gde-jee
introduce-PASS-PST
'Baatar and Čemeg$_1$ were introduced by the teacher to each other$_1$'

According to Miyagawa's analysis, the fact that (122) is grammatical shows that the base position of *Baatar bolon Čemeg* in (122) is to the immediate left of the dative IO *bey beye-d-beng* ('each other-DAT-REFL.POSS'), as in (123). Consequently,

the coindexed reflexive *bey beye-d-beng* ('each other-DAT-REFL.POSS') is never an intervening binder on the chain (Baatar and Čemeg$_1$, t$_1$), and the Chain Condition is satisfied.

(123) Trace of the passive subject in (122)

[Baatar bolon Čemeg]$_1$ bagsi-ber $\boxed{t_1}$ bey beye-d-beng$_1$
[Baatar and Čemeg]$_1$ teacher-INST $\boxed{t_1}$ body body-DAT-REFL$_1$
tanilčagul-ugd-jee
introduce-PASS-PST
'Baatar and Čemeg$_1$ were introduced by the teacher to each other$_1$'

From the discussion above, it is clear that the core assumption in Miyagawa's argument is that A-movement must be subject to the Chain Condition. Thus, Chain Condition effects can be used as a diagnostic for the presence or absence of A-movement in scrambling. The presence of the Chain Condition effect indicates that (A-)movement has taken place. In contrast, if a certain construction that should have violated the Chain Condition turns out to be grammatical, either A-movement has never taken place, or the trace has been base generated higher than the reflexive, as summarized in (124).

(124) Chain Condition as an A-movement diagnostic

Surface order	Chain Condition effect	Indication of trace position
✓DP$_1$ ... reflexive$_1$...	No	$\boxed{DP_1}$ ... $\boxed{t_1}$ ... reflexive$_1$...; or no A-movement
*DP$_1$ ... reflexive$_1$...	Yes	$\boxed{DP_1}$ ... reflexive$_1$... $\boxed{t_1}$

Given independent data from Mongolian, I suggest the diagnostic in (124) should be reconsidered. In particular, I would like to argue that the absence

of a Chain Condition effect does not necessarily indicate the absence of (A-)movement, a point also made in McGinnis (2004) using data from Dutch and Albanian. If this is indeed the case, then the argument for a base-generation analysis based on the lack of Chain Condition effect in VP-internal word order permutation cannot be maintained for Mongolian.

Before turning to these arguments, let us first revisit the two possible word orders in Mongolian ditransitive constructions presented in (114), repeated below as (125).

(125) Two possible orders in ditransitive construction

a. Bagš [*goal* Čemeg-d] [*theme* ter nom-ig] ög-sön
teacher.NOM Č-DAT that book-ACC give-PST
'The teacher gave Čemeg that book.'

b. Bagš [*theme* ter nom-ig] [*goal* Čemeg-d] ög-sön
teacher.NOM that book-ACC Č-DAT give-PST

Following arguments made for typologically similar languages (cf. Japanese as in e.g., Hoji 1985, Takano 1998), I suggest that the goal and the theme phrase are structurally asymmetric, and that (125a) reflects the base structure. One piece of evidence comes from the following patterns of pronominal variable binding.

(126) a. goal-theme

Bi [oyutan bolgon -d]$_1$ [öör-iin khni$_1$ bagš -iig]
1SG.NOM student every -DAT self-GEN 3SG.POSS teacher -ACC
taniltsuulsan
introduced
'I introduced to every$_1$ student his$_1$ (own) teacher.'

b. goal-theme

??/*Bi [öör-iin khni$_1$ bagš -d] [oyutan bolgon -iig]$_1$
1SG.NOM self-GEN 3SG.POSS teacher -DAT student every -ACC

taniltsuulsan
introduced
Int. 'I introduced to his$_1$ (own) teacher every$_1$ student.'

c. theme-goal

Bi [oyutan bolgon -ig]$_1$ [öör-iin khni$_1$ bagš -d]
1SG.NOM student every -ACC self-GEN 3SG.POSS teacher -DAT
taniltsuulsan.
introduced

d. theme-goal

??/*Bi [öör-iin khni$_1$ bagš -iig] [oyutan bolgon -d]$_1$
1SG.NOM self-GEN 3SG.POSS teacher -ACC student every -DAT
taniltsuulsan.
introduced

Example (126a) shows that in the goal-theme order, a quantifier in the goal phrase can bind a pronominal variable in the theme phrase. In contrast, in (126b) with the same 'goal-theme' order, a quantifier in the lower theme phrase cannot bind a pronominal element in the goal phrase. However, variable binding becomes possible if the theme phrase containing the quantifier precedes the goal phrase as in (126c). Example (126d) shows that the variable binding relation in (126a) cannot be maintained if the word order changes from 'goal-theme' (126a) to 'theme-goal' (126d). While the data in (126) can be taken to indicate that goal-theme is the base hierarchy (this is suggested in e.g., Hoji 1985), at first blush, they can also be explained under a base-generation approach. The latter would say that (126a) and (126c) are acceptable because they are both base-generated structures in which the quantifier is located higher than the pronominal element. In contrast, (126b) and (126d) are not acceptable because the pronominal element is base-generated higher than the quantifier.

Despite the initial plausibility of both the movement and the base-generation analyses, I argue that the movement analysis is nevertheless on the right track. In particular, I suggest that 'goal-theme' represents the base hierarchy, and

(126c) is derived from (126b) via short A-scrambling (because it feeds new variable binding relationship and does not induce a WCO effect). In addition, the short A-scrambling does not reconstruct, as shown in (126d). The argumentation will proceed as follows. First, I take issue with one of the proposals made by Miyagawa and Tsujioka (2004) under a base-generation approach as applied to Mongolian, namely the high and low goal proposal. I show that such a proposal does not predict the VP-internal word order permutation patterns involving benefactive phrases in Mongolian. In contrast, such patterns are expected under a movement analysis. The data from benefactives further suggest that the absence of any Chain Condition effect does not necessarily indicate the absence of A-movement, and that the Chain Condition cannot be reliably used as an A-movement diagnostic. Second, I show that the existence of short A-scrambling in Mongolian can be directly observed using depictive stranding, establishing that short scrambling must be at least a possible derivation for the constructions under investigation. Finally, I present further data in support of the A-movement properties of short scrambling.

The idea that both 'goal-theme' and 'theme-goal' orders can be base-generated is further developed in Miyagawa and Tsujioka (2004), who propose two distinct goal positions in Japanese, one higher than the other. The relative positions among the high and low goals with respect to the theme are shown in (127). The high goal refers to the goals that can be construed as the ultimate possessor of the referent of the theme, and the low goal refers to the goals that are interpreted as locations. Both structures in (127) are base-generated, and any movement that occurs among these elements is uniformly A'-movement (most likely driven by focus, see Miyagawa and Tsujioka 2004 for further discussion). In other words, there is no short A-scrambling.

(127) Miyagawa and Tsujioka's two base orders

a. high goal (possessive) ... low goal (locative) ... theme

b. high goal (possessive) ... theme ... low goal (locative)

In contrast to the above proposal, I argue that short scrambling (SS) can be A-movement. One piece of evidence suggesting that SS as a form of A-movement exists in Mongolian comes from benefactives. Assuming that unlike locative low goals, benefactives are merged higher than themes (e.g., Marantz 1993, Pylkkänen 2008), the word order variation between benefactives and theme can only be derived via movement. Recall that the lack of a Chain Condition effect in VP-internal word order permutation is used by Miyagawa (1997) as evidence for the lack of A-movement. This is summarized in (124), repeated below as (128).

(128) Chain Condition as an A-movement diagnostic

Surface order	Chain Condition effect	Indication of trace position
✓DP_1 ... $reflexive_1$...	No	$\overline{DP_1}$ ... $\boxed{t_1}$ ... $reflexive_1$...; or no A-movement
*DP_1 ... $reflexive_1$...	Yes	$\overline{DP_1}$ ... $reflexive_1$... $\boxed{t_1}$

The diagnostic in (128) predicts that when the word order changes from 'benefactive-theme' to 'theme-benefactive', there will be a Chain Condition effect, because benefactives are assumed to be base-generated higher than theme and the latter can only come to linearly precede the former via movement. However, as suggested by the data in (129), this prediction is not borne out in Mongolian. The question in (129a), asking 'did you draw Saruul for (your) students?',

provides the context for the response sentences in (129b) and (129c). The fact that (129c) is ungrammatical is not surprising: the benefactive phrase containing a complex anaphor *öber-in bey-d ni* ('self-GEN body-DAT 3SG.POSS; for herself') is not bound, and the R-expression *Saruul* is bound. The crucial example is (129b). The theme phrase *Saruul*-ACC has undergone movement to precede the benefactive phrase containing the complex anaphor (the trace position is indicated as t_1). If Chain Condition effect must accompany A-movement, then we would expect (129b) to be ungrammatical, contrary to fact. In addition, (129b) cannot be an instance of A'-movement, because from its landing site, the theme phrase can A-bind the anaphor inside the benefactive phrase.

(129) a. [Someone asked an art teacher:]

Ta sorogči-d-beng Saruul-ii jiru-ju ögkü-sen uu?
2SG.NOM student-DAT-REFL.POSS Saruul-ACC draw-CVB give-PST Q
'Did you draw Saruul for (your) students?'

b. [The art teacher replied:]

Ugei, bi [Saruul-ii]$_1$ [ober-in bey-d ni]$_1$ t_1 jiru-ju ögkü-sen
NEG 1SG.NOM Saruul-ACC self-GEN body-DAT 3SG.POSS t_1 draw-CVB give-PST
'No, I drew Saruul$_1$ for herself$_1$' (implying that after the painting is finished, I gave it to Saruul)

c. cf. (129b)

*Ugei, bi [ober-in bey-d ni]$_1$ [Saruul-ii]$_1$ jiru-ju ögkü-sen
NEG 1SG.NOM self-GEN body-DAT 3SG.POSS Saruul-ACC draw-CVB give-PST
Int. 'No, I drew Saruul$_1$ for herself$_1$'

The fact that (129b) is acceptable in Mongolian suggests that A-movement can indeed take place without inducing a Chain Condition effect, as independently

demonstrated by McGinnis (2004) based on data from languages such as Dutch and Albanian. If Chain Condition effects are dissociated from A-movement (see McGinnis 2004 for a proposal arguing *Lethal Ambiguity* to be the source of such effects), then the diagnostic in (128) cannot be reliably used to test for the existence of A-movement.

Further Evidence for Short A-Scrambling

At this point it is worth clarifying that proving the existence of short A-scrambling in Mongolian is more or less orthogonal to the issue of whether Mongolian has two distinct base-generated ditransitive structures, on which I remain agnostic at this point. The main focus of the arguments outlined here is instead the issue of whether the empirical tests that are used to exclude the possibility of short A-scrambling indeed hold for the Mongolian data under investigation. The discussion so far suggests that the answer is negative.

In addition to the benefactive patterns, short A-scrambling in Mongolian can be directly observed in constructions where movement of a theme phrase over a goal phrase strands a depictive secondary predicate, which independently demonstrates that short (A-)scrambling exists at least in the constructions under investigation. Mongolian depictive secondary predicates follow the underlined part in the template (130). When depictives ('X' in (130)) are marked by REFL.POSS, they are subject-oriented. When marked by 3SG.POSS, they are not subject-oriented (for extensive arguments that these are true secondary predicates instead of adjuncts, see Shibagaki 2014). As shown in (131-132), depictives can be stranded by A-movement deriving passives and unaccusatives.

(130) Mongolian depictives (Shibagaki 2014: 194)

S O.ACC X-INST-REFL.POSS/3SG.POSS V

(131) Depictive stranding in passive

a. Bi [sü-tei čai-ii] küiten-iyer ni uu-san
I.NOM milk-COMIT tea-ACC cold -INST 3SG.POSS drink-PST
'I drank (the) milk tea cold.'

b. **[Sü-tei čai]**$_1$ named ___$_1$ küiten-iyer beng uu-gd-san
milk-COMIT tea.NOM I.DAT cold -INST REFL.POSS drink-PASS-PST
'(The) milk tea was drank cold by me.'

(132) Depictive stranding in unaccusative

Bat$_1$ Kökeqota-ača ___$_1$ yadaragsan-iyer beng ir-sen
B.NOM Hohhot-ABL tired-INST REFL.POSS come-PST
'Bat came from Hohhot tired.'

Similarly, a depictive that modifies a theme phrase can be stranded when the theme phrase is moved over a goal phrase. In (133a) the depictive 'cold' modifies the ACC-marked theme *sü-tei čai-i* ('milk tea'). In (133b), the theme phrase appears to the left of the goal phrase, stranding the depictive behind at the base position. The fact that depictive stranding is possible supports the view that in constructions like (133) the two orders can indeed be derived via movement.

(133) Depictive stranding by short scrambling (SS)

a. Bat [Čemeg -d] [sü-tei čai -i] küiten -iyer ni
B.NOM Čemeg -DAT milk-COMIT tea -ACC cold -INST 3SG.POSS
ög-sön
give-PST
'Bat gave Čemeg milk tea cold.'

b. Bat **[sü-tei čai-i]**$_1$ [Čemeg-d] ___$_1$ küiten -iyer ni
B.NOM milk-COMIT tea-ACC Čemeg-DAT cold -INST 3SG.POSS
ög-sön
give-PST

The data reported so far regarding depictives and benefactives suggest that short (A-)scrambling indeed exists in Mongolian. As a final set of data to complete the discussion, I report additional facts suggesting that Mongolian short scrambling (SS) exhibits additional properties of A-movement. First, SS creates new anaphor binding relationship. As discussed in Chapter 2, in Mongolian, binding by a local subject requires the subject-oriented anaphor *öör-öö* ('self-REFL.POSS'), and binding by arguments other than the local subject requires the elsewhere case *öör ni* ('self 3SG.POSS'). In the non-scrambled order (134a), the IO *öör ni* ('self 3SG.POSS') is not the subject-oriented form and therefore cannot be bound by the subject *emč* ('doctor.NOM'). The anaphor also cannot be bound by the DO *Dorj* since it is not c-commanded by *Dorj*. In (134b), the DO moves to the left of the IO, successfully binding the anaphor *öör ni* ('self 3SG.POSS')' in the dative IO position. Here again, the depictive *nütsgen-eer* ('naked'), which modifies the DO *Dorj*, is stranded behind, and the interpretation is that Dorj is the one who is naked. Therefore, I conclude that (134b) is an instance of short A-scrambling.

(134) SS feeds anaphor binding

a. Base order

*Emč	[öör-t	ni]$_1$	**[Dorj-iig]**$_1$	nütsgen-eer	ni
doctor.NOM	self-DAT	3SG.POSS	D-ACC	naked-INST	3SG.POSS

üzüül-sen
show-PST

b. Scrambled order

Emč	**[Dorj-iig]**$_1$	[öör-t	ni]$_1$	—$_1$	nütsgen -eer
doctor.NOM	D-ACC	self-DAT	3SG.POSS		naked -INST

ni üzüül-sen
3SG.POSS show-PST
'(The) doctor showed Dorj$_1$ to himself$_1$ naked.' (interpretation: Dorj is naked)

Further tests such as variable binding and WCO point to the same direction. The data are reported below. Based on these facts, I conclude that short A-scrambling exists in Mongolian.

(135) SS feeds variable binding

Baatar [$_{DO}$ suragči bolgon-ii]$_1$ [$_{IO}$ öör-in khni$_1$ bagš-id] —$_1$
B.NOM student every-ACC self-GEN 3SG.POSS teacher-DAT
taniltsuul-san.
introduce-PST
'Baatar introduced every student$_1$ to his$_1$ teacher.'

(136) SS remedies underlying WCO violation

Baatar [$_{DO}$ khen-ii]$_1$ [$_{IO}$ öör-in khni$_1$ bagš-id] —$_1$
B.NOM who-ACC self-GEN 3SG.POSS teacher-DAT
taniltsuul-san be?
introduce-PST Q
'Baatar introduced who$_1$ to his$_1$ teacher?'

3.3.4 Summary and Further Discussion

The data on local scrambling reported so far can be further considered in light of the major theoretical issues presented at the beginning of this chapter. The results clearly suggest that Mongolian is associated with a configurational structure. I have also adopted a movement approach rather than a base-generation approach to word order permutations observed in Mongolian matrix declarative clauses. In particular, I have treated the word order alternations between SOV and OSV as an instance of intermediate scrambling (IS), with SOV as the base order and OSV as an order derived via movement. In addition, I have demonstrated the existence of short scrambling (SS) in Mongolian, by drawing on phenomena such as Chain Condition and depictive stranding. Under the current view, the order S-DO-IO-V can be derived from S-IO-DO-V via (A-

)movement, although the issue of whether Mongolian has more than one base-generated ditransitive structure remains open.

In addition, I have also shown in the above sections that while IS in Mongolian displays mixed A/A'-effects, SS shows consistent A-properties. The properties of IS in Mongolian are summarized below.

(137) Mongolian IS: Movement Properties

Does IS...		example #
feed anaphor binding?	✓→ A	(112)
establish new variable binding relationship?	✓→ A	(110)
remedy WCO effects?	✓→ A	(108-109)
reconstruct for REFL.POSS binding?	✓→ A′	(113)

The properties of SS in Mongolian are summarized below.

(138) Mongolian SS: Movement Properties

Does SS...		example #
feed anaphor binding?	✓→ A	(129) (134)
establish new variable binding relationship?	✓→ A	(265)
remedy WCO effects?	✓→ A	(136)
reconstruct for variable binding?	✗→ A	(126d)

3.4 Long Distance Scrambling (LDS)

3.4.1 Introduction

In this section, I turn to long distance scrambling (LDS) in Mongolian. First, I show that scrambling may proceed out of an embedded finite CP headed by *gej* (see Chapter 2 for details regarding the complementizer *gej*), and that LDS obeys subjacency. Then, I present additional data suggesting that LDS in Mongolian has both A- and A'-properties, in contrast to what has been observed in other scrambling languages such as Hindi and Japanese, in which LDS is suggested to be uniformly A'-movement.

3.4.2 Constraints on LDS

Long distance scrambling (LDS) refers to the case where the an element such as the internal argument (mostly direct objects in the scope of data discussed in this section) of a finite embedded clause undergoes movement into the matrix clause. An example is given in (139). Notice that the gap in (139b) cannot be filled with an overt pronoun.

(139) LDS in Mongolian (gap cannot be filled with overt pronoun)

a. Emč [$_{CP}$ namaig ene em-iig uu-san gej] khel-sen
doctor.NOM 1SG.ACC this medicine-ACC drink-PST C say-PST

'The doctor said that I took this medicine.'

b. **Ene em -iig**$_2$ emč [$_{CP}$ namaig —$_2$/*üüniig$_2$ uu-san
this medicine -ACC doctor.NOM 1SG.ACC /it.ACC drink-PST
gej] khel-sen
C say-PST

LDS in Mongolian is subjected to the complex NP constraint (Ross 1967). An

example is given in (140).

(140) No LDS out of a relative clause

*__Ter nom__$_1$-ig Bat [[$_{RC}$öčigdör ___$_1$ khudalda-j aw-san] khün-iig]
that book-ACC B yesterday deal-CVB buy-PST person-ACC
khai-j baina
search-CVB COP.NPST
Int. 'That book, Bat is looking for [the person [$_{RC}$ who bought ___ yesterday]].'

LDS is also constrained by the adjunct condition. An example is given in (141).

(141) No LDS out of an adjunct clause

*__Süütei tsai-g__$_1$ Bat [bidn-iig ___$_1$ uukh gej baixad] öröön-d
milk tea-ACC B 1PL-ACC drink.INF C whilst room-DAT
or-j ir-sen
enter-CVB come-PST
Int. 'Milk tea, Bat entered the room [while we were about to drink ___].'

3.4.3 Mixed Properties of LDS

As discussed in 3.2.3, it has been argued for Hindi and Japanese that LDS is uniformly A'-movement (e.g., Mahajan 1990 for Hindi; Saito 1992, Tada 1993 for Japanese). In contrast, LDS in Mongolian seems to show mixed A/A'-effects. Let us first consider A'-properties. As exemplified by (142), a long distance scrambled DP may undergo reconstruction for anaphor binding. At the base order (142a), the embedded subject *Altantsetseg* binds the reflexive possessive in the object position. In (142b), the reflexive possessive DP 'herself's homework' has undergone LDS to the matrix-initial position, and the sentence is still acceptable under the coindexed reading– the scrambled reflexive possessive is interpreted in its base-position in terms of anaphor binding.

(142) a. Base: Embedded subject binds reflexive possessive object

Bi [$_{CP}$ **Altantsetseg**$_1$-iig zarimdaa [Geriin daalgawr-**aa**]$_1$
I A-ACC sometimes home.GEN work-REFL.POSS
khii-deg-gui gej] bodoj baina
do-HABIT-NEG C think.CVB COP.NPST
' I'm thinking that Altantsetseg$_1$ sometimes does not do herself's$_1$ homework.'

b. Scrambled: Reconstruction for anaphor binding

[Geriin daalgawr -**aa**]$_1$ bi [$_{CP}$ **Altantsetseg**$_1$-iig zarimdaa
home.GEN work -REFL.POSS I A-ACC sometimes
__$_1$ khii-deg-gui gej] bodoj baina
do-HABIT-NEG C think.CVB COP.NPST
'(Herself's)$_1$ homework, I'm thinking that Altantsetseg$_1$ sometimes does not do.'

In addition, LDS shows radical reconstruction in clauses containing embedded interrogatives. In Mongolian, the Q-particle *be/we* makes a COMP [+*wh*] and its location indicates *wh*-scope. In (143a), the Q-particle is located inside the embedded clause, and the matrix clause lacks a Q-particle. The sentence can only be interpreted as an embedded *wh*-interrogative, and cannot be interpreted as a matrix scope question. In contrast, in (143b), the Q-particle is located in the matrix clause, and the embedded clause does not have a Q particle. Consequently, the sentence can only be interpreted as a matrix scope *wh*-question, and does not allow an embedded *wh*-interrogative reading.

(143) Mongolian Q-particle indicates *wh*-scope

a. [Navčaa [$_{+Q}$ Zaya-g **ali** **nom-ig** unš-san **be** gej] asuulsan]
N.NOM Z-ACC which book-ACC read-PST Q C asked
[Embedded scope]'Navchaa asked (that) which book Zaya read. '

[*Matrix scope] 'Which book did Navchaa ask that Zaya read? '

b. [$_{+Q}$ Navčaa [Zaya-g **ali** **nom-ig** unš-san gej] asuulsan **be**]?
N.NOM Z-ACC which book-ACC read-PST C asked Q

[*Embedded scope]'Navchaa asked (that) which book Zaya read. '

[Matrix scope] 'Which book did Navchaa ask that Zaya read? '

Forming a *wh*-question in Mongolian requires the presence of the *wh* Q-particle. In (144), the embedded clause contains a Q-particle, but the matrix clause does not. In the meantime, there is a *wh*-phrase 'who' in the matrix subject position, its base position being outside of the scope of the embedded Q-particle. The result is ungrammatical. One of the previous explanations for this, due to K.-I. Harada (1972), is that the traces created by LF *wh*-movement are subjected to the Proper Binding Condition. If we assume the *wh*-phrase must move to the embedded COMP at LF, it will leave behind an unbound trace inside the matrix clause, violating the Proper Binding Condition (see, e.g., Saito 1989). [5]

(144) Matrix *wh* fails to be licensed by embedded Q

*__Khen__ [$_{+Q}$ Zaya-g ter nom-ig unš-san __be__ gej] asuul-san
who.NOM Z-ACC that book-ACC read-PST Q C ask-PST
Int. 'Who asked [Q that Zaya read that book]'

However, a *wh*-phrase can be scrambled to a position outside the c-command domain of the COMP where it takes scope at LF. This is illustrated in (145). Example (145a) is a matrix declarative sentence containing an embedded *wh*-question. In (145b), the *wh*-phrase 'what book' is scrambled from the embedded question into the matrix declarative clause, and the sentence is still acceptable. Compared to (144), what is surprising about (145b) is that although at S-structure the *wh*-phrase is outside of the scope of the embedded *wh* Q-particle, just like in (144), the result sounds far better than (144). The pattern in which a

[5] Alternatively, this can be formulated as a more general constraint requiring that a *wh*-phrase must be interpreted within the scope of its associated Q-particle at LF. See Chapter 5 for additional discussion.

long distance scrambled *wh*-phrase can nevertheless be interpreted within the scope of an embedded question is referred to as the *radical reconstruction* property of LDS.

(145) a. Base: Embedded *wh*-question

Bold [$_{+Q}$ Zaya-g **yamar nom-ig** aw-san **be** gej] asuul-san
B.NOM Z-ACC what book-ACC buy-PST Q C ask-PST
'Bat asked [Q what book Zaya bought]'

b. Scrambled: LDS *wh*-phrase licensed by embedded Q

Yamar nom-ig Bold [$_{+Q}$ Zaya-g ___$_1$ aw-san **be** gej] asuul-san
what book-ACC B.NOM Z-ACC buy-PST Q C ask-PST
'what book$_1$, Bat asked [Q Zaya bought ___$_1$]'

Similar effects can also be observed with NPI licensing. In Mongolian, NPIs such as *khen č* 'anyone' can only be licensed by clausemate negation (146a). As shown in (146b), the ACC-marked NPI can undergo LDS to the pre-subject position in the matrix clause, while still being licensed by the embedded negation.

(146) Reconstruction for NPI licensing

a. Bi [$_{CP}$ Bat -ig önöödör **khen-iig** **č** khar -aa **-güi** gej]
I Bat -ACC today who-ACC FOC see -PST -NEG C
bodoj baina
think.CVB COP.NPST
'I'm thinking that Bat did not see anyone today.'

b. **Khen-iig** **č**$_1$ bi [$_{CP}$ Bat -ig önöödör ___$_1$ khar -aa **-güi** gej]
who-ACC FOC I Bat -ACC today see -PST -NEG C
bodoj baina
think.CVB COP.NPST

Given the data so far, Mongolian LDS seems to behave consistently like A′-movement. However, data from variable binding suggest that LDS also exhibit A-movement properties. Consider the sentences in (147). In (147a) the quantifier in the embedded object position is intended to bind the pronoun in the

matrix subject position. The result gives rise to a weak crossover (WCO) effect. However, in (147b), the embedded object containing the quantifier is long distance scrambled to the matrix initial position, c-commanding the pronoun at the surface structure. The sentence becomes much improved compared to (147a). I take the improved status of (147b) as an indication that LDS is capable of 'remedying' a WCO effect, which is a property of A-movement.

(147) LDS and variable binding

a. Base

*__Öör-iin khni__$_1$ ekhner ni [$_{CP}$ ene emč-ig öngörsön
self-GEN 3SG.POSS wife 3SG.POSS this doctor-ACC last
jil **[öwčtön bolgon-ig]**$_1$ awar-san gej] khel -sen.
year patient every-ACC save-PST C say -PST
' His$_1$ (own) wife said that this doctor saved every$_1$ patient last year.'

b. Scrambled

?**[Öwčtön bolgon-ig]**$_1$, **[öör-iin khni** ekhner ni]$_1$ [$_{CP}$ ene
patient every-ACC self-GEN 3SG.POSS wife 3SG.POSS this
emč-ig öngörsön jil ___$_1$ awar-san gej] khel -sen.
doctor-ACC last year save-PST C say -PST
'**Every patient**$_1$, **his**$_1$ (own) wife said that this doctor saved last year.'

In addition, consider the sentences in (148). Sentence (148a) is ungrammatical because the reciprocal anaphor in the possessor position of the matrix subject is not bound. In (148b), the embedded object 'those two'-ACC undergoes LDS to the matrix-initial position, where it c-commands the reciprocal anaphor at the surface structure. The '#' symbol indicates that the judgment is mixed among the speakers I consulted. While some do not accept (148b), others do get the anaphor binding reading in (148b). For the latter group of speakers, while (148b) is far from perfect, it does sound much better than (148a).

(148) LDS and anaphor binding

a. Base

*[**Bie bie-nii-kh in**]$_1$ bagš [$_{CP}$ Bat-ig önöödör khural
body body-GEN-KH 3SG.POSS teacher B-ACC today meeting
deer **[ter khoyor-ig]**$_1$ šüümjil-sen gej] khel-sen
on that two-ACC criticize-PST C say-PST
'**Each other**$_1$**'s** teacher said that Bat criticized **those two**$_1$ at the meeting today. '

b. Scrambled

#**[Ter khoyor-ig]**$_1$ **[bie bie-nii-kh in]**$_1$ bagš [$_{CP}$ Bat-ig
that two-ACC body body-GEN-KH 3SG.POSS teacher B-ACC
önöödör khural deer ___$_1$ šüümjil-sen gej] khel-sen
today meeting on criticize-PST C say-PST
'**Those two**$_1$, **each other**$_1$**'s teacher** said that Bat criticized at the meeting today.'

If we take this to indicate that for some speakers LDS in Mongolian is capable of feeding new anaphor binding relationship, and consider this in combination with the variable binding data in (147), then Mongolian LDS should not be regarded as pure A'-movement, in contrast to Japanese and Hindi. In this regard, Mongolian seems to pattern more closely with Korean, which has been reported to have LDS with mixed A/A'-properties as well (Cho 1994a, 1994b; Ko 2018).

3.4.4 Summary

The properties of LDS in Mongolian are summarized below.

(149) Mongolian LDS: Movement Properties

Does LDS...		example #
reconstruct for anaphor binding?	✓→ A′	(142)
remedy WCO effects?	✓→ A	(147)
feed new anaphor binding relationship?	# → can be A	(148)
show radical reconstruction? [6]	✓	(145), (146)

3.5 Clausal Scrambling

In Mongolian, a clausal constituent may also undergo scrambling. Unlike the DP scrambling types reviewed above, clausal scrambling exhibits consistent reconstruction effects (the observation that scrambled CPs always exhibit obligatory reconstruction effects have also been made in Korean, see e.g., Kwon 2010). Recall that LDS of a DP argument may feed a new variable binding relationship. This was demonstrated in (147), repeated below as (150).

(150) LDS may feed variable binding

a. Base

***Öör-iin khni**$_1$ ekhner ni [$_{CP}$ ene emč-ig öngörsön
self-GEN 3SG.POSS wife 3SG.POSS this doctor-ACC last

[6]While it is possible to attribute radical reconstruction to the general reconstruction property of A'-movement, as will be discussed in more detail in Chapter 5, descriptively speaking this seems to be an oversimplification. As Saito (1989) demonstrates, English A'-movement such as *wh*-movement and topicalization does not show radical reconstruction (see also Aoun and Benmamoun 1998 for relevant discussion). In addition, it is also well-known that certain types of A-movement do show total reconstruction for quantifier scope, although interpretations and analyses vary (e.g., May 1977, Chomsky 1993, 2001, Hornstein 1995, Lasnik 1999, Wurmbrand and Bobaljik 1999, Fox 1999, Sauerland and Elbourne 2002; see a review of prominent issues in Boeckx 2001). Whether radical reconstruction in scrambling can be directly studied on a par with the A-reconstruction phenomenon for quantifier scope awaits a more comprehensive examination (but see e.g., Sauerland and Elbourne 2002, Miyagawa 2006 for relevant discussions). I leave this issue open here.

jil **[öwčtön bolgon-ig]**$_1$ awar-san gej] khel -sen.
year patient every-ACC save-PST C say -PST
' His$_1$ (own) wife said that this doctor saved every$_1$ patient last year.'

b. Scrambled

?**[Öwčtön bolgon-ig]**$_1$, **[öör-iin khni** ekhner ni]$_1$ [$_{CP}$ ene
patient every-ACC self-GEN 3SG.POSS wife 3SG.POSS this
emč-ig öngörsön jil ___$_1$ awar-san gej] khel -sen.
doctor-ACC last year save-PST C say -PST
'**Every patient**$_1$, **his**$_1$ (own) wife said that this doctor saved last year.'

However, if it is the entire CP that is preposed to the pre-subject position in the matrix clause, the sentence is not improved. This result is expected if the scrambled CP undergoes reconstruction.

(151) Clausal scrambling exhibits a reconstruction effect

*[$_{CP}$ Ene emč-ig öngörsön jil **[öwčtön bolgon-ig]**$_1$ awar-san gej]
this doctor-ACC last year patient every-ACC save-PST C
öör-iin khni$_1$ ekhner ni ___$_{CP}$ khel -sen.
self-GEN 3SG.POSS wife 3SG.POSS say -PST
Int. 'That this doctor saved every$_1$ patient last year, his$_1$ (own) wife said.'

Anticipating later discussion in Chapter 4, CP scrambling also shows consistent reconstruction effects with regard to Condition C. The sentence (152) is ungrammatical due to a Condition C violation induced by the matrix dative pronoun binding the R-expression inside the embedded subject. In (153), the entire CP is preposed to a position higher than the pronoun. The R-expression is no longer c-commanded by the co-indexed pronoun at the surface structure, but the sentence is still ungrammatical. This result is expected if clausal scrambling exhibits obligatory reconstruction effects.

(152) Condition C violation

*Bi **tüün**$_1$**-d** [$_{CP}$ [**Bat**$_1$ **-in** eej -iig] sain khün gej] khel
1SG.NOM 3SG-DAT B -GEN mother -ACC good person C say

-sen.
-PST
Int. 'I said to **him**$_1$ that **Bat**$_1$'s mother is a good person.'

(153) CP scrambling exhibits a reconstruction effect

*Bi [$_{CP}$ [**Bat**$_1$ **-in** eej -iig] sain khün gej] **tüün**$_1$ **-d** __$_{CP}$ khel
I B -GEN mother -ACC good person C he -DAT say
-sen.
-PST
Int. 'I said to **him**$_1$ that **Bat**$_1$'s mother is a good person.'

3.6 Summary of Chapter 3

I have demonstrated above that scrambling in Mongolian, like other well-studied scrambling languages such as Japanese, Hindi, and Korean, is not a uniform phenomenon. On this basis, I have shown that weak crossover (WCO) in a regular transitive sentence can be "remedied" by intermediate scrambling (IS), suggesting that IS in Mongolian shows A-movement properties. In discussing WCO effects in IS, I have also looked into three types of pronouns in Mongolian: the full 3SG pronoun *ter*, self-pronoun *öör ni*, and 3SG.POSS enclitic *ni*. I argued that while the self-pronoun and the 3SG.POSS enclitic can be bound as a variable, the full 3SG pronoun cannot be bound as a variable in the same environments. Therefore, the WCO remedying effect of IS can be observed in constructions involving the former two, but not in those involving the full pronoun (cf. Japanese *kare* vs. *pro/zibun/soitu* as discussed in Saito and Hoji 1983, Yoshimura 1992). In addition, IS also behaves like A'-movement in that a scrambled reflexive possessive phrase can reconstruct. Mongolian IS therefore has mixed A/A'-properties, similar to languages such as Japanese and Korean. I have also motivated the existence of short scrambling (SS) in Mongolian by

revisiting previous arguments for a base-generation approach based on Chain Condition. I showed that the absence of Chain Condition effect on the surface does not necessarily indicate the absence of (A-)movement. In combination with other independent evidence from depictive stranding, I concluded that SS must exist at least for the constructions under investigation. Following this conclusion, SS exhibits consistent A-properties in that it can remedy WCO effects, feed new A-binding relationship, and does not show reconstruction effects. Finally, I have argued that Mongolian has long distance scrambling (LDS) where a DP moves out of a finite embedded clause headed by the complementizer *gej*, and that LDS observes subjacency. In addition, LDS in Mongolian shows reconstruction effects, suggesting it can be A'-movement; However, LDS can also remedy WCO effects, and for some speakers it may feed new anaphor binding relationship, suggesting that it also has some A-properties.

Recall, however, that the discussion so far has excluded the behavior of scrambling in terms of Condition C reconstruction, which is commonly used as an A/A'-diagnostic in previous research on scrambling. Part of the table in (75) showing the relevant movement diagnostics is repeated below as (154).

(154) A/A'-movement diagnostics

Does it...	A-movement	A'-movement	
induce WCO effects?	✗	✓	
create new A-binding relationship?	✓	✗	
reconstruct for anaphor binding?	✗	✓	
show Condition C reconstruction?	✗	✓	★

In Chapter 4, I will argue that contra assumptions in previous research,

Condition C reconstruction (or connectivity) effect is independent of the A/A'-distinction. Thus, while Condition C reconstruction has been frequently employed as a diagnostic for A/A'-movement types, the current work suggests that Condition C in fact has a distinct source in the grammar (Takahashi and Hulsey 2009, see also Bhatt and Keine 2019).

CHAPTER 4

CONDITION C EFFECTS IN SCRAMBLING

4.1 Introduction

In Chapter 3, I established that Mongolian has three types of DP scrambling. Short scrambling and intermediate scrambling behave like A-movement in terms of anaphor binding, WCO, and variable binding. In addition, a reflexive possessive-marked argument can undergo intermediate scrambling and show reconstruction effects, suggesting that intermediate scrambling can behave like A'-movement as well. In addition, long distance scrambling shows mixed A/A'-properties in that on the one hand it reconstructs for anaphor binding, but on the other hand it can remedy WCO effects. In discussing how scrambling can be related to the A/A'-distinction, it was noted that while Condition C reconstruction has been commonly employed as a movement diagnostic, whether it indeed correlates with A/A'-movement types remains unclear and has been called into question by research in recent years (e.g., Takahashi 2006, Takahashi and Hulsey 2009, van Urk 2015, Bhatt and Keine 2019, Miyagawa 2021, Miyagawa and Oikonomou 2021). This chapter is concerned with this issue. In discussing Condition C, I will examine further properties of scrambling as well as some other aspects of Mongolian grammar, such as its case assignment system.

The Condition C diagnostic for movement types, commonly used in research on scrambling, is based on the well-known observation that A-movement typically does not exhibit Condition C reconstruction effects, whereas some instances of A'-movement do (e.g., Chomsky 1993, Lebeaux 1988, 1998, Sauerland

1998, Fox 1999). According to this diagnostic, (155) shows that Mongolian intermediate scrambling behaves like A′-movement in that it displays an obligatory Condition C reconstruction effect in (155b).

(155) a. Condition C violation at the base order

*__Ter__$_1$ Bat -ad [__Čemeg__$_1$-in nom -ig] ög-sön
3SG.NOM B -DAT Č -GEN book -ACC give-PST
Int. '__She__$_1$ gave __Čemeg__$_1$'s book to Bat. '

b. Intermediate scrambling shows obligatory reconstruction effect

*[__Čemeg__$_1$ -in nom -ig]$_2$ __ter__$_1$ Bat -ad ___$_2$ ög-sön
Č -GEN book -ACC 3SG.NOM B -DAT give-PST
Int. '__Čemeg__$_1$'s book, __she__$_1$ gave to Bat. '

However, the empirical picture of Mongolian scrambling turns out to be more complex than what is depicted in (155): Depending on *how* Condition C is violated at the base order, the same type of scrambling may show distinct reconstruction effects. First, notice that the Condition C violation in (155) is induced by the pronoun in the *subject* position binding the R-expression inside the object. In this case, intermediate scrambling does not improve the sentence and shows an obligatory reconstruction effect. Now consider (156). In the base order (156a) the pronoun in the dative object position binds the R-expression inside the direct object, inducing a Condition C violation. Surprisingly, in this case, intermediate scrambling significantly improves the sentence and does not exhibit a Condition C reconstruction effect (156b).

(156) a. Condition C violation at the base order

Bagš __tüün-d__$_1$ [__Čemeg__$_1$-in nom-ig]$_2$ ög-sön
teacher.NOM 3SG-DAT Č -GEN book-ACC give-PST
' (the) teacher gave (to) __her__$_1$ __Čemeg__$_1$'s book.'

b. No obligatory reconstruction when scrambling over dative IO binder

[**Čemeg**$_1$-in nom-ig]$_2$ bagš **tüün-d**$_1$ —$_2$ ög-sön
Č -GEN book-ACC teacher.NOM 3SG-DAT give-PST
'**Čemeg**$_1$'s book, (the) teacher gave (to) **her**$_1$.'

Building on the system developed in Takahashi and Hulsey (2009), I argue that Condition C reconstruction effects in Mongolian do not track movement types, but is instead directly tied to its case system, which controls the applicability of Wholesale Late Merger (WLM). Based on a series of language-specific properties, I develop a hybrid case assignment model for Mongolian (building on Baker and Vinokurova 2010), in which accusative is treated as dependent case and nominative is assigned via Agree. This case-based account neatly explains the contrast between (155) and (156), as well as the more complex patterns in long distance scrambling (LDS), which displays Condition C reconstruction effects in limited contexts. I argue that the full range of reconstruction effects in Mongolian, while puzzling under the standard A/A'-dichotomy, is exactly predicted by the WLM mechanism coupled with the way case assignment works in Mongolian.

The case study reported in this chapter constitutes an attempt to explore in-depth the theoretical and empirical ramifications of a case-based approach to Condition C reconstruction effect. The novel data presented in this chapter strongly suggest that a WLM-based account of reconstruction effects requires a fine-grained view of the case mechanism of the language in question. This view is twofold: First, the pattern of case assignment does not always align with A/A'-movement types. While in English A'-movement does not feed case assignment and A-movement does, a number of languages depart from this alignment particularly in the realm of scrambling. Hindi, for example,

has some instances of scrambling that exhibit A-properties and some with A'-properties. However, it is argued that neither type of scrambling feeds case assignment (Bhatt and Keine 2019, Keine 2018). Mongolian, as will be shown here, has long-distance, at least partially A'-like, scrambling that does feed case assignment. Crucially, when case assignment fails to align with other clusters of A- or A'-properties, Condition C reconstruction tracks case, not movement types. Second, the fact that (structural) case assignment varies cross-linguistically has important consequences for the surface Condition C effects manifested in a particular language, which has attracted increasing research attention. Bhatt and Keine (2019, 2021) suggest that the long-standing puzzle regarding Hindi local scrambling's mixed A/A'-behavior, particularly in terms of Condition C reconstruction, is in fact due to the interplay between case assignment and scrambling. Case and WLM have also been proposed to be at play in reconstruction effects in Dinka (van Urk 2015). Meanwhile, an alternative case-based account for Condition C reconstruction has also been made recently by Miyagawa (2021) and Miyagawa and Oikonomou (2021). In this regard, the Mongolian case assignment mechanism and scrambling properties allow us to probe into a wide range of reconstruction effects, which in turn provides novel insight into case as a controlling mechanism of late merger.

The rest of this chapter proceeds as follows. I first give an overview of variants of Condition C reconstruction effects in different types of movement and how they are used as A/A'-diagnostics. In 4.3, I present the core puzzle from Mongolian local scrambling, in which the Condition C diagnostic gives paradoxical results in terms of the A/A'-distinction, followed by a review of similar phenomena previously observed in other languages. In 4.4, I present my main proposal based on Takahashi and Hulsey (2009). I suggest some important pre-

dictions made by the Takahashi and Hulsey system, and show that these predictions are borne out by the Mongolian data, if a specific hybrid case assignment mechanism is assumed. In 4.5, I extend the core proposal to LDS and show that it correctly predicts the reconstruction patterns there. I also provide an empirical basis for the hybrid case assignment proposal made for Mongolian. In 4.6, I further strengthen this empirical basis by discussing additional data which supports the proposed Mongolian case system. Finally, I address two predictions made by the current case-based approach to Condition C, and show that these predictions are borne out.

4.2 Condition C Reconstruction Effects as an A/A′-diagnostic

The core data examined in this chapter is related to configurations referred to as strong crossover (SCO) (Postal 1971, 1972; Wasow 1972, 1979) and secondary strong crossover (SSCO) (van Riemsdijk and Williams 1981; Postal 1993). SCO is exemplified below.

(157) SCO

*Who$_1$ did he$_1$ say Mary kissed t$_1$?

(158) No SCO

Who$_1$ t$_1$ said Mary kissed him$_1$?

While *who* can be construed with *him* in (158), the coconstrual cannot be easily established between *who* and *he* in (157). In the SCO configuration (157), the pronoun c-commands the position where the *wh*-phrase originates, but in (158), the *wh*-phrase originates from a position to the left of the pronoun. Therefore,

wh-movement does not "cross over" the pronoun in (158). This contrast is often taken to be the result of Binding Condition C (e.g., Chomsky 1981: 193-198), stated as follows.

(159) Binding Theory (Chomsky 1981: 188)

(C) An R-expression is free.

Under the Binding Theory account for SCO, (157) can be taken to be an instance of Condition C connectivity. According to this view, the phrase which has undergone *wh*-movement (a type of A'-movement) in (157) reconstructs to its base position at LF, where it is c-commanded by the pronoun, violating Binding Condition C. In contrast, the LF configuration of (158) does not violate Condition C, because the base position of *who* is not c-commanded by the pronoun. [1]

SSCO is taken to be a variety of SCO (e.g., Postal 1993). In SSCO configurations, it is an NP embedded inside the moved phrase (e.g., as a possessor) that cannot be construed with the pronoun.

(160) Postal (1993:542-543)

a. SCO

*Who$_1$ did they inform him$_1$ that Joan would call t$_1$?

b. SSCO

*[Whose$_1$ sister]$_2$ did they inform him$_1$ that Joan would call t$_2$?

Under a Binding Theory approach, SSCO can be characterized in a similar way as SCO. The *wh*-moved phrase *whose sister* in (160b) undergoes reconstruction

[1] Alternatively, a Binding Theory explanation for SCO can also explain this by assuming that traces/copies left behind by the *wh*-movement in (157-158) are R-expressions, subjected to Condition C.

to its base position, where it is c-commanded by the pronoun *him*, violating Binding Condition C at LF. Under this view, both examples in (160) can be regarded as instances of Condition C reconstruction/connectivity effects (see a recent claim along this line by Bhatt and Keine 2021).

It is well-known that A-movement typically does not exhibit Condition C reconstruction effects, whereas some instances of A'-movement do (e.g., Chomsky 1993, Lebeaux 1988, 1998, Sauerland 1998, Fox 1999). A well-studied contrast which helps illustrate this point is between raising and *wh*-movement in English. Consider the following SSCO examples.

(161) *wh*-movement (A')

a. *He$_1$ thinks Mary saw John$_1$'s mother.

b. *[Whose$_1$ mother]$_2$ does he$_1$ think Mary saw $\_\_{}_2$?

(162) subject raising (A)

a. *It seems to him$_1$ that John$_1$'s mother is intelligent.

b. [John$_1$'s mother]$_2$ seems to him$_1$ [$\_\_{}_2$ to be intelligent].

Sentence (161a) violates Binding Condition C. In (161b), the object has undergone *wh*-movement to the sentence-initial position. The surface order no longer violates Condition C, but the result is still ungrammatical. In contrast, raising to subject in (162b), a type of A-movement, is capable of bleeding a Condition C violation at the base order (162a). *Wh*-movement and raising exhibit the same contrast in terms of SCO, as given in (163-164). Note that a reflexive anaphor *himself* is used in (164b) so that the surface order does not constitute a Condition B violation (*John$_1$ seems to him$_1$ [$\_\_{}_1$ to be intelligent]).

(163) *wh*-movement (A')

a. *He$_1$ thinks Mary saw John$_1$.

b. *Who$_1$ does he$_1$ think Mary saw ___$_1$?

(164) subject raising (A)

a. *It seems to him$_1$ that John$_1$ is intelligent.

b. John$_1$ seems to himself$_1$ [___$_1$ to be intelligent].

Therefore, the generalization can be stated in the following way. The types of English A'-movement examined here[2] exhibit obligatory Condition C reconstruction effects, giving rise to SCO and SSCO. In contrast, A-movement does not reconstruct for Condition C, thus it does not exhibit SCO and SSCO.

(165) English Movement Properties

	English A'-movement	English A-movement
SCO	✓	✗
SSCO	✓	✗

Due to the contrast in English (165), the presence or absence of Condition C reconstruction effects is often taken to be an indication of whether the movement under investigation is A or A'-movement, a method commonly used in the study of scrambling. The rationale of using Condition C as a movement diagnostic can be illustrated with (166). If the base order is ungrammatical due to a Condition C violation, and scrambling does not improve the sentence, then

[2]It is well-known that certain cases of A'-movement do bleed Condition C, e.g., i. [Which argument that John$_1$ made] did he$_1$ believe t$_1$? cf. ii. ??/*[Which argument that John$_1$ is a genius] did he$_1$ believe t$_1$? See e.g., van Riemsdijk and Williams (1981), Freidin (1986), Lebeaux (1988), Fox (1999).

the type of scrambling in question is considered to exhibit obligatory reconstruction effect, a typical A'-property. In contrast, if scrambling does improve the sentence, then the type of scrambling in question does not obligatorily reconstruct for Condition C, a typical A-property.

(166) Condition C Reconstruction and Movement Type

	*Scrambled order	✓ Scrambled order
*Base order A or A'?	Reconstruction typically A'	No Reconstruction typically A

While Condition C reconstruction effects are widely used as an A/A'-diagnostic, the full empirical picture of scrambling turns out to reveal paradoxical patterns that cannot be immediately captured by the correlation between Condition C reconstruction and movement types shown in (166). In particular, it has been observed in multiple studies that the standard A/A'-distinction does not properly characterize the condition in which scrambling shows Condition C reconstruction effects. For example, based on Korean and German scrambling data, Frank, Lee, and Rambow (1996) observe that the same type of scrambling may behave distinctly in terms of Condition C reconstruction, depending on *how* Condition C is violated at the base order. In addition, Bhatt and Keine (2019) examine Hindi local scrambling and demonstrate that Condition C connectivity in fact does not track the A/A'-distinction in Hindi. Condition C also raises a puzzle for local scrambling in Japanese. Saito (1992) demonstrates that IS can be A-movement according to WCO and A-binding tests, but in the meantime shows Condition C reconstruction effects. These empirical observations will be reviewed in greater detail in the next section.

The novel data from Mongolian scrambling, which I turn to in the next section, further contribute to this empirically complex picture. Of particular interest to us is the observation that the Condition C patterns in scrambling often fails to track the A/A'-distinction, contrary to what the table in (166) describes. In examining this paradox, two interrelated questions arise. First, an empirical question: what are we really attempting to diagnose, when we draw on Condition C reconstruction effects in scrambling? And second, a theoretical question: what is the grammatical source of these effects, and how do we model it in a systematic way? To address these questions, the subsequent discussion will proceed as follows. I will begin by introducing the core puzzle regarding Condition C effects in Mongolian local scrambling. I propose that the crucial contrast in Condition C effects concerns whether scrambling targets a case position or not, rather than whether scrambling involves A- or A'-movement. Building on Takahashi and Hulsey (2009), I argue that a case-based approach to Condition C crucially predicts a correlation between a language's case system and its Condition C effects. I argue in particular that accusative case in Mongolian is a dependent case, and hence can be assigned in positions that are different from those where accusative is valued through Agree. The case-based analysis therefore predicts Mongolian scrambling to exhibit a different pattern of Condition C reconstruction effects because of this, and the prediction is shown to be borne out. In addition to local scrambling, I further demonstrate this point using clause-external scrambling. In particular, I show that even long distance scrambling, which is at least partially A'-movement, bleeds Condition C in a way that mirrors the patterns in local scrambling. I show that this otherwise puzzling fact is a natural consequence of the current proposal.

4.3 Core Puzzle

4.3.1 Condition C Effects in Mongolian Local Scarmbling

Some of the core observations from Chapter 3 about local scrambling in Mongolian are repeated below.

(167) Local scrambling in Mongolian

Does **short scrambling (SS)** ...			Does **intermediate scrambling (IS)** ...		
Feed variable binding?	✓	A	Feed variable binding?	✓	A
Feed anaphor binding?	✓	A	Feed anaphor binding	✓	A
Remedy WCO effects?	✓	A	Remedy WCO effects?	✓	A

Turning to Condition C connectivity, we observe that Mongolian SS remains consistent with the picture in (167). As shown in (190a), the pronoun in the dative IO position induces a Condition C violation on the R-expression *Čemeg* inside the accusative DO. As shown in (168b), scrambling the DO to the left of the IO makes the sentence grammatical under the coindexed reading. The absence of an obligatory Condition C reconstruction effect is expected given our observation that SS behaves like A-movement.

(168) No reconstruction in SS

a. *Bagš **tüün-d**$_1$ [**Čemeg**$_1$-in nom-ig] ög-sön
teacher.NOM 3SG-DAT Č -GEN book -ACC give-PST
Int. '(The) teacher gave **her**$_1$ **Čemeg**$_1$'s book.'

b. Bagš [**Čemeg**$_1$-in nom-ig]$_2$ **tüün-d**$_1$ ___$_2$ ög-sön
teacher.NOM Č -GEN book-ACC 3SG-DAT give-PST
'(The) teacher gave **Čemeg**$_1$'s book (to) **her**$_1$.'

Turning to IS, first, no reconstruction takes place in (169). This fits well with our previous observation that IS behaves like A-movement. Note that here the underlying Condition C violation is induced by the pronoun in the IO position binding the R-expression inside the DO.

(169) No reconstruction in IS (IO binding DO)

a. *Bagš **tüün-d**$_1$ [**Čemeg**$_1$-in nom-ig] ög-sön
teacher.NOM 3SG-DAT Č -GEN book -ACC give-PST
Int. '(The) teacher gave **her**$_1$ **Čemeg**$_1$'s book.'

b. [**Čemeg**$_1$-in nom-ig]$_2$ bagš **tüün-d**$_1$ ___$_2$ ög-sön
Č -GEN book-ACC teacher.NOM 3SG-DAT give-PST
'**Čemeg**$_1$'s book, (the) teacher gave (to) **her**$_1$.'

However, additional facts of IS depart from the picture in (167). In contrast to (169), in both (170) (a transitive construction) and (171) (a ditransitive construction), the underlying Condition C violation is induced by the pronoun in the *subject* position binding the R-expression *Čemeg* in DO. Surprisingly, IS of the DO fails to bleed Condition C in both examples – reconstruction obligatorily takes place.

(170) Obligatory reconstruction in IS (SUBJ binding DO, transitive)

a. ***Ter**$_1$ [**Čemeg**$_1$ -in nom -ig] ura-san
3SG.NOM Č -GEN book -ACC tear-PST
Int. '**She**$_1$ tore **Čemeg**$_1$'s book.'

b. *[**Čemeg**$_1$ -in nom -ig]$_2$ **ter**$_1$ ___$_2$ ura-san
Č -GEN book -ACC 3SG.NOM tear-PST
Int. '**Čemeg**$_1$'s book, **She**$_1$ tore.'

(171) Obligatory reconstruction in IS (SUBJ binding DO, ditransitive)

a. ***Ter**$_1$ Bat -ad [**Čemeg-in**$_1$ nom-ig] ög-sön
3SG.NOM B -DAT Č -GEN book -ACC give-PST
Int. '**She**$_1$ gave Bat **Čemeg**$_1$'s book.'

b. *[**Čemeg**$_1$ -in nom -ig]$_2$ **ter**$_1$ Bat -ad ___$_2$ ög-sön
Č -GEN book -ACC 3SG.NOM B -DAT give-PST
Int. '**Čemeg**$_1$'s book, **she**$_1$ gave to Bat. '

4.3.2 A Review of Similar Phenomena in Other Languages

The patterns presented above are puzzling under the traditional approach to scrambling based on the A/A'-distinction. We know that in Mongolian the pre-subject landing site for intermediate scrambling (IS) behaves consistently like an A-position, because IS behaves like A-movement in terms of weak crossover amnesty, variable binding, and anaphor binding. If the pre-subject landing site is an A-position, we expect that scrambling to this position does not reconstruct for Condition C. In reality, the DO scrambles to the pre-subject landing site in (169), (170), and (171), but only (169) shows no reconstruction effect. An A/A'-based account would need to say that Mongolian IS behaves like A-movement in (169), but like A'-movement in (170) and (171), although the DP scrambles to the same position in all three cases. [3]

As discussed in 3.2.3, it is well-known that IS in many languages shows mixed A/A'-properties (including Mongolian). Mahajan (1990, 1994) demonstrates that Hindi IS has properties of A-movement. For example, in Hindi, scrambling to the pre-subject position suppresses underlying WCO violations. At the same time, Hindi IS also displays properties of A'-movement, in that scrambled DPs can reconstruct. Similarly, it has been suggested that IS in

[3] Alternatively, one might propose that the pre-subject position is always an A'-position for Condition C. Therefore reconstruction for Condition C always happens from the pre-subject landing site. In (169), due to the availability of an intermediate A-landing site, the scrambled DP has the option to reconstruct only partially to that intermediate A-position, hence the grammaticality of (169b). Nevertheless, it is difficult to extend this to the clause-external scrambling cases. See the rest of this chapter for relevant discussion.

Japanese can be A- or A'-movement (Saito 1992). With regard to the mixed properties of IS, Webelhuth (1989, 1992) proposes that scrambling is to a third type of position that is neither an A- nor an A'-(operator) position. Mahajan (1990, 1994) argues that clause-internal scrambling can be either A or A', but not simultaneously both as in Webelhuth's account. Nevertheless, the Condition C reconstruction facts at hand are paradoxical given these two analyses. According to Webelhuth's account, scrambling is to a third type of position, so Condition C reconstruction should always be optional from such a position. Under Mahajan's account, clause-internal scrambling is ambiguous between A- and A'-movement. However, neither account explains why the A-movement option is apparently unavailable for (170-171) but available for (169).

Recall from Chapter 3 that Saito's analysis for Japanese scrambling combines Webelhuth's and Mahajan's proposals. His hybrid analysis is repeated below.

(172) Saito's (1992) hypothesis

a. Clause-internal scrambling is ambiguous between A- and A'-movement, while "long distance" scrambling must be A'-movement (Mahajan's hypothesis)

b. A'-scrambling differs from wh-movement and topicalization in that it is movement to a non-operator position (A revised version of Webelhuth's hypothesis)

A potential problem which Saito recognizes for (172) is the Condition C reconstruction effects. According to the hypothesis in (172), nothing prevents the IS in (173) from being an instance of A-movement. However, A-movements are not expected to exhibit reconstruction effects as observed in (173).

(173) ?* [Masao$_i$ -no hahaoya] -o$_j$ [kare$_i$ -ga t$_j$ aisiteiru] (koto)
M -GEN mother -ACC he -NOM love fact
'[Masao's$_i$ mother]$_j$, he$_1$ loves t$_j$.'

Under Saito's original analysis, building on Tada (1990), the landing site of IS can be reanalyzed as an A-position at LF. Given (173), this implies that Condition C reconstruction must not be relevant at LF, but at some level before the LF A'→A reanalysis, arguably at D-structure (Lebeaux 1988) or at NP-structure (van Riemsdijk and Williams 1981). [4]

In contrast to the above proposals, Frank et al. (1996) argue that the contrast in Condition C reconstruction effect manifested in scrambling simply cannot be explained using the A/A'-distinction. Instead, this contrast is due to the special status of subject binders. Their proposal is based on a similar set of asymmetries in Korean and German local scrambling. I illustrate the patterns using their Korean data. First, (174a) is ungrammatical due to the Condition C violation induced by the subject binding the R-expression in the object *Minswu-uy emma-lul*. Frank et al. observe that in (174b), scrambling the object over the subject pronoun does not repair the Condition C violation. In other words, Condition C obligatorily reconstructs in the intermediate scrambling example (174b).

(174) Korean (Frank et al. 1996:5)

a. *Ku$_1$ -ka [Minswu$_1$ -uy emma] -lul coahanta
he -NOM Minswu -GEN mother -ACC like
'He likes Minswu's mother'

b. *[Minswu$_1$ -uy emma]$_2$ -lul ku$_1$ -ka t$_2$ coahanta
Minswu -GEN mother -ACC he -NOM like

However, scrambling shows a different pattern when the pronoun binder in the base order is not the subject. The Korean sentence (175a) is ungrammatical

[4] cf. Kitahara (2002) for a derivational analysis of Saito's example (173).

due to a Condition C violation, induced by the IO *ku-eykey* c-commanding the R-expression *Minswu* in the DO *Minswu-uy sacin-ul*. In (175a), the DO *Minswu-uy sacin-ul* is scrambled to the position preceding the IO, and the sentence becomes grammatical. If this DO undergoes intermediate scrambling, as in (175c), the sentence is also grammatical, indicating that intermediate scrambling also repairs a Condition C violation. The Korean patterns shown in (174-175) are similar to the Mongolian patterns presented in 4.3.1.

(175) Korean (Frank et al. 1996:5)

a. *Younghee -ka ku_1 -eykey [$Minswu_1$ -uy sacin] -ul
Younghee -NOM him -DAT Minswu -GEN picture -ACC
poyecwuessta
showed
'Younghee showed him_1 $Minswu's_1$ picture'

b. Younghee -ka [$Minswu_1$ -uy sacin]$_2$ -ul ku_1 -eykey t_2
Younghee -NOM Minswu -GEN picture -ACC him -DAT t
poyecwuessta
showed

c. [$Minswu_1$ -uy sacin]$_2$ -ul Younghee -ka ku_1 -eykey t_2
Minswu -GEN picture -ACC Younghee -NOM him -DAT t
poyecwuessta
showed

Frank et al. (1996) argue that these facts cannot be explained on the basis of the A/A'-distinction, but instead are tied to whether the binding relation affected by scrambling is one in which the binding is by an element in a subject position. They formulate this as the subject binding generalization in (176).

(176) Subject binding generalization (Frank et al. 1996)

If X in subject position binds Y at some point in the derivation, then X binds Y at all levels of representation.

According to this account, Condition C reconstruction will always happen if

the R-expression has been bound by a subject at a certain point of derivation, including at its base position. Thus, Condition C reconstruction happens in (170-171) (and in the Korean examples (174)) because scrambling affects a binding relationship involving a subject binder. Contrastively, the binders in (168-169) (Korean counterparts (175)) are not subjects but indirect objects, therefore scrambling of the constituent containing the R-expression does bleed Condition C. This proposal is extended by Y.-S. Lee (1993), who draws on Korean data and argues that the special role of subject binders is at play even in long distance scrambling (LDS). Anticipating later discussions, I will draw on LDS data and show that the subject binding generalization cannot be maintained for Mongolian. Instead, Condition C reconstruction effects are systematically regulated by case, giving rise to the surface effect where reconstruction seems to differ depending on how Condition C is violated at the base order.[5] The current account is consistent with both Saito (1992) and Frank et al.'s (1996) initial insight that Condition C must be valued somewhat differently from the standard A/A'-dichotomy. Before turning to LDS, I first present the core components of my proposal which derive the local scrambling facts.

[5]It should be made clear that while the current case-based account explains the Mongolian scrambling facts, whether or not such an analysis can be extended to Korean or German awaits future research. A closely related factor is the case mechanism in these languages and whether/how it relates to nominal licensing. For example, Y.-S. Lee (1993) has reported similar empirical facts in Korean local and long distance scrambling, which can be potentially revisited and explored in light of more recent analyses of the Korean case mechanism (e.g., Levin 2017). A comparison among these languages, although beyond the scope of the current chapter, would be very illuminating. I leave this to future work.

4.4 The Proposal: Dependent Case Controls WLM

In this section, I present the major components of the current proposal for Condition C reconstruction effects in Mongolian scrambling. Departing from previous accounts, I argue that the complexity of the phenomenon reveals that Condition C reconstruction is neither related the the position of underlying binders, nor to A/A'-properties. Building on Takahashi and Hulsey (2009), I argue that scrambling bleeds Condition C so long as the case requirement of the late-merged NP can be satisfied. Crucially, I motivate a hybrid case assignment modality for Mongolian in which accusative case is assigned as a dependent case, and nominative case is assigned by T^0 via Agree. I argue that such a mechanism has a direct consequence on how scrambling behaves in terms of Condition C reconstruction, thereby introducing a fine-grained view of case in to Takahashi and Hulsey's system. This section will proceed as follows. I first introduce the theory of Wholesale Late Merger and argue that it makes non-trivial predictions about case and Condition C reconstruction. Then, in 4.4.2, I introduce the hybrid case assignment system in Mongolian and show that it accounts for the Condition C patterns in local scrambling. The analysis of reconstruction in local scrambling can be directly extended to the more complex facts in long distance scrambling, which I turn to in section 4.5.

4.4.1 Wholesale Late Merger (WLM) and Its Predictions

A Review of Takahashi and Hulsey (2006)

Within the copy theory of movement, Takahashi (2006) and Takahashi and Hulsey (2009) propose that the surface difference in Condition C reconstruction effects can be accounted for via *Wholesale Late Merger* (WLM), an revised and expanded version of Lebeaux (1988). Assuming all movements leave copies, Takahashi and Hulsey propose that it is possible for an operator/determiner to undergo movement alone, with their restrictors countercyclically merged, so long as the output can be interpreted by the semantics (building on Fox 2002, Bhatt and Pancheva 2004, 2007). Crucially, the applicability of WLM is constrained by the case assignment mechanism. In particular, late merger of an NP restrictor is possible only at a point where case can be assigned.

Takahashi and Hulsey incorporate the mechanism of Trace Conversion (Fox 2002), which allows for movement chains to be properly interpreted under the copy theory of movement. To understand the purpose of such a mechanism, consider a sentence like (177a). The QP [*every book*] in object position has the type <<e,t>,t>, which does not combine with the type of the transitive verb *read* (<e, <e,t>>). Under the trace theory of movement, this problem can be circumvented by raising the QP and leaving behind a trace, which is interpreted as a bound variable of type e (Heim and Kratzer 1998). However, once we assume the copy theory of movement, it is not clear how the type mismatch at the lowest VP level can be resolved, since there is a full copy of QP present in the object position (177b).

(177) a. John read [every book]

b. [every book] [John read [every book]]

Fox (2002) suggests that Trace Conversion (178) allows uninterpretable movement chains like (177b) to be compositionally interpretable in the semantic component.

(178) *Trace Conversion*

a. Variable Insertion: (Det) Pred → (Det) [Pred λ**y(y=x)**]

b. Determiner Replacement: **(Det)** [Pred λ**y(y=x)**] → **the** [Pred λ**y(y=x)**]

Trace Conversion has two components. First, Variable Insertion introduces a predicate of type <e,t> (i.e., λy(y=x)) into a lower copy, which combines with the restrictor of a determiner, also of type <e,t>, via Predicate Modification (as defined in Heim and Kratzer 1998). Variable Insertion establishes a binding dependency between the lower copy and the λ-operator introduced by movement of the QP. The derivation is schematized in (179a-179c).

The second component is Determiner Replacement, which converts the lower copy into a definite description of type e. As illustrated in (179d), the determiner *every* is replaced with the definite determiner *the*. The resulting representation can then be compositionally interpreted in the semantic component.

(179) Takahashi and Hulsey (2009: 396)

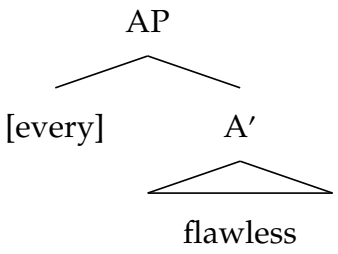
a. [John read every book]	**original sentence**
b. [every book] λ**x.** [John read every book]	**QR**
c. [every book] λ**x.** [John read [every book **x**]]	**Variable Insertion**
d. [every book] λ**x.** [John read [**the** book **x**]]	**Determiner Replacement**

To illustrate how WLM captures the A/A' asymmetry in Condition C reconstruction, consider the following derivation discussed in Takahashi and Hulsey (2009: 400-402). For a raising example like (180), Condition C does not reconstruct, as expected for A-movement.

(180) Every argument that John$_1$ is a genius seems to him$_1$ to be flawless.

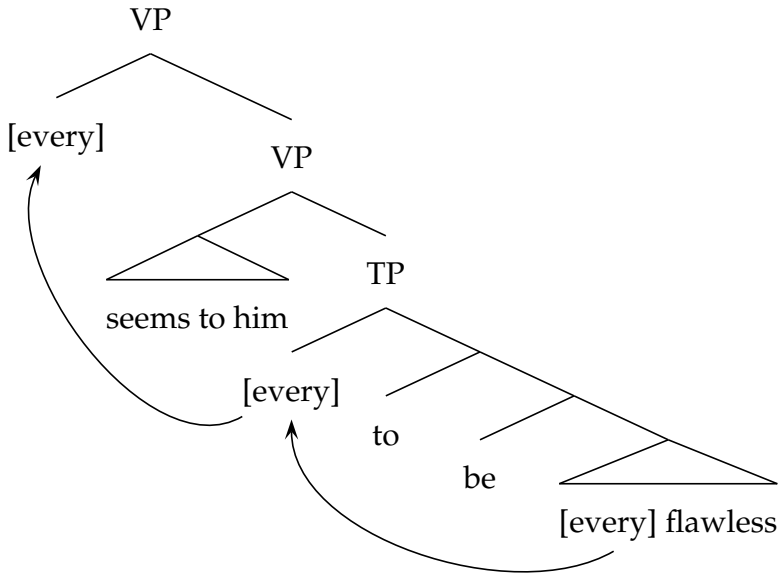
The above sentence involves the following derivations. First, a determiner is generated in the base position without its restrictor.

(181) The determiner **[every]** is base-generated in Spec, AP **without** its restrictor



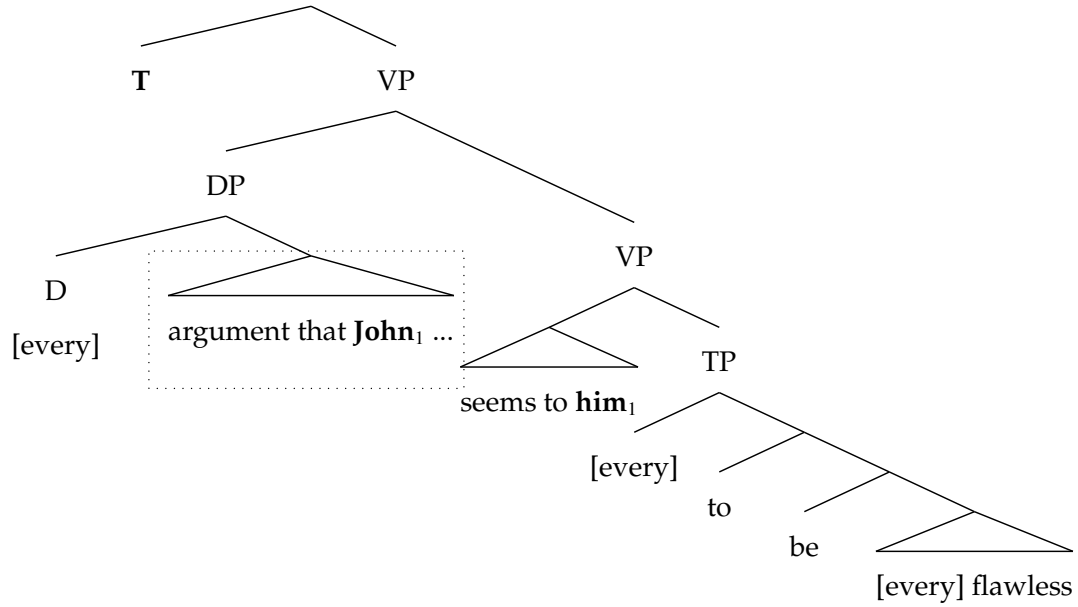
Second, the determiner undergoes successive cyclic movement without its restrictor, as indicated in (182).

(182) The determiner [every] undergoes successive cyclic movement



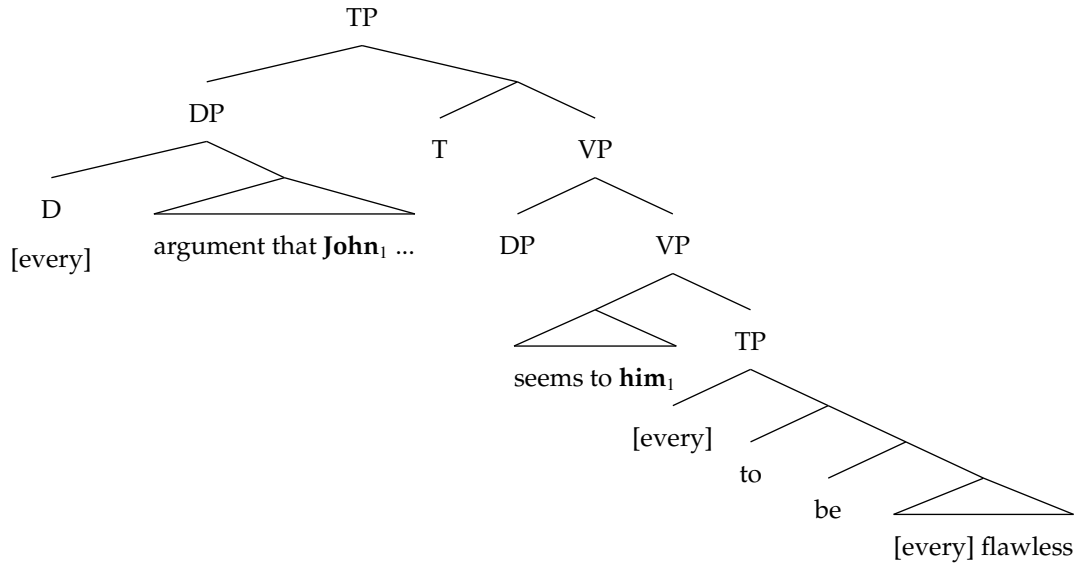
According to Takahashi and Hulsey, WLM of the restrictor NP takes place at the matrix VP-adjoined position, as shown in (183). This is the first point in the derivation where the restrictor containing the R-expression *John* is introduced, and it is crucially higher than the pronoun binder *him*, circumventing a Condition C violation. At this point, the higher head T assigns to the result nominative case.

(183) WLM of the restrictor at matrix VP-adjoined position, gets case from T



After being case licensed at the matrix VP-adjoined position, a full copy of the DP [every argument that John is a genius] then proceeds to Spec TP, its ultimate surface position.

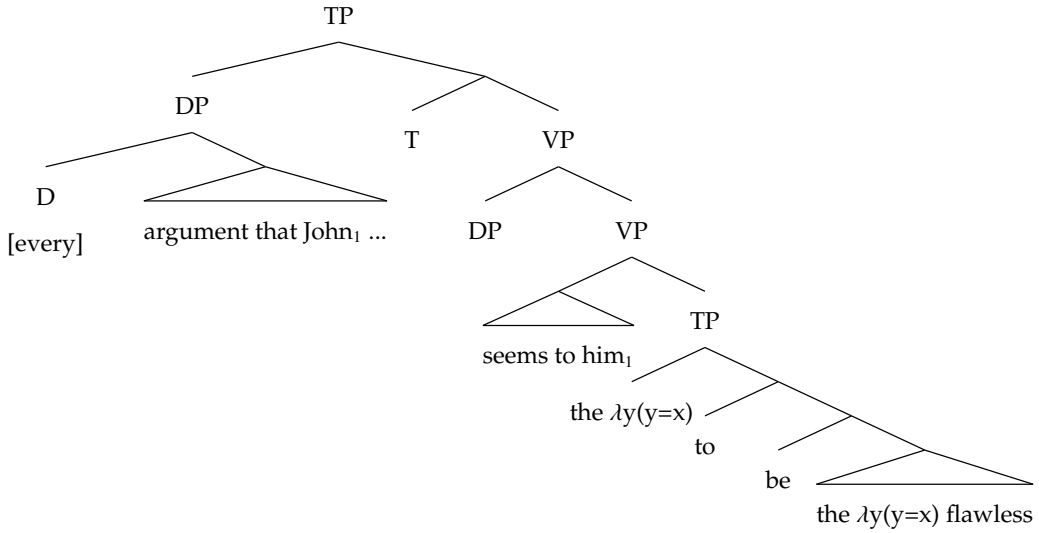
(184) Movement to surface position



Finally, Trace Conversion converts the lower copies of D to *the*, and inserts an

<e,t> predicate by Variable Insertion. This process is abstractly represented in (185). The derivation so far renders an interpretable representation in which there is no copy of R-expression *John* within the c-command domain of the pronoun *him*. Consequently, the structure does not violate Binding Condition C.

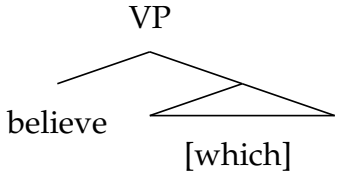
(185) All the lower copies of [every] undergo Trace Conversion



In contrast, WLM cannot be fulfilled in English A'-movement contexts, because during the course of A'-movement, there is no case position available that allows late merge. An example is given below.

(186) ??/* Which argument that $John_1$ is a genius did he_1 believe?

(187) a. **[which]** is base-generated without its restrictor



b. Movement of *which*, WLM of the restrictor & Trace Conversion

[[which [argument that John$_1$ is a genius]] λx.[he$_1$ v believe [the x]]

***WLM**

WLM is not possible in (187b). Since the object can only receive case from v, the restrictor NP which undergoes WLM in (187b) cannot get case because it is outside the domain of v. As a result, a full copy of the DP containing the NP restrictor must be generated in the base position. As shown in (188b), since the pronoun c-commands the lower copy of the R-expression *John*, this sentence is ruled out by Condition C.

(188) a. [$_{vP}$ v believe [which argument that John$_1$ is a genius]]

$\longrightarrow$ wh-movement

b. *[$_{CP}$ [which argument that John$_1$ is a genius] [$_{TP}$ he$_1$ believe [which argument that John$_1$ is a genius]]]

To summarize, Takahashi and Hulsey (2009) account for the surface difference in reconstruction effects via WLM, a mechanism which allows for determiners alone to undergo movement, with their restrictors countercyclically merged, so long as the output can be interpreted by the semantics (by invoking Fox's Trace Conversion). Of particular interest to us here is the proposal that the applicability of WLM is constrained by the case assignment mechanism, which states that late merger of an NP restrictor is possible only at a point where case can be assigned. This proposal immediately predicts the contrast between A and A'-movement in English: A-movement feeds case assignment in English. Therefore, it may bleed Condition C in the raising example (180); Contrastively, the A'-movement example (186) examined above does not feed case assignment

in English. Thus, it does not bleed Condition C. [6]

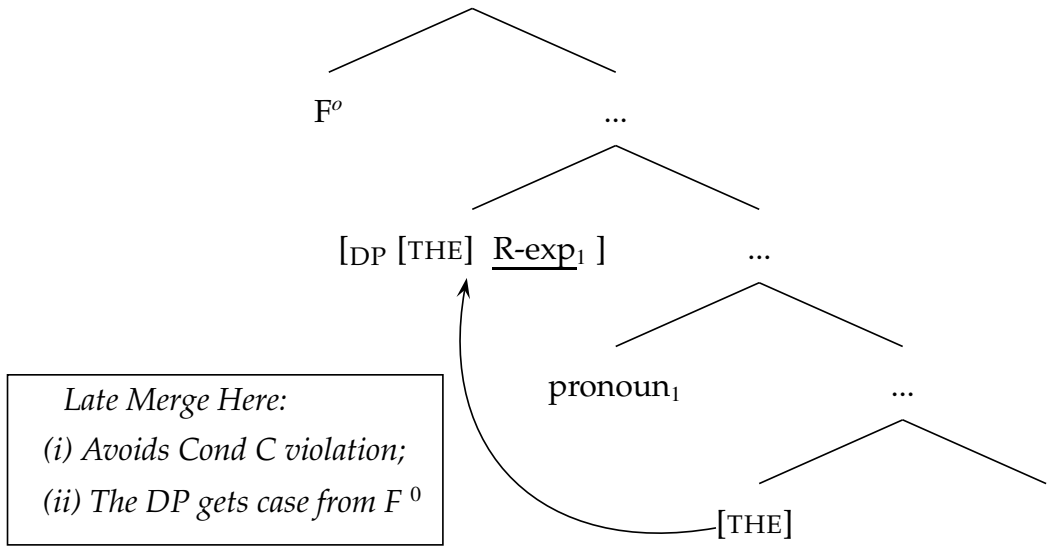
Core Predictions of WLM

Taken together, the WLM approach to Condition C reconstruction is based on the interactions of two factors. First, the late-merged restrictor containing the R-expression must not be c-commanded by the coreferential pronoun; and second, an NP must have case. The situation where movements successfully bleed Condition C can therefore be stated as in (189), where F^o is the relevant case assigning head.

(189) Condition on WLM

a. WLM may help avoid Condition C violation if the movement chain in question permits a case position higher than the pronoun binder.

b.



[6]This summary abstracts away from the well-known argument-adjunct asymmetry which Takahashi and Hulsey discuss in detail. See Takahashi and Hulsey (2009) for explanation for how such asymmetry is accounted for in WLM.

An important prediction of (189) is that if a language has more than one location on a movement chain where case can potentially be assigned, Condition C violation can be circumvented so long as the case position that ultimately gets realized (i.e., where late merger applies) is higher than the pronoun binder. Furthermore, if WLM is indeed tied to case, depending on a specific language's case mechanism, the language in question may exhibit a specific type of Condition C reconstruction effect in accordance with the way its case assignment mechanism operates.

In the next section, I show that these predictions are borne out by data from Mongolian scrambling. I argue that the mismatch in reconstruction effects presented in 4.3 is a natural result of case assignment, which controls the applicability of WLM. Based on a series of language-specific properties, I develop a hybrid case assignment model for Mongolian (building on Baker and Vinokurova 2010). Importantly, accusative case in Mongolian needs to be analyzed as dependent case, which can be assigned at certain positions such as the one between the subject and the dative (IO) pronoun in (168), repeated here as (190), allowing WLM in short scrambling (SS).

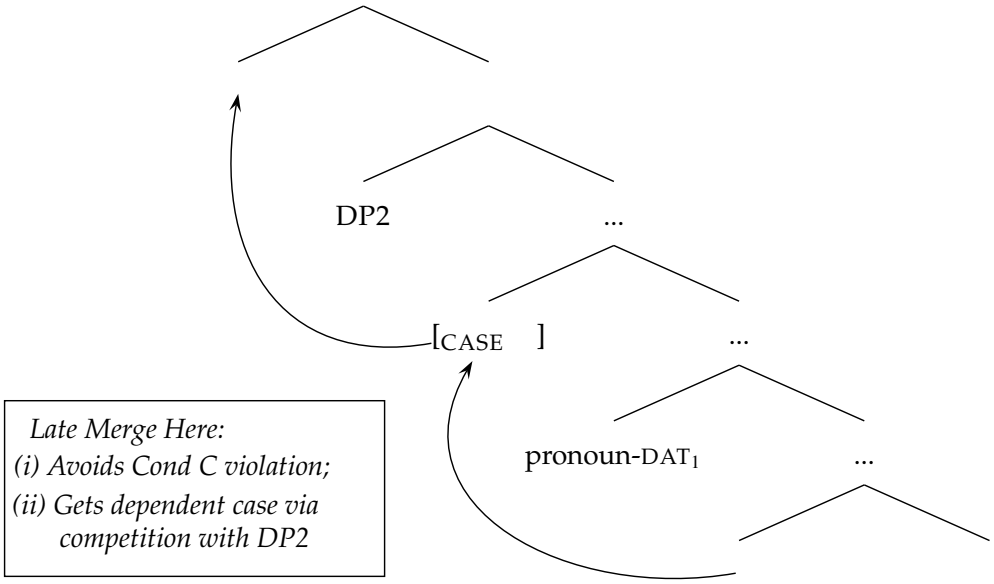
(190) (=168) No reconstruction in SS

a. *Bagš **tüün-d**$_1$ [**Čemeg**$_1$-in nom-ig] ög-sön
teacher.NOM 3SG-DAT Č -GEN book -ACC give-PST
Int. '(The) teacher gave **her**$_1$ **Čemeg**$_1$'s book.'

b. Bagš [**Čemeg**$_1$-in nom-ig]$_2$ **tüün-d**$_1$ ___$_2$ ög-sön
teacher.NOM Č -GEN book-ACC 3SG-DAT give-PST
'(The) teacher gave **Čemeg**$_1$'s book (to) **her**$_1$.'

The mechanism for Mongolian WLM can be regarded as a dependent case variant of the Condition on WLM (189), schematized in (191).

(191) Late merger at the dependent case position (Mongolian)



I argue that the contrast in Mongolian reconstruction effects between (168-169) and (170-171) is a direct consequence of this intermediate dependent case position. Furthermore, the complex behaviors of long distance scrambling (LDS) in terms of Condition C reconstruction can also be accounted for using this mechanism. I will first spell out the details of the analysis using local scrambling, then turn to the LDS data.

4.4.2 WLM in Local Scrambling: Basic Mechanisms

The assignment rules of accusative and nominative case in Mongolian, based on Baker and Vinokurova's proposal, are stated in (192a-192b). In addition, dative is treated as a nonstructural case.

(192) Case assignment rules in Mongolian

a. If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as accusative case, unless NP1 has already been marked for case.

b. Nominative case is assigned by finite T^0. [7]

c. Dative case is a nonstructural case.

In this section, I show that (192) allows for WLM to apply in all local scrambling cases which bleeds Condition C. I will fully flesh out the hybrid model and reinforce the empirical basis for it in 4.5 and 4.6. First, consider the fact that Condition C reconstruction does not happen in short scrambling (SS), when the Condition C violation is induced by the pronoun in IO binding the R-expression in DO. As shown in (193a), when the DO containing the R-expression is scrambled to the left of the IO, there is no reconstruction effect. Under the current analysis, the derivation starts with the covert determiner [THE] introduced as the complement of the main verb *ögsön* ('gave') at the base position, then moves to the position between the subject *bagš* ('teacher') and the pronoun *tüünd* (3SG-DAT), as schematized in (193). Here WLM of the NP restrictor (as indicated by the underlined part in (193b) is allowed, because the resulting DP is within the same phase as the subject, which has not yet been valued for case. The whole DP gets accusative by competition with the subject.

[7] Baker and Vinokurova's (2010) proposal for nominative case assignment in Sakha draws on the observation that the nominative-marked phrases seems to co-occur with agreement, a point regarding which Levin and Preminger (2015) suggest alternative explanations. In contrast to Sakha, Mongolian does not have overt subject-verb ϕ-agreement, and thus this study has little to offer in regard to this discussion. The only point which is needed for the sake of the current analysis is that nominative case is assigned to a caseless noun phrase by virtue of structural proximity to a designated functional head (i.e., finite T^0), during which Agree relationship is established in accordance with the approach outlined in Chomsky (2000, 2001). The empirical basis for this claim will be provided in 4.6.

(193) a. (=(168)) No reconstruction in SS (IO binding DO)

Bagš [**Čemeg**$_1$-in nom-ig]$_2$ **tüün-d**$_1$ —$_2$ ög-sön
teacher.NOM Č -GEN book-ACC 3SG-DAT give-PST
'(the) teacher gave **Čemeg**$_1$'s book (to) **her**$_1$.'

b. WLM applies below the subject, ACC assigned as dependent case

Bagš [$_{VP}$ [$_{DP}$THE [$_{NP}$**Čemeg**$_1$ -in nom] $\overline{-ig}$]$_2$ [$_{VP}$ **tüün**$_1$**-d** [$_{VP}$ [THE] ögsön]]]

Some additional exposition regarding this intermediate lading site and the timing of case valuation are needed. For concreteness, I propose this intermediate landing site is Spec VP, with VP in Mongolian regarded as a phase. [8] Thus the scrambled object must stop at the edge of VP before moving onto the next phase, in accordance with the Phase Impenetrability Condition (Chomsky 2000, 2001). I also assume that case assignment happens as soon as the relevant structural conditions, as specified in (192), are met. Therefore, upon the merger of

[8] Additional facts from differential object marking (DOM) is consistent with this idea. As mentioned in Chapter 2, Mongolian has robust DOM – not all objects have overt accusative case marking. Generally speaking, only objects that are specific are obligatorily marked as accusative.

i Mongolian DOM

a Indefinite non-specific DPs are not marked with ACC
Bat neg nom aw -san. 'Bat bought a book.'
B one book buy -PST

b DPs with ACC are obligatorily interpreted as specific
Bat neg nom**-ig** aw -san. 'Bat bought a certain book.'
B one book-ACC buy -PST

c Definite DPs, proper names are marked with ACC
Bi Bat**-ig**/ter mašin**-ig** khar -san. 'I saw Bat/that car.'
I Bat-ACC/that car-ACC see -PST

Many accounts for DOM cross-linguistically argue that the differential marking involves syntactic movement of the object (e.g., Torrego 1998; Woolford 1999; Bhatt and Anagnostopoulou 1996; Rodríguez-Mondoñedo 2007; Baker and Vinokurova 2010; N. Richards 2010; López 2012; Ormazabal and Romero 2013). Among these accounts, the movement is often related to the need for the object to raise out of VP to escape existential closure (Diesing 1992).

the external argument at Spec *v*P, dependent case calculation takes place and the scrambled object gets accusative case. Then, upon its merger T immediately searches its domain, finds the external argument, and evaluates its case feature as nominative. Finally, Mongolian exhibits several properties distinct from those of Sakha, which leads to the treatment of dative as a nonstructural case, in contrast to Baker and Vinokurova's dependent case account of dative. I address this point further in 4.6.

Second, Condition C reconstruction does not happen in intermediate scrambling (IS), when the underlying violation is induced by the IO binding the DO, as shown in (194a). This is so due to the same reason as the SS case in (193a): WLM is allowed at the position immediately below the subject, because accusative case can be assigned to the resulting DP via competition with the subject. The already case-valued DP then scrambles to the surface pre-subject position. In this derivation, no copy of the R-expression *Čemeg* is present within the domain of the original IO binder *tüünd* (3SG.DAT). Therefore, no Condition C violation is induced.

(194) a. (=(169)) No reconstruction in IS (IO binding DO)

[**Čemeg**$_1$-in nom-ig]$_2$ bagš **tüün-d**$_1$ ___$_2$ ög-sön
Č -GEN book-ACC teacher.NOM 3SG-DAT give-PST
'**Čemeg**$_1$'s book, (the) teacher gave (to) **her**$_1$.'

b. WLM applies, then the DP moves to the surface position

[$_{DP}$THE [$_{NP}$**Čemeg**$_1$-in nom]-ig]$_2$ bagš [$_{DP}$THE [$_{NP}$**Čemeg**$_1$-in nom]-ig]$_2$ **tüün**$_1$**-d** [$_{VP}$[THE] ögsön] **WLM, ACC assigned**

Third, regardless of whether the verb is transitive or ditransitive, if the underly-

ing Condition C violation is induced by the subject binding the DO, obligatory reconstruction is enforced. The relevant examples are repeated in (195a) and (195b). Unlike the previous examples, here the binder in the underlying order is actually the subject, not the IO. As shown in the derivation (195c), WLM is not possible in either (195a) or (195b), because case cannot be valued at the position where WLM is required to apply: In order to escape a Condition C violation, the NP restrictor containing the R-expression *Čemeg* must be merged above the subject pronoun, as indicated in (195c). However, WLM cannot apply at this targeted pre-subject location, because the resulting DP cannot receive case – there is no higher case competitor present in order for the DP to receive dependent accusative case, and there is no eligible nearby functional head to assign to it nominative case.

(195) a. =(170b) Obligatory reconstruction in IS (Subj binding DO), transitive

*[**Čemeg**$_1$ -in nom -ig]$_2$ **ter**$_1$ ___$_2$ ura-san
Č -GEN book -ACC 3SG.NOM tear-PST
Int. '**Čemeg**$_1$'s book, **She**$_1$ tore.'

b. =(171b) Obligatory reconstruction in IS (Subj binding DO), ditransitive

*[**Čemeg**$_1$ -in nom -ig]$_2$ **ter**$_1$ Bat -ad ___$_2$ ögsön
Č -GEN book -ACC 3SG.NOM B -DAT gave
Int. '**Čemeg**$_1$'s book, **she**$_1$ gave to Bat. '

c. WLM not possible at the targeted location

[THE <u>[**Čemeg**$_1$ **-in** nom]</u>]$_2$ **ter**$_1$ [$_{VP}$ [THE] ura -san]
Č -GEN book 3SG.NOM tear -PST
✗ WLM

Note that the local scrambling data alone does not distinguish the depen-

dent case theory from the functional head assignment theory, and WLM would work equally well under the latter framework. Under the functional head case assignment account, v is responsible for assigning ACC. Given the Condition on WLM (189) that the DP containing the R-expression needs to merge above the relevant pronoun binder, WLM can take place above IO-binders but not above subject binders, since the latter is merged higher than v. Nevertheless, I maintain that analyzing accusative case as dependent is not only strongly motivated by independent data from the language (a point which will be strengthened in Section 4.5 and 4.6), but is also reflected by the complex behavior of LDS in terms of Condition C reconstruction, which I turn to in the next section.

4.5 Condition C Effects in Long Distance Scrambling

4.5.1 Two Types of Clause-External Scrambling in Mongolian

In this section, I shift the focus to Condition C reconstruction effects in clause-external scrambling, which offers crucial support for the wholesale late merger (WLM) mechanism laid out in 4.4. I present the extension of the reconstruction puzzle to two types of clause-external scrambling, and demonstrate that both are in fact natural consequences of the WLM mechanism coupled with the case assignment mechanism motivated for Mongolian.

Subject cross-clausal scrambling

The first type of scrambling involves moving the embedded accusative subject into the main clause. In Mongolian, subjects of finite embedded clauses can be marked with accusative case. For example, in (196) the matrix verb *khelsen* ('said') takes a finite embedded clause headed by the complementizer *gej*. The embedded subject is in accusative case.

(196) Subject of finite embedded CP is marked with accusative

Zaya [$_{CP}$ bagš -iig sain khün gej] khel -sen
Z.NOM teacher -ACC good person C say -PST
'Zaya said that the teacher is a good person.'

Fong (2019) argues extensively that the accusative subject of the sort in (196) indeed originates from the embedded clause. She demonstrates that accusative subjects in Mongolian do not raise out of the embedded clause into the main clause, but are nevertheless higher than regular nominative embedded subjects. According to her account, the embedded subject *bagš* ('teacher') of (196) is located at the edge of the embedded CP, receiving accusative case from the matrix *v*, as schematized in (197).

(197) Analysis of (263) according to Fong (2019)

Zaya ...[$_{vP}$ *v* [$_{CP}$ <u>bagš -iig</u> [$_{TP}$ sain khün] gej] khel -sen]
Z ... *v* teacher-ACC good person C say -PST
ACC

What is important for the current discussion is that the accusative embedded subject can freely scramble into the matrix clause, exhibiting consistent A-

properties, which Fong suggests to be an instance of hyperraising. The Condition C facts, however, deviate from this generalization. In (198a), a matrix dative argument *tüünd* induces Condition C violation on the embedded accusative subject. In (198b), the embedded subject containing the R-expression *Bat* is scrambled to the matrix pre-subject position, and the sentence is much improved under the coindexed reading. In other words, when the binder in the original order is the (matrix) non-subject, Condition C reconstruction does not happen. Contrastively, when the binder in the original order is the (matrix) subject, as in (199), Condition C reconstruction is obligatory.

(198) No reconstruction in scrambling of ACC SUBJ (matrix DAT binder)

a. *Bi **tüün**$_1$**-d** [$_{CP}$[$_{DP}$ **Bat**$_1$ **-in** eej -iig] sain khün gej] khel -sen
1SG.NOM 3SG-DAT B -GEN mother -ACC good person C say -PST
Int. 'I said to **him**$_1$ that **Bat**$_1$'s mother is a good person.'

b. ?[**Bat**$_1$ **-in** eej -iig]$_2$ bi **tüün**$_1$ **-d** [$_{CP}$ ___$_2$ sain khün gej] khel -sen.

(199) Obligatory reconstruction in scrambling of ACC SUBJ (matrix SUBJ binder)

*[**Baatar**$_1$ -in zokhiol -iig]$_2$ **ter**$_1$ [$_{CP}$ ___$_2$ maš sain gej] khel -sen
B -GEN article -ACC 3SG.NOM very good C say -PST
Int. '**Baatar**$_1$'s article, **he**$_1$ said was very good.'

As an additional note on the word order preference, in (198b) it is in fact more natural if the matrix dative argument follows the embedded clause. As shown below in (200), the entire embedded clause shifts from its base position to be placed above the dative matrix argument. The word order alternation does not have any effect on binding – (200) is still ungrammatical due to Condition C violation, and scrambling the ACC subject in (201) still leads to improvement of the sentence. This is expected under the view that the movement of the finite

embedded CP undergoes full reconstruction, as suggested in Chapter 3. The preference of the surface word order in (200-201) is perhaps due to prosodic reasons and the fact that it is easier to parse the dative pronoun as a matrix argument when it immediately follows the complementizer *gej*. For exposition purpose, I abstract away from such word order preference in the subsequent discussion.

(200) *Bi [$_{CP}$ [$_{DP}$ **Bat**$_1$ **-in** eej -iig] sain khün gej] **tüün**$_1$ **-d** ___$_{CP}$
I B -GEN mother -ACC good person C he -DAT
khel -sen
say -PST
Int. 'I said to **him**$_1$ that **Bat**$_1$'s mother is a good person.'

(201) [**Bat**$_1$ **-in** eej -iig]$_2$ bi [$_{CP}$ ___$_2$ sain khün gej] **tüün**$_1$ **-d** ___$_{CP}$ khel -sen

Object cross-clausal scrambling

The second type of clause-external scrambling involves the more typical long distance scrambling (LDS). It refers to the case where the internal argument (mostly direct objects in the scope of the current section) of the finite embedded clause moves into the matrix clause. As discussed in detail in Chapter 3, LDS in Mongolian behaves like both A- and A'-movement, with some of its core properties repeated in (202). The mixed A/A'-properties of LDS in Mongolian contrast with the well-known cross-linguistic observation that clause-internal scrambling can be A-movement, but LDS is uniformly A' (e.g., Saito 1985, 1992 for Japanese; Mahajan 1990 for Hindi). To a certain extent, Mongolian LDS patterns more closely with Korean, in which LDS has been reported to have mixed A/A' properties (see an overview in Ko 2018 and references therein).

(202) Mongolian LDS: Movement Properties

Does LDS...		example #
reconstruct for anaphor binding?	✓→ A′	(142)
remedy WCO effects?	✓→ A	(147)
feed new anaphor binding relationship?	# → can be A	(148)

Given this background, Mongolian LDS partially exhibits reconstruction effects in terms of Condition C, which again seems to be sensitive to whether the binder in the base order is a subject or a dative argument. Condition C reconstruction happens in (203), but not in (204).

(203) Obligatory reconstruction in LDS of ACC OBJ (matrix SUBJ binder)

*[**Bat**$_1$-in esee-g]$_2$ **ter**$_1$ [$_{CP}$ bagš-iig —$_2$ unš-san gej] khel
B-GEN essay-ACC 3SG.NOM teacher-ACC read-PST C say
-sen
-PST
Int. '**Bat**$_1$'s essay, **he**$_1$ said that the teacher read.'

(204) No reconstruction in LDS of ACC OBJ (matrix DAT binder)

?[**Bat**$_1$**-in** esee-g]$_2$ Zaya **tüün**$_1$**-d** [$_{CP}$ bagš-iig —$_2$ unš-san gej]
B-GEN essay-ACC Z.NOM 3SG-DAT teacher-ACC read-PST C
khel-sen
say-PST
'**Bat**$_1$'s essay, Zaya said to **him**$_1$ that the teacher read.'

Taken together, the striking pattern that emerges is that the reconstruction effect in the two subtypes of clause-external scrambling behaves exactly the same way as that in clause-internal scrambling – when the binder in the underlying order is the subject, scrambling forces reconstruction; when the binder in the underlying order is not the subject but a dative argument, scrambling bleeds Condition C. This pattern has previously been noticed in other scrambling languages. Y.-S. Lee (1993), building on Frank et al. (1996), has observed the same

patterns in Korean local scrambling and LDS. According to her account, the subject binding generalization (176), repeated below, is responsible for the Korean facts that Condition C always reconstructs when the binder of the underlying order is the subject. In the next section, I show that given a wider range of empirical data, the subject binding generalization cannot be maintained for Mongolian.

(205) Subject binding generalization (Frank et al. 1996)
If X in subject position binds Y at some point in the derivation, then X binds Y at all levels of representation.

4.5.2 Dependent Case in WLM: Clause-external Scrambling

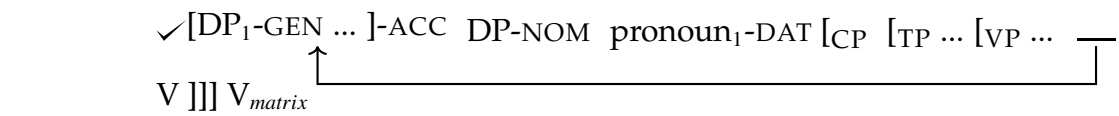
The Condition C reconstruction patterns in clause-external scrambling are summarized below.

(206) Condition C reconstruction in clause-external scrambling

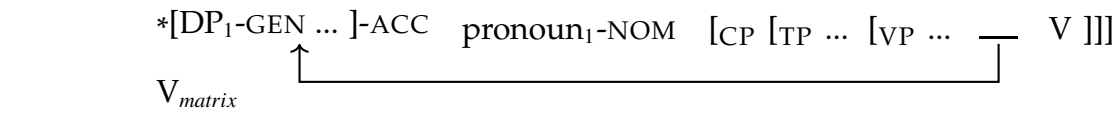
a. No reconstruction in scrambling of ACC SUBJ (matrix DAT binder)
✓[DP_1-GEN ...]-ACC DP-NOM pronoun$_1$-DAT [$_{CP}$ — [$_{C'}$ ... ...]] V_{matrix}

b. Obligatory reconstruction in scrambling of ACC SUBJ (matrix SUBJ binder)
*[DP_1-GEN ...]-ACC pronoun$_1$-NOM [$_{CP}$ — [$_{C'}$ ... ...]] V_{matrix}

c. No reconstruction in LDS of ACC OBJ (matrix DAT binder)



d. Obligatory reconstruction in LDS of ACC OBJ (matrix SUBJ binder)



The account for the LDS data sets the current proposal apart from the Agree-based case assignment model in WLM. In Takahashi and Hulsey (2009), case is assigned by a nearby functional head via Agree. This model cannot fully capture the reconstruction effects in (206), because it would require late merger to apply when the scrambled arguments are outside of the domain of their case assigners. As we can see in (207) (= (204)), an embedded object undergoing LDS to the matrix pre-subject position does not undergo reconstruction for Condition C. As schematized in (208), in order to escape a Condition C violation, the NP restrictor *Bat-in esee* ('Bat's essay') must be introduced somewhere above the matrix pronoun binder *tüün-d*, since the latter cannot bind any copy of the R-expression *Bat*. However, this hypothetically late merged NP cannot get case, because the resulting DP is outside of the domain of the embedded *v*, which is the original assigner of the accusative case.

(207) ?[**Bat**$_1$**-in** esee -g]$_2$ Zaya **tüün**$_1$**-d** [$_{CP}$ bagš-iig —$_2$ unš-san gej] khel-sen
Bat-GEN essay -ACC Z.NOM he-DAT teacher-ACC read-PST C say-PST
'**Bat**$_1$'s essay, Zaya said to **him**$_1$ that the teacher read.'

(208) ?[$\overbrace{\textbf{Bat}_1\textbf{-in}\ esee - g]_2\ Zaya}^{late\ merge\ domain}$ **tüün**$_1$**-d** [bagš-iig [$_{vP}$***v*** [t_2] unš -san] gej] khelsen

↑ requires ACC case

↑ matrix binder can't bind any lower copy of ***Bat***

↑ source of ACC given Agree-based account

Alternatively, consider the possibility of the scrambled DP getting ACC case not being in the embedded clause, but at some point in the matrix clause. This turns out not to be feasible under the Agree-based account. Recall that under Fong's (2019) account, the embedded subject of (207), *bagš-iig* ('teacher'-ACC), is located at the edge of the embedded CP, receiving ACC case from the matrix *v*. Since the matrix *v* has already assigned case to the embedded subject, without additional support for apparatus such as multiple Agree (Hiraiwa 2001), there is no other functional head available that can license accusative case on the scrambled object phrase.

(209) ACC case assignment on the embedded subject by matrix *v* (based on Fong 2019)

...[$_{vP}$ ***v*** [$_{CP}$ bagš -***iig*** [$_{C'}$ C [$_{TP}$ ... ...]]]]

(ACC)

In fact, further data suggest that the source of accusative case on the embedded subject needs to be reconsidered. This is because embedded subjects can be marked with accusative even when there is no functional head in the matrix clause that can assign to it accusative case. First, as shown in (210), the object of the predicate *uurlax* ('to become angry') is required to be in DAT, and cannot be in ACC. This suggests that *uurlax* does not assign ACC [9]. However, in (211),

[9]Using the predicate *uurlax*, Aravind (2021) has suggested a similar point about ACC subjects

when *uurlax* serves as the matrix predicate taking a finite clausal complement, the embedded subject can be in accusative case.

(210) *uurlax* unable to assign ACC

Bat Zaya-d / *Zaya-g uurla -san
B.NOM Z-DAT / Z-ACC become.angry -PST
'Bat became angry at Zaya.'

(211) Complement clause of *uurlax* allows ACC subject

Emč [$_{CP}$ Bat-**ig** em-ee uu-gaagüi gej]
Doctor.NOM B-ACC medicine-REFL.POSS drink-PST.NEG C
uurla-san
become.angry-PST
'The doctor became angry that Bat did not drink his medicine.'

Second, as shown in (212), the non-finite embedded clause receives dative case from the matrix predicate 'believe'. Neither the matrix nor the embedded *v* can assign accusative case in this example. Nevertheless, the embedded subject is marked with accusative case. On the dependent case account, this fact follows straightforwardly: the embedded subject, being at the edge of the non-finite clause, receives accusative case via competition with the matrix subject.

(212) Embedded SUBJ has ACC when embedded clause gets DAT from matrix verb

Bi [Čang -**iig** amid bai -gaa gedeg]-**t** itgeltei
1SG.NOM [Č -ACC alive COP -NPST.PTCP C]-DAT believe
baina
COP.NPST
'I believe that Chang is alive.'

In addition, accusative subjects are not unique to complement clauses. In Mongolian, subjects of many types of adjunct clauses are marked with ac-

in Mongolian non-finite clauses.

cusative case. Despite the absence of a close-by functional head, accusative case is available on these subjects. In (213), the matrix clause is a transitive construction with an accusative object *khuug* ('son-ACC'). Nevertheless, the subject of the adjunct clause *namaig* ('1SG.ACC') is marked with accusative case. In (214), while the matrix clause is an existential construction, the embedded subject is marked with accusative case. These examples are problematic for an Agree-based account where accusative is assigned by (transitive) v. However, they are expected under a dependent case treatment of accusative case. We could posit that the adjunct clause in (213) is first introduced below the matrix subject just as in (214). The embedded subject, being at the edge of the adjunct clause, is visible in the same phase as the matrix subject. Accusative case is assigned to the embedded subject by competition with the matrix subject. Then the adjunct clause is preposed to its surface position.

(213) ACC subject of *until*-clauses (Tserenpil and Kullmann 2015:167)

[**Namaig**	khičeel-ee	duus-tal]	ter	minii	khuu-g
1SG.ACC	class-REFL.POSS	finish-until	3SG.NOM	1SG.GEN	son-ACC
khar-dag					
watch-HABIT					

'S/he looks after my son [until I have finished my lessons].'

(214) ACC subject of *when/while*-clauses

Ta	[bagš-**iig**	irekh -ed]	angi	-d	-aa	baisan
2SG.NOM	teacher-ACC	come -DAT	classroom	-DAT	-REFL.POSS	COP.PST
uu?						
Q						

'Were you in your classroom when the teacher came?'

Once we adopt the view that accusative case is assigned configurationally in this language, the Condition C facts naturally follow under WLM. In particular, I argue that (206a) and (206c) are possible because of a dependent accusative case position inside the matrix clause, allowing WLM there. This point is illus-

trated with the LDS case (207), with the data repeated in (215). [10]

(215) (=(207))

?[**Bat**$_1$**-in** esee-g]$_2$ Zaya **tüün**$_1$ **-d** [$_{CP}$ bagš -iig ___$_2$ unš-san gej] khel-sen
Bat-GEN essay-ACC Z.NOM he -DAT teacher -ACC read-PST C say-PST
'**Bat**$_1$'s essay, Zaya said to **him**$_1$ that the teacher read.'

A stepwise derivation is depicted in (216). First, a covert determiner is base-generated inside the embedded VP without its restrictor. Second, the determiner undergoes successive cyclic movement out of the embedded clause and into the matrix clause. Importantly, WLM takes place in the matrix clause as in (216c). I take this position to be the matrix VP-adjoined position for concreteness. At this location, the scrambled element is not c-commanded by the matrix dative pronominal argument, but it is locally c-commanded by the subject which has not yet been valued for case. After the merger of the NP restrictor [$_{NP}$ Bat's essay], accusative case is assigned to it as a dependent case (recall also that VP is assumed to be a phase, the scrambled object located at the edge of VP is therefore visible to the matrix subject). After T merges, it assigns nominative case to the matrix subject, as shown in (216d). Then, the derivation proceeds to derive the ultimate surface order, with trace conversion applying as the last step. Since there is no copy of the R-expression *Bat* present within the domain of the matrix dative pronominal argument, a Condition C violation is circum-

[10]Some additional clarifications of the precise case competition domain in sentences like (215) is needed. It is suggested that the embedded ACC subject bagš 'teacher' raises to the edge of the embedded CP. At this point, the embedded subject is visible at the matrix VP phase, but not the matrix CP phase. I follow Baker and Vinokurova and suggest that the entire embedded CP shifts out of VP, which makes the embedded subject visible in the same phase as the matrix subject. The embedded subject therefore receives dependent ACC case via competition with the matrix subject. See Baker and Vinokurova for additional discussion. Since movement of full finite CPs does not affect the pattern of Condition C (see, e.g., the discussion regarding (200-201)), I abstract away from this point in the following discussion.

vented.

(216) a. covert determiner [THE] is base-generated without the NP restrictor
[$_{VP}$ [THE] read-PST]

b. [THE] undergoes successive cyclic movement
[$_{vP}$ SUBJ [$_{VP}$ [THE] [$_{VP}$ **3SG-DAT** [$_{VP}$ [$_{CP}$[THE] [$_{TP}$ [$_{VP}$ [THE] read-PST] T] C] say-PST]]] v]

c. WLM at the matrix VP-adjoined position, dependent case assigned
[$_{vP}$ SUBJ [$_{VP}$ [THE [$_{NP}$Bat's essay]-ACC] [$_{VP}$ **3SG-DAT** [$_{VP}$ [$_{CP}$[THE] [$_{TP}$ [$_{VP}$ [THE] read-PST] T] C] say-PST]]] v]

d. T assigns NOM to the SUBJ, SUBJ moves to Spec TP[11]
[$_{TP}$ SUBJ [T [$_{vP}$ SUBJ [$_{VP}$ [THE [$_{NP}$Bat's essay]-ACC] [$_{VP}$ **3SG-DAT** [$_{VP}$ [$_{CP}$[THE] [$_{TP}$ [$_{VP}$ [THE] read-PST] T] C] say-PST]]]] v]]
(move: SUBJ → Spec TP; NOM: T ↔ SUBJ)

e. [$_{DP}$Bat's essay] scrambles to the surface position, pronunciation of the head of the chain
[[THE [$_{NP}$Bat's essay]-ACC] [$_{TP}$ SUBJ [T [$_{vP}$ ~~SUBJ~~ [$_{VP}$ ~~[THE [$_{NP}$Bat's essay]-ACC]~~ [$_{VP}$ **3SG-DAT** [$_{VP}$ [$_{CP}$[THE] [$_{TP}$ [$_{VP}$ [THE] read-PST] T] C] say-PST]]]] v]]]

On the current approach, successful late merger of the restrictor in (215-216) allows for the coindexing between the R-expression and the pronoun in the matrix dative argument position without violating Condition C. In contrast, if the pronoun binder in the underlying order is the matrix subject (i.e., (203), example

[11] I assume a right headed structure for Mongolian syntax. The matrix TP appears left-headed in this linear representation for exposition purpose.

repeated below), there is no way that the case requirement of the late-merged NP can be satisfied. As schematized in (218), the latest point at which the scrambled element can get case is in the matrix VP-adjoined position. However, at this point the R-expression is still within the c-command domain of the matrix subject. Thus, the sentences with matrix subject pronoun binders are ruled out due to a Condition C violation.

(217) (=(203)) Obligatory reconstruction in LDS of ACC OBJ (matrix SUBJ binder)

*[**Bat**$_1$-in esee-g]$_2$ **ter**$_1$ [$_{CP}$ bagš-iig —$_2$ unš-san gej] khel
B-GEN essay-ACC 3SG.NOM teacher-ACC read-PST C say-sen
-PST
Int. '**Bat**$_1$'s essay, **he**$_1$ said that the teacher read.'

(218) Late merge at the matrix VP-adjoined position leads to Condition C violation

*[$_{vP}$ **he**$_1$ [$_{VP}$ [THE [$_{NP}$**Bat's**$_1$ essay]-ACC] [$_{VP}$ [$_{CP}$[THE] [$_{TP}$ [$_{VP}$ [THE] read-PST] T] C] say-PST] V]]

At this point it is fair to ask whether the scrambled DP can indeed appear overtly in this intermediate landing site within the matrix clause, showing that such position is available. This possibility is represented in (219). The word orders pose significant parsing difficulty and are more degraded compared to the examples where the phrase scrambles all the way to the left edge of the matrix clause. [12] Nevertheless, the coindexation between the R-expression *Bat* and the

[12]It is observed in Hindi that long-distance movements that target below the subject is much more degraded than those that target above the subject (Bhatt 2003, Dayal 2017). While research on the real reason behind this contrast and its cross-linguistic variations is not conclusive, see Keine (2018) for possible explanations for some of the derivations and an overview of the phenomena in Hindi.

matrix dative pronoun *tüünd* can be obtained. [13]

(219) Scrambled DP surfacing at the matrix intermediate landing site

a. ??Bi [Bat$_1$ -in eej -iig]$_2$ tüün$_1$ -d [__$_2$ sain khün gej]
1SG.NOM B -GEN mother -ACC 3SG -DAT good person C
khel-sen
say-PST
'I, Bat's mother, said to him that is a good person. (= I said to him that Bat's mother is a good person.) '

b. ??Zaya [Baatar$_1$ -in esee -g]$_2$ tüün$_1$ -d [bagš -iig -aa __$_2$
Z.NOM B -GEN essay -ACC 3SG -DAT teacher -ACC -REFL.POSS
unš -san gej] khel -sen
read -PST C say -PST
'Zaya, Bat's essay, said to him that her teacher read. (= Zaya said to him that her teacher read Bat's essay.)'

At first blush, the pattern in (206) also seems to suggest that the subject binding generalization, repeated in (220), is on the right track. All the examples where the original pronoun binder is the subject exhibit obligatory Condition C reconstruction, and all the ones where the original pronoun binder is a da-

[13]The existence of this intermediate landing site receives further support from Korean LDS (Y.-S. Lee 1993). As shown in i, the underlying Condition C violation in a can be circumvented by scrambling the embedded object *Minswuuy pwumonim* ('Minswu's parents') to the matrix intermediate landing site argued for in Mongolian. As reported by Lee, b is grammatical, and the coindexation between *Minswu* and *kueykey* obtains successfully.

i Matrix intermediate landing site in Korean (Y.-S. Lee 1993: (97), I-NOM on matrix subject mine.)

a *Na-nun/Nay-ka **ku**$_1$ -eykey [nay-ka **Minswu**$_1$-uy pwumonim -ul cal tolpo
I-TOP/I-NOM he -DAT I-NOM Minswu-GEN parents -ACC well take.care
-keyss -ta -ko] yaksokhayssta.
-FUT -DECL -COMP promised
'I promised **him** that I would take good care of **Minswu's** parents.'

b Na-nun/Nay-ka [**Minswu**$_1$-uy pwumonim]$_2$ -ul **ku**$_1$ -eykey [nay-ka t$_2$ cal
I-TOP/I-NOM Minswu-GEN parents -ACC he -DAT I-NOM well
tolpo -keyss -ta -ko] yaksokhayssta.
take.care -FUT -DECL -COMP promised
'I, **Minswu's** parents$_i$, promised **him** that I would take good care of t$_i$.'

tive argument (non-subject) do not show obligatory reconstruction effect. These facts would follow if binding by subjects at the base position cannot be overridden by further derivations, hence there will always be Condition C violation at least at the base structure.

(220) Subject binding generalization (Frank et al. 1996)

If X in subject position binds Y at some point in the derivation, then X binds Y at all levels of representation.

I suggest that this generalization needs to be reconsidered. In fact, regardless of whether a subject binder is involved, as long as the case requirement of the scrambled DP can be satisfied, there will be a Condition C bleeding effect. I demonstrate this point using (221), which violates Condition C because the pronominal embedded subject binds the R-expression in the embedded object.

(221) Embedded subject inducing Cond C violation on embedded object

*Emč [$_{CP}$**tüün**$_1$-iig [**Bat**$_1$-in em-iig] uu-gaagüi gej]
doctor.NOM 3SG-ACC Bat-GEN medicine-ACC drink-PST.NEG C
uurla-san
become.angry-PST
Int. 'The doctor became angry that he$_1$ did not drink Bat$_1$'s medicine. '

As shown in (222), the embedded object can undergo LDS into the matrix clause, and the sentence becomes acceptable – no Condition C reconstruction takes place. This fact is unexpected under Frank et al.'s subject binding analysis, since the binder in the underlying order is indeed a subject – it is the subject of the embedded clause. The subject binding generalization would therefore predict that Condition C reconstruction must happen and that (222) would be ungrammatical, contrary to fact.

(222) LDS can bleed Cond C with subject binder

[**Bat**$_1$-in em-iig]$_2$ emč [$_{CP}$**tüün**$_1$-iig $\_\_{}_2$ uu-gaagüi gej]
Bat-GEN medicine-ACC doctor.NOM 3SG-ACC drink-PST.NEG C
uurla-san
become.angry-PST
'Bat$_1$'s medicine, the doctor became angry that he$_1$ did not drink. '

The possibility represented by (222) is, by contrast, a natural result under the current approach. Due to the presence of a higher case competitor (i.e., the matrix subject), WLM of the NP restrictor of the scrambled element can be carried out below the matrix subject, since accusative case can be assigned as a dependent case to the late merged NP. In other words, even scrambling involving a subject binder can bleed Condition C, as long as the case requirement of the scrambled DP can be satisfied at a later point.

(223) *Emc* [THE **[Bat$_1$ -in** em *-iig*]] [$_{CP}$ **tüün$_1$ -iig** [THE] uu -gaagüi gej]
uurlasan
doctor Bat -GEN meds -ACC 3SG -ACC drink-PST.NEG C
became.angry

4.5.3 Section Summary

Based on the discussion so far, I conclude that the subject binding generalization cannot account for the reconstruction puzzle in Mongolian. Instead, the relevant facts are tied to whether WLM can be carried out successfully in each scenario, which is in turn related to the case assignment mechanism in this language. It then follows that if case assignment mechanisms vary across languages, the

Condition C reconstruction effects are also expected to differ. In the next section, I present a series of language-specific properties, which further motivate a hybrid case assignment model in Mongolian where accusative is assigned as dependent case and nominative is assigned by the functional head T^0 via Agree. The goal is to demonstrate that in order to account for the full range of facts in clause-internal as well as clause-external scrambling, introducing such model into late merger is both necessary and independently motivated.

4.6 Further Remarks on the Hybrid Case Assignment Model

In this section, I provide further data and discussion in support of adopting the hybrid case assignment model in Mongolian. At this point it is worth emphasizing that the purpose of this discussion is not to show that one case assignment mechanism is superior to another in controlling WLM, but instead to demonstrate that case is indeed relevant for WLM, precisely as Takahashi (2006) and Takahashi and Hulsey (2009) originally proposed. To this end, I deal with the following tasks in this section. First, I present additional evidence for analyzing accusative case as dependent by probing further into case alternations on subjects of different embedded clauses. Second, maintaining the current version of WLM analysis also requires nominative case to be assigned by the functional head T, as opposed to being assigned as a default/unmarked case. The unavailability of nominative case in various tenseless domains supports this treatment. While nominative case on Mongolian full DPs lacks overt morphology, I show that the zero-suffix stems in some tenseless domains like PPs are in fact distinct from DPs in canonical nominative case positions, diagnosed through allomorphy and morpheme ordering. Finally, I provide relevant evidence for treating

dative as a nonstructural case in Mongolian.

4.6.1 Accusative as Dependent Case: Further Data

Recall that in Section 4.5.2, I showed that as long as there is an accessible matrix case competitor, accusative case is allowed on the embedded subject, regardless of the presence or absence of an eligible *v* head. In addition, if a matrix case competitor is absent, accusative is not allowed on the embedded subject. As shown in (224), when the embedded clause is the complement of an impersonal predicate, the embedded subject cannot be in accusative, but can be in nominative or genitive case.

(224) Embedded SUBJ cannot be in ACC without a matrix case competitor [14]

[*Bat-ig/Bat/Bat-in	ger-iin	daalgawr	-aa	khiikh
B-ACC/B.NOM/B-GEN	home-GEN	assignment	-REFL.POSS	do.FUT

[14] As exemplified in this sentence, 3SG.POSS *ni* in Mongolian can be used to nominalize clauses of various size, with no possessive interpretation. For example,

i Bat Ulaanbaatar -t yaw -na. 'Bat will travel to Ulaanbaatar. '
B.NOM U -DAT travel -NPST

ii Bat / Bat-in Ulaanbaatar -t yawakh ni 'Bat's traveling to Ulaanbaatar. '
B.NOM / B-GEN U -DAT travel.INF 3SG.POSS

Tserenpil and Kullmann (2015) claim that the subject of *ni*-nominalized clauses should in principle be in genitive; Janhunen (2012) also provides similar discussion. However, in daily use people often go against the rules (for a study on the preference of different forms of subjects, see Mizuno 1995), and nominative subjects are common especially in nominalized embedded clauses of the expression "it is important that...". For example,

iii Kharin [ene khünd tsag üyeiig **mongolchuud bid** khüchee negtgen,
but this hard time stage.ACC Mongolian.PL 1PL.NOM power join
khamtyn khücheer davan tuulakh ni] čukhal yum.
together.GEN power.INST overcome 3SG.POSS important PART
'But it is important that we Mongolians unite and overcome this difficult time together.'

[source: https://news.mn/r/2393536/]

This contrasts with the subjects of relative clauses, which can be in genitive only. Relative clauses in Mongolian are not only nonfinite, but also appear to be much more restricted in terms of subject case requirement compared to nominalized clauses.

ni] čukhal
3SG.POSS important
'It is important that Bat will do his homework.'

Further, accusative case on the embedded subject is only available if the matrix subject, its case competitor, is in nominative case. In (225a), the matrix predicate *uurlasan* does not assign accusative case, but the embedded subject *John* can be in accusative case. Under the dependent case account, this is because the embedded subject *John*, located at the edge of the embedded clause, is within the same case competition domain as the matrix subject *Saruul*. Accusative case is therefore assigned to the lower DP according to (192a). On the other hand, if there is no eligible case competitor in the main clause domain, the embedded subject cannot be in accusative case. This is demonstrated with (225b). The matrix clause only has one dative argument present, and accusative becomes unavailable on the embedded subject (see Podobryaev 2013 for a similar situation in Mishar Tatar). The slight awkwardness comes from the fact that the expression "it seemed to someone that..." is not a canonical expression in Mongolian. Instead, speakers prefer simple active constructions such as "someone thinks that...". Nevertheless, the sentence is grammatically acceptable when the embedded subject is in nominative.

(225) a. Dependent ACC is possible when matrix argument is NOM

Saruul [John -ig šine mašin awsan gej] uurla -san
S.NOM J -ACC new car buy.PST.PTCP C become.anrgy -PST
'Saruul became angry that John bought a new car.'

b. Dependent ACC is not possible when matrix argument is DAT

?Saruul -d [John / *John-ig šine mašin awsan gej]
S -DAT J.NOM / J-ACC new car buy.PST.PTCP C
sanagdaj baisan
seem.CVB COP.PST
'It seemed to Saruul that John bought a new car.'

The contrast in terms of the case availability on the embedded subject can be straightforwardly explained if ACC is assigned as a dependent case. The assignment of (inherent) dative case to *Saruul* in (225b) makes it ineligible as a case competitor for the embedded subject.

4.6.2 Nominative is Assigned by Finite T

Given that the primary goal of the current study is to argue for a case-based WLM account in Mongolian, the assignment mechanism of cases other than ACC also needs to be clarified. According to the dependent case theory (specifically, Marantz's 1991 case realization disjunctive hierarchy), unmarked case is calculated after lexically governed case and dependent case. Unmarked case can in principle be assigned to any DPs, although it may be sensitive to the syntactic environment. For example, nominative may be the unmarked case inside a clause, whereas genitive may be assigned to any noun phrases inside an NP or DP. In contrast, the current system adopts the view that nominative is not an unmarked case in Mongolian, but needs to be assigned by the functional head T^0 in accordance with (192b).

According to Baker and Vinokurova (2010), the existence of the NOM case assignment rule in (192b) in Sakha is diagnosed by case alternations associated with agreement and differences in syntactic environments. Unlike Sakha, Mongolian does not have overt ϕ-agreement, but it does exhibit case alternations sensitive to changes in syntactic environments. Applying two diagnostics from Baker and Vinokurova leads to results in favor of functional head assignment as opposed to an unmarked case treatment of nominative case. First, if nominative

is a default or unmarked case, then it is expected to be freely available inside not only VPs and clauses, but also inside other phases like PPs. Except for dedicated nominative forms for pronouns, nominative case in Mongolian otherwise does not have overt morphological exponent. Example (226) shows the subject of a finite clause is not overtly marked.

(226) Special NOM form on pronouns, but NOM is not overtly marked on full DPs

Bi/Bat alim id-sen
1SG.NOM/Bat.NOM apple eat-PST
'I/Bat ate (an) apple/apples.'

In terms of PPs, the majority of postpositions in Mongolian require their complements to be in genitive case (227).

(227) Complements of postpositions with genitive case

a. bašin -giin / *bašin-Ø urd
house -GEN / house-Ø in.front.of
'in front of the house'

b. bašin -giin / *bašin-Ø tukhai
house -GEN / house-Ø about
'about the house'

Nevertheless, there are a few postpositions such as *deer* ('on') and *door* ('under') that appear to select for a complement with zero suffix. At first blush, (228) might seem to suggest that nominative as an unmarked case is freely available in PPs headed by postpositions that do not require their complement to be in genitive case.

(228) Complement of *deer* ('on') with zero suffix

telewiz-Ø / *telewiz -in deer
television-Ø / television -GEN on
'on the television'

Upon closer investigation, however, the internal structure of (228) turns out to be different from that of (227), and *deer* ('on') in (228) patterns morphosyntactically with case suffixes rather than with canonical postpositions exemplified in (227). The noun *telewiz* ('television') in (228) is therefore not a DP bearing nominative case, but a caseless stem. The crucial evidence comes from the idiosyncratic stem allomorphy which is triggered by certain case endings as well as the zero-suffix selecting postpositions like *deer* ('on'). Mongolian nominal declensions are generally predictable and most alternations are phonologically conditioned. But for a small set of singular nouns, a stem-final *n* always appears before three case suffixes only – genitive, dative, and ablative. This unpredictable, lexically-conditioned stem alternation is traditionally called hidden-n or fleeting-n (for a synchronic description and a diachronic account see Thompson 2008). *Širee* ('table') is a noun with hidden-n. As shown in (229), when *širee* ('table') is in a canonical nominative position, no hidden-n is allowed. In contrast, genitive, dative, and ablative case suffixes obligatorily triggers the hidden-n on the same stem. Accusative, on the other hand, does not trigger stem alternation.

(229) a. No hidden-n at canonical NOM position

Ene širee / *širee-**n** khyamd
this table / table-hidden.n cheap
'This table is cheap.'

b. GEN, DAT, ABL trigger hidden-n

*širee / širee **-n** -ii/-d/-ees
table / table -hidden.n -GEN/-DAT/-ABL

c. ACC does not trigger hidden-n

Bi ter širee -g / *širee -**n** -g öšiglö -sön
1SG.NOM that table -ACC / table -hidden.n -ACC kick -PST
'I kicked that table.'

Similar to genitive, dative, and ablative case ending in (229b), the zero-suffix selecting postposition *deer* also triggers the hidden-n on the same stem, unlike nominative and accusative. This can be contrasted with regular postpositions in (231), which require their complements to be in genitive case. This genitive case ending in turn triggers hidden-n on the stem.

(230) *Deer* does not require GEN complement, but triggers hidden-n on stem

*širee / širee **-n** deer
table / table -hidden.n on
'on the table'

(231) Regular postpositions require GEN complements

širee -n -ii urd/tukhai
table -hidden.n -GEN in.front.of/about
'in front of/about the table'

A further difference between regular postpositions and *deer* ('on') is that the latter requires its pronominal complement to be in a special suppletive form that is also triggered by a number of oblique case suffixes. For instance, the special oblique stem for first person singular pronoun is *nad-*, shown in (232). Note that the stem *nad-* to which the case suffixes are attached is a bound morpheme that cannot stand alone.

(232) Oblique stem *nad* for first person singular pronoun

1SG.NOM	bi
1SG-DAT	nad -ad
1SG-ABL	nad -aas
1SG-INST	nad -aar
1SG-COMIT	nad -tai

Surprisingly, *deer* ('on') also triggers the *nad-* stem on first person singular pronouns. The canonical nominative form of the pronoun, by contrast, is ungrammatical as a complement of *deer* ('on'). This can be contrasted again with regular postpositions, which simply selects for the genitive form of the pronoun.

(233) *Deer* selects *nad-* pronoun stem; Full NOM pronoun ungrammatical

nad / *bi deer
1SG.OBL / 1SG.NOM on
'on me'

(234) Regular postpositions select for genitive pronoun

minii urd/tukhai
1SG.GEN in.front.of/about
'in front of/about me'

More strikingly, *deer* also differs from regular postpositions, but aligns with regular case suffixes, in terms of morpheme ordering. Regular postpositions like *tukhai* ('about') follow personal possessive enclitic such as *mini* in (235). However, as shown in (236), *deer* precedes the personal possessive enclitic, just like regular case suffixes such as dative.

(235) a. Basic possessive phrase using 1SG.POSS enclitic

aaw mini
father 1S.POSS
'my father'

b. A regular postposition follows personal possessive enclitic

aaw -in **mini** **tukhai**
father -GEN 1S.POSS about
'about my father'

(236) a. Basic possessive phrase using 1SG.POSS enclitic

širee mini
table 1S.POSS
'my table'

b. *deer* precedes personal possessive enclitic

širee -n **deer mini**
table -hidden.n on 1S.POSS
'on my table'

c. A case suffix precedes personal possessive enclitic

širee -n **-d** **mini**
table -hidden.n -DAT 1S.POSS
'at my table'

The data above suggest that if *urd* ('in front of') and *tukhai* ('about') are genuine postpositions, then members of the class of *deer* ('on') are best seen as case suffixes rather than postpositions. Since *deer* is structurally regarded as a case suffix, the "zero suffix" complement it selects for in fact does not bear the default nominative case, but instead is a caseless stem, as confirmed by the pronoun alternation in (233). If this is on the right track, then the apparent free availability of nominative case inside PPs is only illusory. The fact that nominative case is absent in genuine PPs would be difficult to explain if nominative were a default or unmarked case.

Second, nominative case is not available in nonfinite relative clauses that lack a tense head. In most cases, the subject of a relative clause must be in genitive case, as shown in (273a). This is unexpected if nominative is an unmarked case that is freely available independent of the specific clausal structure, but it is

consistent with the view that nominative is assigned by T^0.

(237) The RC subject is in genitive case

[$_{RC}$ Minii / *Bi id-sen] alim
1SG.GEN / 1SG.NOM eat-PST.PTCP apple
'The apple which I ate'

Nevertheless, it has been reported that a bare nominal is possible with inanimate, non-pronominal subjects, especially in relative clauses with existential content (Janhunen 2012).

(238) RC subject without GEN allowed in clauses with an existential content [15]

Ter bol [$_{RC}$ **manai mašin** zogsoj bai-san] gazar mön
that TOP 1PL.GEN car.NOM stand.CVB COP-PST.PTCP] place COP
'That is the place where our car was (standing).'

A possible treatment of the non-GEN subject in this case is that since it is the theme and the sole argument of the relative clause in (238), it is (pseudo-)incorporated into the verb. It has been argued that objects can be pseudo-incorporated in Mongolian (Driemel 2020, Guntsetseg 2016). Since the subject of the existential/unaccusative clause is not merged as an external argument, but is introduced within VP and receives the theme role, it is possible that it has undergone pseudo-incorporation into the verb and can remain caseless (Baker 1988, for example, reports similar instances of incorporation in the Iroquoian languages and in Southern Tiwa). The matter of whether and under what condition the RC subject can appear without GEN varies among speakers, and its exact nature as well as the dialectical variation associated with it remains to be further investigated. For the purpose of the current work, these data seem

[15] Example from Janhunen (2012):274, spelling and gloss are modified in accordance with the convention adopted by the current work.

sufficient for us to maintain the functional head case assignment rule for the treatment of nominative case.

4.6.3 Dative as Nonstructural Case

As alluded to earlier, dative has been implicitly treated as a nonstructural case in Mongolian in all the derivations above. Consequently, the dative IO does not interfere with dependent case calculation. It is worth noting that for the purpose of this study, it is not important how the dative on the IO argument (which I distinguish from true lexical dative case uniquely assigned by certain predicates) is assigned, as long as the argument in question does not interfere with the calculation of the rest of the cases. Conceptually it is, for example, possible to follow Baker and Vinokurova (2010) and treat dative on IOs as a structural case assigned configurationally to the higher of the two arguments within a VP phase. Adopting one way over another does not have immediate consequence on reconstruction and scrambling. Scrambling the IO argument over a subject binder, as expected, always forces reconstruction (239). If dative is a structural case assigned configurationally within VP, then it is not possible for the IO argument to scramble out of VP while still get case in (239). If dative is a nonstructural case, or to be more specific, an inherent case associated with θ-role assignment, then it must be licensed at the base position, requiring a full copy of DP to be introduced in-situ. WLM is not possible on either approach.

(239) Scrambling IO forces Condition C reconstruction (SUBJ binding IO)

*[**Čemeg**$_1$-in eej -id]$_2$ **ter**$_1$ __$_2$ nom ögsön
Č -GEN mother -DAT 3SG.NOM book gave
Int. '(to) **Čemeg**$_1$'s mother, **she**$_1$ gave (a) book/books. '

Nevertheless, empirical data from Mongolian favor a nonstructural view of dative case. Drawing on Chomsky (1981, 1986b) and based on diagnostics such as case preservation under A-movement, dative case has been standardly treated as nonstructural in various languages, either as inherent case associated with particular θ-roles like goals, or as lexical case licensed by certain lexical heads (see e.g., Woolford 2006, Pesetsky and Torrego 2011 for an overview). Meanwhile, it has been noted that in some languages dative shows properties of a structural case (e.g., Harley 1995, Folli and Harley 2007). Along this line, dative case has been treated as being assigned configurationally, either to the intermediate of three DP arguments (Podobryaev 2013, Yuan 2019), or to the higher of the two DP arguments within VP (Baker and Vinokurova 2010, Baker 2015).

The specifics of dative case alternation in various constructions is beyond the scope of this chapter. Thus I will offer two relevant observations and leave the remaining details to future research. In the ditransitive construction with the verb "give" which we have seen above, only the accusative DO can become the subject of the corresponding passive construction, while the dative IO may not.

(240) a. ACC DO can undergo passivization

Ter nom bagš -aar Baatar -d ögö -gd -sön
that book.NOM teacher -INST B -DAT give -PASS -PST
'That book was given to Baatar by the teacher.'

b. DAT IO cannot undergo passivization

*Baatar bagš -aar ter nom -ii ögö -gd -sön
B.NOM teacher -INST that book -ACC give -PASS -PST
Int. 'Baatar was given that book by the teacher.'

Aside from case alternation in ditransitives, dative has previously been reported to behave like a dependent case in causative constructions of some languages. In Japanese, for example, the *make*-type causative with an intransitive root verb requires the causee to be in accusative. However, when the root verb is transitive, the causee cannot be in accusative, but instead must be in dative. Similar to Japanese, in Mongolian causative constructions the causee is usually in accusative when the root verb is intransitive.

(241) The causee is marked with ACC when the root verb is intransitive

Bagš oyutan -ig yaw -uul -san
teacher.NOM student -ACC leave -CAUS -PST
'The teacher had the student leave.'

However, the causativized transitive clause in Mongolian departs from that in Japanese in several ways. First, when the root verb is transitive the causee predominantly appears in instrumental case, not dative.

(242) The causee is marked with INST when the root verb is transitive

Bagš oyutn -aar esee bič -üül -sen
teacher.NOM student -INST essay write -CAUS -PST
'The teacher made the student write (an) essay/essays.'

The causee can also be marked with dative case, although this is not as common as instrumental case. When the causee is in dative, its interpretation is to some extent similar to the "let" reading of the Japanese causative construction with the morpheme *-sase-* (Y. Kitagawa 1986, Terada 1990, Harley 1995, Miyagawa 2017). The following minimal pair in Mongolian is presented in Svantesson (2003), with modified gloss.

(243) Contrast between a DAT causee and an INST causee

a. Bi Bat -ad alim id -üül -sen
I.NOM Bat -DAT apple eat -CAUS -PST
'I let Bat eat an apple.'

b. Bi Bat -aar alim id -üül -sen
I.NOM Bat -INST apple eat -CAUS -PST
'I made Bat eat an apple.'

Importantly, for our purpose, the presence of dative case on the causee is not contingent on the presence of another eligible case competitor in the same domain. In (244), except for the subject and the causee there is only one PP headed by the postposition *tukhai* ('about') in the lower domain. Therefore, dative on the causee cannot be assigned configurationally as there is no eligible case competitor present in its local domain. In contrast, these facts follow naturally if dative is inherent case.

(244) DAT appears on the causee without potential case competitors

Bi tüün -d khurl -in tukhai san -uul -san
I.NOM 3SG -DAT meeting -GEN about remember -CAUS -PST
'I let him remember about the meeting/I reminded him about the meeting.'

4.6.4 Section Summary

In this section, I have presented a series of independent evidence in support of adopting the following hybrid case assignment model in Mongolian:

(245) a. If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as

accusative case, unless NP1 has already been marked for case.

b. Nominative case is assigned by finite T^0.

c. Dative case is a nonstructural case.

Given these data and the insight that WLM is related to case, the fact that even some instances of LDS in Mongolian can bleed Condition C is not accidental. Because accusative case can be assigned configurationally, there are multiple potential dependent case positions on the LDS chain, which allows WLM at relatively high positions in the structure. Therefore, Condition C violation can be circumvented so long as the syntactic configuration satisfies the condition on WLM (189).

4.7 Predictions of the Case-Based Analysis

4.7.1 Lexical Case vs. Structural Case

The proposal advanced above makes another prediction. If WLM is indeed related to case, we expect the possibility of late merger to be sensitive to the kind of case the DP is bearing. For example, the discussion so far has shown that scrambling which feeds structural accusative case assignment is capable of bleeding Condition C, a result expected under the WLM approach. Further, movement types which feed structural nominative case assignment such as passivization exhibit the same effect. In general, passive constructions are not as commonly used in Mongolian, and this seems to be especially the case for inanimate derived subjects. Thus, a regular passive construction such as (246a) is

rarely used (hence the ?), but is nevertheless grammatical. Against this background, the coreferential reading between the R-expression *Bat* in the derived subject position and the dative pronoun is easy to obtain in (246b), and the sentence is grammatical. This is expected under the current approach.

(246) a. Regular passive construction

?Nom$_1$ bagš-aar Dorj-d ___$_1$ ögö -gd -sön
book teacher-INST D-DAT give -PASS -PST
'(The/A) book was given to Dorj by the teacher.'

b. Passivization bleeds Condition C

?[**Bat**$_1$-in nom]$_2$ bagš-aar **tüün**$_1$-d ___$_2$ ögö -gd -sön
B-GEN book.NOM teacher-INST 3SG-DAT give -PASS -PST
'**Bat**$_1$'s book was given to **him**$_1$ by the teacher. '

In contrast, if the DP bears a lexical case, then scrambling the DP might exhibit reconstruction effects different from when the scrambled DP bears structural case. In Mongolian, the object of the verb 'to help' bears lexical dative case, not accusative. Example (247) is the result of scrambling the dative embedded object *Zorigiin emeed* ('Zorig's grandmother.DAT') to the matrix initial position. In the base order, the embedded pronoun subject *tüüniig* induces Condition C violation on the R-expression *Zorig* inside the embedded object. The order and coindexing in (247) is judged to be degraded by speakers who accept LDS of ACC phrases bleeding Condition C. However, it must be acknowledged that the judgment is subtle, and more data will need to be collected to evaluate the robustness of such a contrast. Nevertheless, if on the right track, (247) further suggests that the nature of case (structural *vs.* nonstructural) being assigned might affect interpretations in terms of Condition C.

(247) LDS of lexical DAT objects

??/*[**Zorig**$_1$-iin emee -d]$_2$, bi [$_{CP}$ **tüün**$_1$**-iig** $\_\_{}_2$
Z-GEN grandmother -DAT 1SG.NOM he-ACC
tusal-dag bai-san gej] bodoj bai-na
help-HABIT COP-PST C think.CVB COP-PST
Int. 'Zorig's$_1$ grandmother, I am thinking that he$_1$ had been helping.'

In any formulation of WLM, movement of DPs with lexical case are expected to behave somewhat differently, because unlike accusative case, which in some languages often has more than one locations to be assigned, lexical case is strictly tied to the lexical head that selects for the DP. This nature of lexical case might manifest in different ways in terms of late merger, depending on the specific properties of the language in question. Regarding this issue, the main proposal advanced in this chapter suggests one possibility given the overall picture in Mongolian. Since lexical case is assigned in a local configuration with the lexical case assigner, the DP including the NP restrictor must be fully spelled out in its base position, triggering Condition C violation there.

4.7.2 PP Scrambling

The Condition on WLM (189) suggests that scrambling can bleed Condition C if the moved DP can get case in a position that c-commands the pronoun binder. Since some instances of LDS in Mongolian feed ACC case assignment in the matrix clause, those instances of scrambling can fix Condition C violations induced by a matrix DAT argument or by an embedded subject pronoun binder. A further prediction that the current case-based proposal makes is that there should be a visible distinction between scrambling DPs and scrambling other kinds of element such as PPs. [16] Reinhart (1976) points out that (248) with PP preposing

[16]This point was originally raised by an anonymous reviewer of Gong (in progress). I thank them for raising this question.

is ungrammatical in English.

(248) *In Ben's$_1$ box, he$_1$ put cigars. (Reinhart 1976)

If LDS of DPs in examples such as (249) and (250) are acceptable because the scrambled object can be assigned ACC case in the matrix clause, there should be a visible distinction between LDS of DPs as in (249-250) and LDS of PPs in terms of Condition C effects.

(249) LDS can bleed Cond C with matrix DAT pronoun binder

?[**Bat$_1$-in** esee-g]$_2$ Zaya **tüün$_1$ -d** [$_{CP}$ bagš -iig —$_2$ unš-san
Bat-GEN essay-ACC Z.NOM he -DAT teacher -ACC read-PST
gej] khel-sen
C say-PST
'**Bat$_1$**'s essay, Zaya said to **him$_1$** that the teacher read.'

(250) LDS can bleed Cond C with subject binder

[**Bat$_1$**-in em-iig]$_2$ emč [$_{CP}$**tüün$_1$**-iig —$_2$ uu-gaagüi gej]
Bat-GEN medicine-ACC doctor.NOM 3SG-ACC drink-PST.NEG C
uurla-san
become.angry-PST
'Bat$_1$'s medicine, the doctor became angry that he$_1$ did not drink. '

Preliminary results of investigation into PP scrambling suggest that this prediction is borne out. Here I focus on the verb *temtsekh* ('to fight') which can take a PP headed by the postposition *esreg* ('against'). A basic example using the expression 'to fight against' is presented in (251).

(251) Basic case using *'to fight [$_{PP}$ against ...]'*

Odoo khümüüs [$_{PP}$ dain-i esreg] temtse-j baina
now people war-GEN against fight-CVB COP.NPST
'Now, people are fighting against war.'

The PP headed by *esreg* ('against') can undergo LDS, as shown in (252).

(252) a. Base order

Bagš [$_{CP}$zasgiin gazr -ig [$_{PP}$ ediin zas-giin khyamral-in
teacher.NOM government -ACC economy-GEN crisis-GEN
esreg] temtse-j baina gej] nadad khel-sen
against fight-CVB COP.NPST C 1SG.DAT say-PST
'The teacher said to me that [$_{CP}$the government is fighting [$_{PP}$ against the economic crisis]].'

b. Scrambled order

[$_{PP}$ Ediin zas-giin khyamral-in esreg]$_1$ bagš [$_{CP}$zasgiin gazr-ig
economy-GEN crisis-GEN against teacher.NOM government-ACC
__$_1$ temtse-j baina gej] nadad khel-sen
fight-CVB COP.NPST C 1SG.DAT say-PST
'[$_{PP}$ Against the economic crisis]$_1$ the teacher said to me that [$_{CP}$the government is fighting __$_1$].'

In addition, this kind of PP scrambling may not proceed out of an island. As shown in (253), the PP headed by *esreg* ('against') may not scramble out of a relative clause.

(253) a. PP inside a relative clause

Bi [$_{RC}$ [$_{PP}$ takhl-in esreg] temtse-j bai-gaa]
1SG.NOM plague-GEN against fight-CVB COP-NPST.PTCP
khun-iig ikh khundel-deg
person-ACC very respect-HABIT
'I really respect the people [$_{RC}$who are fighting [$_{PP}$ against the plague]].'

b. PP may not scramble out of a relative clause

*[$_{PP}$ Takhl-in esreg]$_1$ bi [$_{RC}$ __$_1$ temtse-j bai-gaa]
plague-GEN against 1SG.NOM fight-CVB COP-NPST.PTCP
khun-iig ikh khundel-deg
person-ACC very respect-HABIT
Int. '[$_{PP}$ Against the plague]$_1$, I really respect the people [$_{RC}$who are fighting __$_1$].'

With the above facts in mind, consider the following examples on PP scrambling and Condition C. In (254a), the pronoun in the embedded subject position induces Condition C violation on the R-expression *Bat* inside the PP 'against Bat's addiction' within the embedded clause. The sentence is ungrammatical under the coindexed reading between *tüüniig* ('3SG.ACC') and *Bat*. In (254b), [$_{PP}$ against Bat's addiction] has undergone LDS to the sentence-initial position. The surface order of (254b) no longer violates Condition C, but the sentence is still rejected by the speakers who accepted LDS of ACC DPs in (249-250). Such contrast suggests the existence of a distinction between LDS of PPs (which does not feed case assignment and is incompatible with WLM) and LDS of DPs (some of which feed ACC case assignment).

(254) a. Embedded pronoun subject binds R-expression Bat, violating Cond C

*Emč [$_{CP}$ **tüün-iig**$_1$ kheden jil-iin turš [$_{PP}$ **Bat**$_1$-in dontolt-in esreg] temtse-j bai-san gej] nadad khel-sen
doctor 3SG-ACC some year-GEN during Bat-GEN addiction-GEN against fight-CVB COP-PST C 1SG.DAT say-PST
Int. 'The doctor said [$_{CP}$ that he$_1$ has been fighting [$_{PP}$ against Bat$_1$'s addiction] for years.].'

b. PP scrambling exhibits an obligatory reconstruction effect

*[$_{PP}$ **Bat**$_1$-in dontolt-in esreg]$_1$ emč [$_{CP}$ **tüün-iig**$_1$ kheden jil-iin turš ___$_1$ temtse-j bai-san gej] nadad khel-sen
Bat-GEN addiction-GEN against doctor 3SG-ACC some year-GEN during fight-CVB COP-PST C 1SG.DAT say-PST
Int. '[$_{PP}$ Against Bat's$_1$ addiction]$_2$, the doctor said [$_{CP}$ that he$_1$ has been fighting ___$_2$ for years].'

LDS of PPs with a matrix DAT pronoun binder points to the same direction. In (255a), the matrix DAT pronoun induces Condition C violation on the R-expression *Zorig* inside the PP which is located in the embedded clause. The

sentence is ungrammatical under the coindexed reading between *tüünd* and *Zorig*. In (255b), the PP [$_{PP}$ against Zorig's disease] has undergone LDS out of the embedded clause to the matrix-initial position. While the surface order no longer violates Condition C, the sentence is still unacceptable under the coindexed reading. Again, we observe obligatory Condition C reconstruction effect with PP scrambling.

(255) a. Matrix DAT pronoun binds R-expression Bat, violating Cond C

*Zaya **tüün-d**$_1$ [$_{CP}$emč nar-ig čadakh bükhn-eer-ee [$_{PP}$ **Zorig**$_1$**-iin**
Z.NOM 3SG-DAT doctor PL-ACC ability all-INST-REFL Z-GEN
öwčin-ii esreg] temtse-j bol-no gej] khel-sen
disease-GEN against fight-CVB be-NPST C say-PST
Int. 'Zaya said to him$_1$ [$_{CP}$ that the doctors will do their best to fight against Zorig$_1$'s disease].'

b. PP scrambling exhibits an obligatory reconstruction effect

*[$_{PP}$**Zorig**$_1$**-iin** öwčin-ii esreg]$_2$ Zaya **tüün-d**$_1$ [$_{CP}$emč nar-ig
Z-GEN disease-GEN against Z.NOM 3SG-DAT doctor PL-ACC
čadakh bükhn-eer-ee ___$_2$ temtse-j bol-no gej] khelsen
ability all-INST-REFL fight-CVB be-NPST C say-PST
Int. '[Against Zorig$_1$'s disease]$_2$ Zaya said to him$_1$ [$_{CP}$ that the doctors will do their best to fight ___$_2$].'

While a complete picture of Mongolian PPs and their scrambling properties awaits a much more thorough and comprehensive investigation, which I leave for future work, the result presented above using PPs headed by *against* shows that in some cases there seem to be a difference between scrambling PPs and scrambling DPs in terms of reconstruction effects.

4.8 Summary of Chapter 4 and Further Remarks

In this chapter, I have argued that the Condition C reconstruction effects manifested in Mongolian scrambling, which bears on a long-standing puzzle in the literature on scrambling and the A/A'-distinction, is tied to the case assignment mechanism. Departing from previous characterizations of this phenomenon, I have proposed a reanalysis of accusative case in Mongolian and related it to the Condition C reconstruction puzzle. I have demonstrated that some generalizations previously made about the puzzle–for instance, the subject binding generalization–do not hold upon closer examination of a wider range of empirical facts in Mongolian. The WLM-based analysis advanced in this chapter instead takes the relevant phenomena to be the result of multiple available late-merge locations on the movement chain formed by scrambling. The fact that Mongolian has LDS and that accusative is assigned configurationally allow us to account for a wide range of intricate reconstruction effects. I have also identified various scenarios under which WLM can successfully help avoid Condition C violations. The novel empirical data presented here provide a strong argument for the view that WLM is controlled by case, as originally proposed by Takahashi (2006) and Takahashi and Hulsey (2009). Moreover, depending on the case mechanism of a specific language, WLM may play out accordingly, giving rise to variations in reconstruction patterns cross-linguistically. Specifically, the current analysis follows from a theory with three major components.

(256) a. Countercyclic Merger of R-expressions helps avoid Condition C violation (*Wholesale Late Merger*).

b. Late Merger is controlled by case requirement of NPs (*Case Filter*).

c. Modality of case assignment governs Condition C effects (*dependent case*

vs. *Agree*)

I have showed how dependent accusative case, which is part of a hybrid case assignment system (257) in Mongolian, give rise to the complex patterns of Condition C reconstruction in local and long distance scrambling. The facts in Mongolian point to the possibility that WLM is potentially compatible with different case mechanisms.

(257) Hybrid Case Assignment Mechanism in Mongolian

a. If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as accusative case, unless NP1 has already been marked for case.

b. Nominative case is assigned by finite T^0.

c. Dative case is a nonstructural case.

As a final remark, I would like to discuss the question of why case should be relevant for Condition C reconstruction. I believe this can be connected to the earlier claim that case makes an element visible for θ-marking (i.e., Chomsky's (1986b) *Visibility Condition*, following Aoun 1979). In the Minimalist Program, case is an uninterpretable feature that must be checked and eliminated for the derivation to converge. It is therefore possible to generalize the visibility condition and regard case valuation as a requirement that must be met in order for an argument to be properly interpreted (for suggestions along this line, see Boeckx 2001).

CHAPTER 5

ECM AND FEATURE-DRIVEN MOVEMENT

5.1 Overview of Major Issues

In the preceding chapters, I have motivated the existence of local and long-distance scrambling in Mongolian, and related the empirical facts of scrambling to the A/A'-distinction. I have shown that while Condition C effects have been frequently employed as an A/A'-diagnostic in previous research on scrambling, Mongolian as well as a number of other scrambling languages exhibit paradoxical movement patterns in terms of Condition C. Based on the detailed case study of Mongolian, I have argued that these patterns cannot be subsumed under the A/A'-distinction, but are instead conditioned by the language's hybrid case assignment mechanism, in which accusative is assigned as a dependent case and nominative is assigned by finite T^0. The purpose of this chapter is to discuss some well-known issues concerning the A/A'-distinction and the syntax of (Japanese-Korean-Mongolian type) exceptional case marking (ECM) on the basis of the results obtained in the preceding chapters.

5.1.1 The A/A'-Distinction

The first issue has to do with the status of the A/A'-distinction in the current syntactic theory. Within the Government and Binding theory, different kinds of movement are distinguished based on whether they target A- or A'-positions, defined based on the nature of the head which hosts the moved

phrase (e.g., Chomsky 1981). [1] More recently, adopting the view that Internal Merge requires the establishment of an Agree relation (Chomsky 2000, 2001, 2004, 2007), an emerging body of literature has focused on deriving the A-/A'-distinctions from the Agree mechanism (implemented in one way or another, by e.g., Obata and Epstein 2011, van Urk 2015, Keine 2016, 2019; see also Zyman 2018, Wurmbrand 2019). In particular, it has been proposed that A-movement behaves distinctly from A'-movement because the former involves ϕ-feature agreement but the latter is driven by A'-features such as topic or *wh* (e.g., Obata and Epstein 2011, van Urk 2015).

Concomitantly, there has been much discussion on whether an Agree-based view of the A/A'-distinction handles well-known generalizations and puzzles in a more explanatory way, and whether all properties of movement can be reduced to Agree and features. Some of the authors cited above approach this by focusing on the locality profiles of movement types and selective opacity effects (Keine 2016, 2019), some provide alternative solutions to well known puzzles such as A'-opacity [2] (Obata and Epstein 2011, see also Rezac 2003), others deal with the loci of typical A/A'-distinction, such as weak crossover effects (van Urk 2015). What these previous proposals share in common is that the relevant constraints are either fully or partially removed from movement dependencies themselves, and the burden of explanation is instead placed on the Agree mechanism and Merge. Against this backdrop, the question I wish to explore in this chapter is, how do the position-based approach to A/A'-distinction and the Agree-based approach differ in term of explanation and empirical cov-

[1] More precisely, in GB the A/A'-distinction applies both to landing sites of movement and base-generated (e.g., argument vs. adjunct) positions. The status of such a distinction is less clear in externally vs. internally merged sites in Minimalism. As discussed in Chapter 1 and throughout the current chapter, the A/A'-distinction survives in Minimalism more or less as descriptive taxonomy, not a theoretical construct.

[2] Notably, see Safir (2019) for a recent non-Agree-based proposal.

erage? An advantage of the Agree-based analysis is that, as van Urk (2015) [3] argues, it can provide a fine-grained account for the system of phrasal movement in languages in which no clear A/A'-distinction is found, without needing to posit distinct A- and A'-positions. In the following sections, I will discuss some novel data from Mongolian ECM, which similarly cannot be easily related to the position-based A/A'-dichotomy. I will provide a feature-based analysis and discuss its potential implications.

5.1.2 The Potential A-Status of Spec CP

The second issue, closely connected to the first one, has to do with the previous proposal that Spec CP can be an A-position in languages like Japanese, Korean, and Mongolian (JKM). This proposal is based on the well-known fact that ECM in these languages is apparently optional and (in some analyses) may proceed out of a finite embedded clause. In order to provide background for the subsequent discussion, let us first consider ECM in JK. Examples from each language are provided below.

(258) Japanese ECM (Kuno 1976: 23-24)

Yamada wa **Tanaka ga/o** baka da to omotte ita
Y TOP T NOM/ACC fool is that thinking was
'Yamada thought that Tanaka was a fool.'

(259) Korean ECM (J. H. Yoon 2007: 616)

Cheli-nun **Yenghi-ka/-lul** yenglihay-ss-ta-ko mitnun-ta
C-TOP Y-NOM/-ACC smart-PST-DECL-COMP believe-DECL
'Cheli believes Yenghi was smart. '

[3] van Urk (2015) refers to this as a featural view of phrasal movement, which is similar to the Agree-based view discussed here.

While a number of researchers have proposed analyses for ECM in (258-259) without resorting to movement (e.g., Saito 1983, Oka 1988, Sells 1990, Hoji 1991, 2005, Takano 2003 for Japanese; K.-S. Hong 1990, 1997 for Korean), many researchers have defended the idea that ECM in these examples does involve raising of the embedded subject of some sort (e.g., Kuno 1976, 2007, Ueda 1988, Sakai 1998, Tanaka 2002, Hiraiwa 2005, Takeuchi 2010 for Japanese; J.-M. Yoon 1991, J. H. Yoon 2007, S.-M. Hong 2005 for Korean). What I focus on for the sake of the current theoretical discussion is the latter approach.

A salient feature of these movement-based analyses is that raising of the embedded subject is possible out of a finite embedded clause headed by an overt complementizer (Japanese *to*, Korean *ko*). Two pieces of representative work along this line are Tanaka (2002) for Japanese and J.-M. Yoon (1991) for Korean. One of Tanaka and Yoon's core observations is that in JK, raised subjects can participate in A-dependencies in the matrix clause. Consider the following examples.

(260) Japanese ECM subjects can A-bind a reciprocal in the matrix clause [4]
(Tanaka 2002: 640)

a. ??Otagai-no$_1$ sensei-ga [karera-o$_1$ baka-da-to] omot-teiru
each.other-GEN teacher-NOM they-ACC fool-COP-COMP think-PROG
'Each other's$_1$ teachers think of them$_1$ as fools.'

b. Karera-o$_1$ otagai-no$_1$ sensei-ga [t$_1$ baka-da-to] omot-teiru
they-ACC each.other-GEN teacher-NOM fool-COP-COMP think-PROG
'Them, each other's$_1$ teachers think of t$_1$ as fools.'

(261) Korean ECM subject can undergo passivization in matrix clause
(J.-M. Yoon 1991: 25)

[4]The bracketing is presented in this way for expository purposes only and should not be regarded as claiming that Japanese ECM subjects receive ACC while being in the embedded clause. See Tanaka 2002 for alternative bracketing and additional details on this example.

a. Na-nun [Chelswu-lul ttokttokha-ta-ko] mit-nun-ta
I-TOP C-ACC is.smart-DECL-COMP believe-PRES-DECL
'I believe that Chelswu is smart.'

b. Chelswu$_1$-ka (na-ey.uyhay) [t_1 ttokttokha-ta-ko]
C-NOM I-by is.smart-DECL-COMP
mit-(e)-ci-n-ta
believe-(e)-PASS-PRES-DECL
'Chelswu is believed to be smart.'

The Japanese data in (260) indicate that ECM subjects can further move into the matrix clause and bind a reciprocal inside the matrix subject. The data in (261) show that in Korean, ECM subjects may undergo passivization in the matrix clause. These are typical A-movement properties. Importantly, given that the complement clauses in (260-261) headed by overt complementizers are finite, this would mean that JK permit A-movement out of a finite CP.

How is A-movement possible out of a finite CP? It is well-known that A-movement is typically clause-bound (it observes the Tensed-S Condition, the Specified Subject Condition, etc. see e.g., Chomsky 1973). If A-movement were to proceed out of a finite CP, it must make a stop at the edge of CP, in accordance with the Phase Impenetrability Condition (Chomsky 2000, 2001). Under the traditional position-based view of the A/A'-distinction, Spec CP is an A'-position. If movement through Spec CP further targets an A-position in the matrix clause, improper movement (*A'→A) would result. Thus, the fact that (260-261) are acceptable in JK requires additional explanation. Given this consideration, Tanaka (2002) and J.-M. Yoon (1991) argue that Spec CP can be an A-position. Consequently, A-movement proceeding through the A-edge of the complement CP does not result in improper movement. [5] As will be discussed in more detail in subsequent sections, the proposal that Spec CP can be an A-position has also

[5] Another option is to posit that the embedded complement clause is not a phase or a barrier to government after all. For this line of analysis see e.g., Ueda (1988), Sakai (1998).

been made by Fong (2019) for Mongolian ECM constructions.

While the argument that Spec CP has A-status in JKM circumvents the improper movement issue, this argument is largely inductive, based on language-specific evidence. Furthermore, the A-status of Spec CP raises important questions about the nature of the A/A'-distinction, and how scope, usually determined by A'-movement, can be affected by the A/A' status of CP. Specifically, an important prediction that Tanaka, Yoon, and Fong's proposals make is the following: If movement to Spec CP is a kind of A-movement (since Spec CP is an A-position), such movement should in principle interact with other operations that target CP, such as *wh*-questions and topicalization. This point is scarcely addressed in previous proposals that posit the A-status of Spec CP.

Against this backdrop, this chapter takes as its point of departure novel observations on the interaction between A/A'-operations at the Mongolian clausal periphery. I suggest that an Agree-based view of movement types, combined with the proposed Mongolian clausal architecture, allow us to provide a unified account for the behavior of ECM, *wh*-licensing, and topicalization at the left periphery of this language. Specifically, the current account explains three interconnected properties of Mongolian:

(i) Mongolian allows ACC-case assignment of an embedded subject at the edge of embedded finite CP.
(ii) Only ACC-subjects can be A-extracted from embedded finite CP (hyperraising); NOM subjects may not be.
(iii) A'-operations (*wh*-licensing and thematic topicalization) on subjects within the embedded clause are incompatible with the contexts specified

in (i-ii).

To help illustrate these properties, consider example (262). First, (262a) is an embedded declarative construction, in which the matrix verb *khel-* ('to say') takes a finite embedded CP headed by the complementizer *gej*. Property (i) is illustrated by the fact that the embedded subject *Bat* can surface as either NOM or ACC. With respect to their differences, previous research suggests that NOM subjects are structurally lower than ACC subjects. The ACC-case marking is due to the subject raising to the edge of CP, receiving its case from the matrix clause in an exceptional-case-marking (ECM)-like fashion (Fong 2019, use of the term ECM mine). The NOM and ACC embedded subjects in (262a) also differ in their movement properties. As I will show in the subsequent sections, only ACC subjects can A-move into the matrix clause; NOM subjects generally may not move. In the second example (262b), the embedded clause is also a finite CP headed by [$_{C}$ *gej*]. What is different from (262a) is that in (262b) the clausal complement is a *wh*-question, in which the subject *wh*-phrase takes embedded scope. Strikingly, in this example ECM is no longer available on the embedded subject. Note that the unavailability of ACC on the subject is not due to the [+Q] CP blocking cross-clausal case assignment. The embedded *wh*-question in (262c) has the object *wh*-phrase taking embedded scope. The embedded subject is a non-*wh*, regular [$_{DP}$ *Zaya*]. The complement clauses in (262b) and (262c) presumably have the same size, but ACC case marking is only possible on the non-*wh*-subject *Zaya* in (262c).

(262) a. Both NOM and ACC are available on embedded subject

Bagš	[$_{CP}$	Bat-ig/Bat	ter	nom-ig	unš	-san	gej]
teacher.NOM		B-ACC/B.NOM	that	book-ACC	read	-PST	C

khel-sen
say-PST
'The teacher said that Bat read that book.'

b. *ACC when the *wh*-subject takes embedded scope

Bagš [$_{CP}$??*khen-iig/khen ter nom-ig unš -san
teacher.NOM who-ACC/who.NOM that book-ACC read -PST
be gej] asuul-san
wh-Q C ask-PST
[Embedded scope only] 'The teacher asked (that) who read that book.'

c. ACC ok on regular non-*wh* subjects of an embedded question

Bagš [$_{CP}$ Zaya-g/Zaya yamar nom-ig unš-san be
teacher.NOM Z.ACC/Z.NOM what book-ACC read-PST *wh*-Q
gej] asuul-san
C ask-PST
[Embedded scope only] 'The teacher asked (that) what book Zaya read.'

As I will show, ECM is not only unavailable on *wh*-subjects of embedded interrogatives as seen in (262), but is also incompatible with embedded thematic topicalization, both being A'-operations. Based on a featural view of phrasal movement, I argue that (i-iii) directly fall out from the Mongolian clausal architecture and the availability of a ϕ-probe on C^0. While it has been argued that Mongolian Spec CP is an A-position (Fong 2019), I show that there exists an intermediate A'-domain between TP and CP, resulting in a [[[... A] **A'**] **A**] clausal periphery. This departs from a typical characterization of A/A'-domains, in which different domains are structurally determined in terms of height. In particular, A'-movement has been taken to target higher landing sites than A-movement (e.g., Williams 2003, Müller 2014, also see Keine 2016 for an overview of various alternative approaches to characterizing A/A'-positions).[6] The proposal

[6]More recently, the difference between A- and A'-landing sites has also been characterized in terms of phase theory. For example, it has been suggested that A'-movement targets the edge

for Mongolian, in which Spec CP as an A-position is potentially available above some A'-domains, does not fit well with accounts in which A- and A'-domains are directly mapped onto the hierarchy of levels of projections. Instead, the current proposal, if on the right track, suggests that there should not be a universal classification of A/A'-positions, nor should there be a universal hierarchy between them (e.g., A'-positions are uniformly higher than A-positions), a natural consequence under the Agree-based approach to movement types. Since properties of movement make reference to the Agree mechanism, what makes one movement type differ from another is really the structural locations and properties of the probes and goals, subject to cross-linguistic variation. This is a desirable outcome. As discussed in much recent literature, the A vs. A' distinction no longer has an independent status in the Minimalist Program. The Agree-based approach, among other proposals, is one of the ways to render such distinction an epiphenomenon that emerges from the operations Agree and Merge (in addition to the authors cited above, see Chomsky 1995a, Chomsky 2004; for recent important discussions and alternative proposals see Safir 2019).

Due to its flexible word order and unique locality profile, Mongolian provides an ideal testing ground for the Agree-based approach to movement types. The case study presented here illuminates the behavior of the Agree mechanism as it relates to movement dependencies in that it examines the features which are operative in triggering movement, and the interactions between probes bearing different features.

of a phase, and A-movement is only within the domain of a phase head (e.g., Miyagawa 2010, Charnavel and Sportiche 2016).

5.1.3 Reconstruction

The third issue to be discussed in this chapter concerns the similarities and differences between ECM and scrambling in terms of Binding (Condition C) reconstruction and radical reconstruction. An important observation that will be drawn from the subsequent sections is that ECM (i.e., subject raising to Spec CP) bleeds *wh*-licensing, but long distance scrambling (LDS) does not. In other words, radical reconstruction is found in LDS but not in ECM. At the same time, given the appropriate structural configuration, both ECM and LDS can feed case assignment and thus may in principle bleed Condition C. Given these observations, the question I would like to explore is, how do the movement properties of ECM and LDS relate to the presence or absence of radical reconstruction, and how does this differ from Condition C reconstruction?

Given the Agree-based analysis of ECM, I will approach this by drawing on the idea that radical reconstruction is attributed to the absence of feature checking (R. Lee 1994, Saito and Fukui 1998, Saito 2004). I focus on three types of movement in particular – movement of the subject to Spec TP (involving ϕ-agreement with T^0 and NOM case assignment), movement of the ECM subject to Spec CP (involving ϕ-agreement with C^0 and ACC case assignment), and long distance scrambling (does not involve ϕ-agreement but can in principle feed ACC case assignment given the appropriate structural context). I will show that the first two types of movement do not show radical reconstruction, in contrast to long distance scrambling. I argue that this contrast is due to that the first two types of movement are ϕ-feature-driven, but scrambling is not. This is further contrasted with the patterns of Condition C reconstruction exhibited by the three types of movement. Crucially, since Condition C reconstruction is

governed by case, and all three types of movement can feed case assignment given the appropriate structural environment, all of them may in principle obviate a Condition C violation. If on the right track, this result suggests that Condition C reconstruction and radical reconstruction have distinct sources in the grammar. Specifically, under the current approach, Condition C reconstruction is governed by case, but radical reconstruction is governed by features and Agree.

The rest of the chapter will proceed as follows. In section 5.2 I review the properties of Mongolian ECM constructions, and how they lead to the conclusion that Spec CP is an A-position. In section 5.3, I investigate the interactions between ECM and *wh*-licensing in Mongolian, and lay out some of the problems they present for the assumed A-status of Spec CP. In section 5.4, I present additional empirical data on the interactions between ECM and embedded thematic topicalization that parallel the *wh* vs. ECM patterns to some extent. These patterns motivate the need for a fine-grained proposal for the clausal architecture, which I develop at the end of section 5.3 and 5.4. In section 5.5, I utilize such a proposal to build an analysis based on the Agree mechanism, which accounts for these empirical patterns. I also offer some further discussions on the issue of improper movement, in light of the current case study. In section 5.6, I make some further remarks on the issue of radical reconstruction and its relationship with Condition C reconstruction. I synthesize the results obtained so far and speculate on various issues concerning reconstruction and scrambling.

5.2 Background on Mongolian ECM Constructions

The main purpose of this section is to provide background for the discussion of the ECM/A'-interaction in section 5.3 and 5.4. I focus in particular on the previous treatment of Mongolian ECM, and the proposal that Spec CP is an A-position.

5.2.1 ACC Case Assignment at the Edge of CP

Mongolian is a language which allows ECM-like constructions where embedded subjects receive ACC case from the higher clause. A typical case is exemplified in (263). The matrix verb *khelsen* ('said') takes a finite embedded clause headed by the complementizer *gej*. The embedded subject can be in accusative (ACC) case or nominative (NOM) case.

(263) Subject of finite embedded CP can be marked with accusative

Zaya [$_{CP}$ bagš -iig/bagš sain khün gej] khel -sen
Z.NOM teacher -ACC/teacher.NOM good person C say -PST
'Zaya said that the teacher is a good person.'

The construction in (263) differs from typical English ECM constructions in several ways. First, the ACC case marking on the embedded subject is optional. In most cases, the subject of a finite embedded clause can alternate between ACC (*-iig* in (263)) and NOM (morphologically unmarked on regular NPs, marked on pronouns). Second, embedded clauses which allow ACC subjects are full finite CPs. In these two respects, Mongolian ECM constructions resemble those in Japanese (Kuno 1976, 2007, Hiraiwa 2001, Tanaka 2002) and Korean (J.-M. Yoon

1991, S.-M. Hong 2005, J. H. Yoon 2007), although language-specific differences remain.

Fong (2019) argues extensively that the ACC subject in (263) indeed originates from the embedded clause. She demonstrates that ACC subjects do not obligatorily raise out of the embedded clause into the main clause, based on several pieces of evidence such as the fact that the entire embedded CP containing the ACC subject can be displaced as a unit. Fong argues that ACC subjects are structurally higher than regular NOM subjects, based on binding and other facts. Specifically, an ACC subject is located at the edge of embedded CP, where it receives ACC case from the matrix clause. In her analysis, as reviewed in Chapter 4, the embedded subject receives ACC from matrix v. However, according to the dependent case approach advanced in the current work, the embedded subject will receive dependent case via competition with the matrix subject. See Chapter 4 for empirical basis and further details about the dependent case proposal.

5.2.2 Spec CP as an A-Position

While in most cases the embedded subject can either be in NOM or ACC, NOM subjects in general may not move out of the embedded clause, only ACC subjects can.

(264) a. NOM subjects may not move out of embedded CP [7]

*Bold	Tuya$_1$	kharamsaltai-gaar	[$_{CP}$ —$_1$	teneg	bai-san	gej]	
B.NOM	T.NOM	sad-INST		stupid	COP-PST	C	
bod-son							
think-PST							

[7] Example is modified based on von Heusinger, Klein, and Guntsetseg (2011): (18) (Fong (2019):(66))

Int. 'Bold thought with sadness that Tuya was stupid.'

b. ACC subjects may move out of embedded CP

Bold Tuya-g$_1$ kharamsaltai-gaar [$_{CP}$ —$_1$ teneg bai-san gej] bod-son
B.NOM T-ACC sad-INST stupid COP-PST C think-PST
'Bold thought with sadness that Tuya was stupid.'

Importantly, Fong (2019) shows that the cross-clausal movement of ACC subjects exemplified in (264b) is a kind of A-movement. For example, (265) shows that cross-clausal movement of the embedded ACC subject feeds variable binding in the matrix clause.

(265) Movement from embedded Spec CP feeds variable binding (Fong 2019)

a. No variable binding in base order

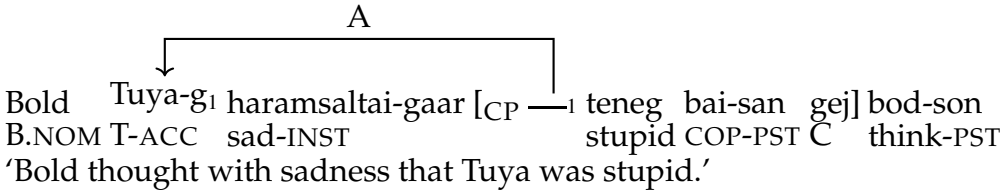
Öör-iin-kh ni$_1$ eej [$_{CP}$ **okhin bür-iig$_{*1}$** ukhaantai gej] khelsen
self-GEN-KH 3S.POSS mother girl every-ACC intelligent C said
'His/her$_1$ (own) mother said that every girl$_{*1}$ is intelligent.'

b. Embedded ACC subject A-moves and binds matrix pronoun

Okhin bür-iig$_1$ öör-iin-kh ni$_1$ eej [$_{CP}$ —$_1$ ukhaantai gej] khelsen
girl every-ACC self-GEN-KH 3S.POSS mother intelligent C said
'Every girl$_1$, her$_1$ (own) mother said is intelligent.'

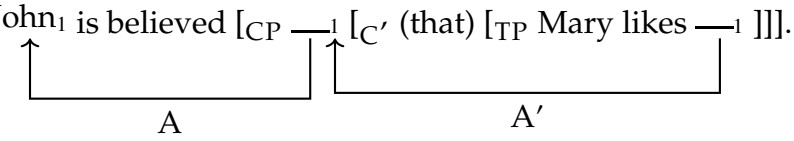
Based on evidence such as (265), Fong concludes that the cross-clausal displacement of the ACC subject observed in (264b) is a kind of A-movement.

(266) A-movement out of finite CP



It is well-known that A-movement out of a finite clause is not possible in English (first discussed in Chomsky 1973) – a sentence like (267) is ungrammatical.

(267) Lasnik and Saito (1992: (103))



The standard account (e.g., Chomsky 1977, 1981, 1986a, May 1979, Lasnik and Saito 1992, Fukui 1993a) developed to exclude constructions like (267) consists of two major components. First, the requirement due to subjacency that movement must proceed through the edge of a finite clause, which is an A′-position in English; Second, a constraint imposing a *Ban on Improper Movement* which prohibits movement from an A′-position to an A-position. [8]

(268) Ban on Improper Movement

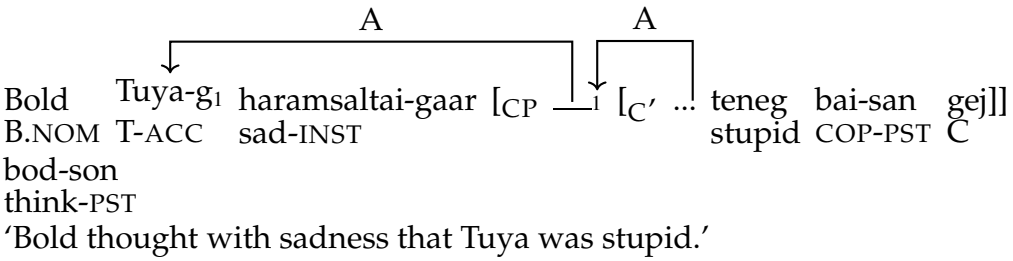
Movement may not proceed from an A′-position to an A-position.

In contrast to English, subsequent research suggests that some languages do allow A-movement to proceed out of a finite clause, often known as hyperrais-

[8]Note that (268) is stated in more general terms compared to some alternative formulations. In order to rule out chains like (267), Chomsky (1973:244) states that no rule can involve A, Y in the structure ... X ... [$_\alpha$ ... Z ... -WYV ...] ... where "(b) Y is in COMP and X is not in COMP". See e.g., Lasnik and Uriagereka (1988), Cinque (1990) for other formulations and observations that the constraint may extend to constructions other than COMP to non-COMP movement. See e.g., May (1979), Lasnik and Saito (1992), Müller and Sternefeld (1993) for discussions regarding the source of such a constraint. Also see section 5.5.5 for further discussion on the ban on improper movement.

ing [9] (e.g., Ura 1994, 1995, Ferreira 2004, Carstens and Diercks 2009, Halpert 2019, Zyman 2018; see Zyman 2021 for a recent review of languages with hyperraising and major analytical approaches). Mongolian, as discussed above, is one such language. According to Fong's (2019) analysis, the embedded Spec CP in Mongolian is an A-position, and thus movement to and from Spec CP are A-movement.

(269) Spec CP as an A-position in Mongolian



'Bold thought with sadness that Tuya was stupid.'

Therefore, Mongolian has "proper" movement through Spec CP, an idea which was previously proposed for Japanese (e.g., Tanaka 2002) and Korean (e.g., J.-M. Yoon 1991). On Fong's account, A-movement through Spec CP in Mongolian is not deemed a violation of (268) due to the presence of a ϕ-probe on C^0. In particular, she extends van Urk's (2015) proposal that A-movement is distinguished from A'-movement in that the former involves ϕ-feature agreement, whereas the latter does not. Essentially, Spec CP is an A-position in Mongolian because movement targeting Spec CP involves ϕ-agreement. However,

[9] Ura (1994) originally distinguishes "superraising" from "hyperraising". "Superraising" refers to the operation by which a DP moves beyond the subject of a clause to an A-position in a higher clause:

i. *John$_1$ seems [$_{CP}$ that [$_{TP}$ it was told —$_1$ [that Mary is a genius]]]

"Hyperraising", on the other hand, refers to A-movement from the subject position of a tensed (or finite) clause to the subject position of a higher finite clause:

ii. *They$_1$ seems [$_{CP}$ that —$_1$ like Mary]

I abstract away from such terminological distinction here and use "hyperraising" to refer to A-movement of an embedded subject out of a finite clause.

as Zyman (2021) comments, since modern Khalkha Mongolian does not seem to exhibit overt ϕ-agreement, a natural question is whether there is any direct evidence for the existence of such ϕ-probe in Mongolian, an issue which remains unresolved in Fong (2019). In the upcoming sections, I identify and confirm several predictions arising from the availability of a probe on C^0 which induces A-movement. Specifically, I show that the interactions between A- and A'-operations at the embedded finite clausal periphery naturally follows from an Agree-based view of movement types, in which A-movement to Spec CP proceeds in response to a ϕ-probe on C^0.

5.3 ECM Incompatible with *wh*-Licensed Subjects

The core data in this chapter concerns the interactions between ECM and *wh*-licensing/topicalization. I start by focusing on the interaction between ECM introduced in section 5.2 and *wh*-licensing in Mongolian. I adopt the analysis in which *wh*-phrases do not move covertly, and are instead licensed in-situ. Given this background, I present previously unnoticed data in section 5.3.2, suggesting that in an embedded question, *wh*-licensing and ECM cannot co-occur on the embedded subject. I identify some of the problems these data present for the A-status of Spec CP, which I will provide a solution for in section 5.5.

5.3.1 *Wh*-Licensing in Mongolian

This subsection provides background on Mongolian *wh*-questions in preparation for the discussion in section 5.3.2, focusing specifically on the structure of

embedded questions. I adopt the analysis in which *wh*-licensing in Mongolian does not involve covert or overt movement of *wh*-phrases.

Matrix and Embedded Questions

Mongolian is a *wh*-in-situ language. A grammatical *wh*-question requires the presence of a *wh*-Q particle *be/we*, which is distinguished from a yes/no question particle *uu/üü*.

(270) a. Wh-questions require *wh*-Q particle *be/we*

Ta yamar nom-ig unši-j bai-na **we** /*uu?
2SG.NOM what book-ACC read-CVB COP-NPST *wh*-Q /**y/n*-Q
'What book are you reading?'

b. Y/N questions require *y/n*-Q particle *uu/üü*

Ta ter nom-ig unš-san **uu** /*we?
2SG.NOM that book-ACC read-PST *y/n*-Q /**wh*-Q
'Did you read that book?'

In embedded constructions, the location of a *wh*-Q particle unambiguously indicates the scope of the *wh*-phrase. As shown in (271a), the *wh*-phrase *ali nomig* ('which book.ACC') inside the embedded clause obligatorily takes embedded scope when the question particle *be* is inside the embedded clause. In contrast, the *wh*-phrase obligatorily takes matrix scope when the question particle *be* is in the matrix clause.

(271) a. *Wh*-Q particle in embedded clause, only embedded scope is possible

Navčaa [Zaya-g ali nom-ig unš-san **be** gej] asuul-san
N.NOM Z-ACC which book-ACC read-PST *wh*-Q C ask-PST
[Embedded scope] 'Navchaa asked (that) which book Zaya read.'

[*Matrix scope] *'Which book did Navchaa ask that Zaya read?'

b. *Wh*-Q particle in matrix clause, only matrix scope is possible

Navčaa [Zaya-g ali nom-ig unš-san gej] asuul-san **be**?
N.NOM Z-ACC which book-ACC read-PST C ask-PST *wh*-Q
[*Embedded scope] *'Navchaa asked (that) which book Zaya read.'

[Matrix scope] 'Which book did Navchaa ask that Zaya read?'

Notice also that as exemplified in (271a), the *wh*-question particle is always followed by the complementizer *gej* in Mongolian finite embedded questions.[10] I propose that the *wh*-question particle *be/we* instantiates a Force^0 head, which hosts relevant Q/*wh* features. The complementizer *gej* in an embedded questions instantiates C^0 located above Force^0. Therefore, a *wh*-question with embedded scope such as the one in (271a) has the following clausal periphery.

(272) Clausal periphery of Mongolian embedded *wh*-questions

[CP [*ForceP* [TP... ...] *be/we*] *gej*]

Wh-licensing in Mongolian

Whether in-situ *wh*-phrases undergo covert movement or not is a complex issue beyond the scope of the current discussion, and a thorough investigation into this question will lead us too far afield from the current topic. In this chapter, I take the position that Mongolian *wh*-questions involve *wh*-licensing, which does not require overt or covert movement but is instead established by an Agree relation with Force^0. I discuss data related to subjacency and focus intervention effect which led me to adopt the no-covert-movement view.

[10]This can be compared with Japanese *-ka-to* (-Q-C) sequence (e.g., Saito 2012), although in Japanese, *to* is often optional. Similar to the current proposal, Saito also suggests a recursive CP structure for the Japanese clausal periphery. To some extent, Mongolian *-be-gej* is perhaps more similar to the Korean embedded question pattern Vstem-*nya-ko*, where *-nya-* is a Q marker (*wh* or *y/n*) and *-ko* is the complementizer. Unlike the Japanese *-ka-to* pattern, the complementizer *-ko* is obligatory in Korean indirect questions, like Mongolian (John Whitman, p.c.).

First, while Fong (2019) suggests that the unacceptability of a *wh*-phrase inside conditional clauses and *whether*-islands can be accounted for by assuming covert *wh*-movement in Mongolian, it has long been observed since Huang (1982) that some in situ *wh*-phrases can indeed appear in positions from which overt extraction is not quite acceptable. As discussed in detail by Simpson (2000), the fact that overt and covert movement often are not fully parallel in their locality profile poses challenge to the type of approach which motivates covert *wh*-movement based on island sensitivity. This non-parallelism with regard to movement carries over to Mongolian, in which relative clauses (RCs) are strong islands for scrambling (273a) and overt A′-movement such as relativization (273b). Nevertheless, a *wh*-phrase may freely appear in RCs (274).

(273) a. RC is a strong island for scrambling

*Ter nom-ig$_1$ [$_{RC}$ Bat-in očigdor ⎯$_1$ awsan] khunnig khai-j baina
that book-ACC B-GEN yesterday bought person search-CVB COP.NPST
Int. 'That book, Bat is looking for the man who bought yesterday. '

b. RC is a strong island for relativization

*[$_{RC}$ [$_{RC}$ ⎯$_2$ ⎯$_1$ Unš-ij baigaa] nom$_1$ ikh khetsuu] khun$_2$ khurdan sur-č čad-na
read-CVB be.PTCP book very difficult man fast learn-CVB can-NPST
Int. 'The man$_1$ whose book that he$_1$ is reading is very difficult can learn very fast.'

(274) *wh*-phrase can appear in RCs [11]

Ta [$_{RC}$ **khen-ii** bič-sen] nom-ig aw-san be?
2SG.NOM who-GEN write-PST book-ACC buy-PST *wh*-Q
'Who$_x$ did you buy the book which *x* wrote?'

[11] See Nishigauchi (1986), who attributes this to the possibility of LF pied-piping (for Japanese).

Similarly, a *wh*-phrase can also take scope out of an adjunct clause, another strong island for overt phrasal movement such as scrambling.

(275) *wh*-phrase can appear in adjunct islands

[**Khen** owd-son učraac] ta nar bayar-t yaw-j čad-san-gui
who.NOM ill-PST because you PL celebration-DAT go-CVB can-PST-NEG we?
wh-Q
'Who$_x$ is it such that you couldn't go to the celebration because *x* got ill?'

The second piece of relevant data concerns focus intervention effects. This part of the discussion draws on previous work, especially Keine (2016) and Kotek (2019), which connects focus intervention to the presence/absence of covert *wh*-movement. Beck (2006), building on Kim (2002) and expanding earlier work (Beck 1996, Beck and Kim 1997), observes intervention effects in *wh*-questions of a number of languages, such as Korean, Japanese, Malayalam, Hindi/Urdu, French, German, and parts of English (as discussed in Pesetsky 2000).

(276) Focus intervention effect (Beck 2006: (9-11))

a. A quantificational or focusing element may not intervene between a *wh*-phrase and its licensing complementizer.

i. *[Q$_i$ [... [intervener [... *wh*-phrase$_i$ ...]]]]

b. A intervenes between B and C when A c-commands B, and C c-commands both A and B.

An example of focus intervention effect in Mongolian is illustrated in (277). In (277a), the NPI *khen č* ('anyone') c-commands the *wh*-object *yamar nomig* ('what

book-ACC'), in violation of (276a). The sentence is severely degraded. Importantly, the structural relationship between the *wh*-phrase and the NPI intervener matters. If the *wh*-phrase moves to a higher position where it is no longer c-commanded by the intervener, the intervention effect disappears. In (277b), the *wh*-object is scrambled to the left of the NPI. The sentence becomes grammatical.

(277) a. Focus intervention effect

??/*[$_{\text{NPI}}$ Khen č] yamar nom-ig unš-aa-**gui** we?
Who.NOM FOC what book-ACC read-PST-NEG *wh*-Q
Int. 'What book did no one read?'

b. Focus intervention effect obviated by scrambling

Yamar nomig$_1$ [$_{\text{NPI}}$ khen č] ___$_1$ unš-aa-**gui** we?
what book-ACC who.NOM FOC read-PST-NEG *wh*-Q
'What book did no one read?'

Expanding earlier work, Beck provides a semantic analysis of intervention effects in which *wh*-phrases make use of the same interpretational mechanism as focus. To give a very general summary, in her account a *wh*-phrase can only be evaluated by a question operator, and requires its first c-commanding operator to be a question operator. As a result, a *wh*-phrase c-commanded by an intervening focus-sensitive operator will be uninterpretable even if there exists a higher c-commanding question operator, giving rise to intervention effects. [12] Beck's analysis and its implications are further explored in Kotek (1994) and Kotek (2019: Ch 5-6). In particular, Kotek examines the correlation between superiority and intervention effects in English (an observation due to Pesetsky 2000), and suggests that covert movement, just as overt movement, is capable of obviating intervention effects. Utilizing Kotek's proposal, Keine (2016) suggests

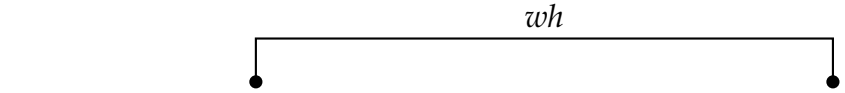
[12] See Miyagawa (2010) Chapter 5 for an alternative focus-based formulation implementing Beck's insight.

that focus intervention effects can be used to diagnose the existence of potential covert *wh*-movement. In particular, focus intervention effect arises if neither overt nor covert movement takes place.

If these proposals are on the right track, the data in (277) potentially provide further clues on the absence of covert *wh*-movement in Mongolian. Specifically, if the *wh*-phrase in (277a) had undergone covert movement to a higher position, we would not have observed an intervention effect. The fact that such effect does arise in (277a) suggests that the *wh*-phrase does not undergo covert movement to a higher position.

In the current analysis, I follow Beck's focus-related interpretation mechanism which does not require a *wh*-phrase to move covertly to the CP that designates its scope. In the subsequent discussion, I will specifically assume a mechanism in syntax in which construction of a *wh*-question does not involve covert movement, and instead involves establishing an Agree relation between a *wh*-probe (on Force^0 in Mongolian) and an appropriate goal. This Agree relation is taken to be able to apply long-distance, as evidenced by the fact that a *wh*-phrase inside an embedded CP can be licensed by a matrix Q-particle in (271b), repeated below.

(278) Long-distance *wh*-licensing



Navčaa [Zaya-g **ali** **nom-ig** unš-san gej] asuul-san **be**?
N.NOM Z.ACC which book-ACC read-PST C ask-PST *wh*-Q
[*Embedded scope] *'Navchaa asked (that) which book Zaya read.'

[Matrix scope] 'Which book did Navchaa ask that Zaya read?'

5.3.2 *Wh*-Licensing vs. ECM

The core observation of this section is that *wh*-subjects taking embedded scope are incompatible with ECM. First, recall from previous discussion that *wh*-Q particles in Mongolian indicate *wh*-scope. Therefore, in (279) only the embedded scope reading is available. Notice that in this sentence, the *wh*-phrase *ali nomig* ('which book.ACC') is the embedded object, and ACC case marking on the embedded subject *Bat* is allowed.

(279) ACC-subject compatible with *wh*-object taking embedded scope

Bold	[$_{CP}$	Bat-ig/Bat	ali	nom-ig	unš-san	be	gej]
B.NOM		B-ACC/Bat.NOM	which	book-ACC	read-PST	*wh*-Q	C
asuul-san							
ask-PST							

[Embedded scope only] 'Bold asked (that) which book Bat was reading.'

In contrast, if the *wh*-phrase is in the subject position of the embedded clause, it can only be in NOM case. ACC case marking becomes unacceptable.

(280) ACC-case incompatible with *wh*-subject taking embedded scope

Bold	[$_{CP}$	khen/??*khen-iig	ter	nom-ig	unš-san	be	gej]
B.NOM		who.NOM/who-ACC	that	book-ACC	read-PST	*wh*-Q	C
asuul-san							
ask-PST							

[Embedded scope only] 'Bold asked (that) who read that book.'

Similar effects are found in embedded multiple *wh*-questions. In (281), ECM of the embedded *wh*-subject is impossible.

(281) ACC impossible on *wh*-subject in embedded multiple *wh*-question

Bold	[$_{CP}$	khen/??*khen-iig	yu(-g)	khar-san	be	gej]
B.NOM		who.NOM/who-ACC	what(-ACC)	see-PST	*wh*-Q	C

asuul-san
ask-PST
[Embedded scope only] 'Bold asked (that) who saw what.'

Strikingly, this constraint disappears when the embedded *wh*-subject obligatorily takes matrix scope (i.e., no embedded scope reading is possible).

(282) ACC-subject compatible with *wh*-subject taking matrix scope

Bold [$_{CP}$ khen/khen-iig ter nom-ig unš-san gej] khel-sen
B.NOM who.NOM/who-ACC that book-ACC read-PST C say-PST
be?
Q
[Matrix scope only] 'Who did Bold say (that) read that book?'

The observations made in (279-282) can be descriptively stated as (283).

(283) Constraint on embedded subject *wh*-licensing

**wh*-phrase.ACC, when it is the subject of a finite embedded question.

This generalization immediately raises three questions. First, if Mongolian embedded Spec CP is an A-position which a subject can optionally raise to and receive ACC, why is this option unavailable when the subject is a *wh*-phrase taking embedded scope? Second, why does this option become available when the *wh*-subject obligatorily takes matrix scope? Third, what is the structural source of this pattern, and how do we model it in such a way so that (283) directly falls out from independent properties of grammar? I will defer a solution to these questions until Section 5.5. In the next section, I identify parallels between embedded *wh*-constructions and topicalization in their interactions with ECM, which allows for a unified analysis that accounts for all three phenomena.

5.4 ECM Incompatible with Thematic Topic Subjects

In this section, I examine further data which show that ECM is incompatible with subjects as embedded thematic topics. I identify the status of thematic (aboutness) topics in Mongolian and posit that they are interpreted at Th(eme)P. I then show that thematic topic interpretations are unavailable on ECM subjects, a pattern which resembles (283).

5.4.1 Topic Constructions in Mongolian

In Mongolian, topics are often indicated by the particle *bol*. The interpretation of phrases marked by *bol* is, to some extent, similar to those marked by *wa* in Japanese. For example, similar to *wa*, *bol*-marked phrase can be interpreted as a "theme" (i.e., aboutness topic or thematic topic as defined in Kuno 1975) or as a contrastive topic, thus, (284) is ambiguous.

(284) Both thematic and contrastive reading are available

[Bat **bol**] ter nom-ig unš-san
B.NOM TOP that book-ACC read-PST
'Bat read that book.'

[Thematic reading: Speaking of Bat, he read that book.]

[Contrastive reading: Bat read that book, but other people did not.]

While a contrastive topic reading is available for *bol*-marked phrases in most cases, the thematic reading is possible only when a phrase is in the clause-peripheral position. In (285), *bol* marks *ter nomig* ('that book-ACC') in the canonical object position. The object can only be a contrastive topic. However, if the

object is placed at the sentence-initial position as in (286), the thematic reading becomes accessible.

(285) Only contrastive reading is accessible

Bat [ter nom-ig **bol**] unš -san
B that book-ACC TOP read -PST
'Bat read that book.

[*Thematic reading: Speaking of that book, Bat read it.]

[Contrastive reading: Bat read that book, but he did not read the others.]

(286) Both thematic and contrastive are accessible

[Ter nom-ig **bol**]$_1$ Bat ___$_1$ unš -san
that book-ACC TOP B read -PST
'That book, Bat read.

[Thematic reading: Speaking of that book, Bat read it.]

[Contrastive reading: Bat read that book, but he did not read the others.]

The thematic reading on a subject topic remains accessible even when the subject no longer counts as the sentence-initial constituent after scrambling applies. As shown in (287), when a *bol*-marked subject is preceded by a scrambled object, the thematic reading, although weakened, is still accessible.

(287) Ter nom-ig$_1$ [Bat **bol**] ___$_1$ unš -san
That book-ACC B.NOM TOP read -PST
'That book, Bat read. '

[(Weakened) Thematic reading: As for Bat, he read that book]

[Contrastive reading: Bat read that book, but I don't know about others]

Importantly, thematic topic interpretations are not limited to matrix clauses. In Mongolian, finite CP complements of the verb 'to say' allow embedded thematic topics. A typical case is given in (288), in which the third singular pronom-

inal possessive in the embedded CP coindexes with the matrix subject *bagš* ('teacher'), ensuring that it is not a direct quotation. The embedded subject *Bat* is marked by *bol*, giving rise to an embedded thematic topic reading. Meanwhile, a contrastive topic reading is also available.

(288) Embedded thematic topics

Bagš$_1$ [$_{CP}$ Bat **bol** offis-t ni$_1$ khoyor nom-ig unši-j
Teacher B.NOM TOP office-DAT 3S.POSS two book-ACC read-CVB
duusga-san gej] khel-sen
finish-PST C say-PST
'The teacher$_1$ said that Bat finished reading two books in his$_1$ office.'

[Thematic: The teacher$_1$ said that as for Bat, he finished reading two books in his$_1$ office]

[Contrastive: The teacher$_1$ said that Bat finished reading two books in his$_1$ office (but not other people)]

As (288) exemplifies, structurally speaking, the kind of embedded environment which can accommodate thematic topic interpretations is limited to CPs that are "big enough" (i.e., finite CPs headed by the complementizer *gej*). In contrast, nonfinite embedded clause smaller than a CP cannot host a thematic topic. For example, (289) contains a nonfinite embedded clause which is marked with ACC case. The embedded verb *unšikh* ('to read') is a nonfinite participial form with a non-past interpretation.[13] This embedded clause does not project CP, nor does it allow [$_C$ *gej*]. The phrase marked by *bol* can only have a contrastive reading.

(289) Thematic topic unavailable in nonfinite embedded clauses

[13]Janhunen (2012) calls *-kh* a 'futuritive participle' ending. It refers to the future in some contexts, but is also often used as general atemporal form of the verb with no specific temporal reference. For this reason it is also widely used as the "dictionary form" of verbal elements. See Chapter 2 for further details regarding the ending *-kh*.

Bagš [Bat(-ig) **bol** tawan nom unši-kh]-iig khel-sen
Teacher.NOM B-ACC TOP five book read-INF]-ACC say-PST
Lit. 'The teacher said Bat to read 5 books. '

[*Thematic: The teacher said that as for Bat, he read 5 books.]

[Contrastive: The teacher said that Bat read 5 books (but not other people).]

Based on the patterns of matrix and embedded topics, I propose that there is a designated projection Th(eme)P for thematic topics in the clausal periphery, between TP and CP, following Saito (2009, 2012). A phrase occupying this position receives thematic topic reading.

(290) Clausal periphery with a thematic topic

[$_{CP}$ [$_{ThP}$ [$_{TP}$ ... ...]] *gej*]

5.4.2 Embedded Topicalization vs. ECM

Given the background provided above, consider (291-292). In both examples, the embedded subject *Natsagdorj* is marked by *bol*. Crucially, when the embedded *bol*-marked topic receives ACC case as in (291), the thematic topic reading is no longer available. Such a reading can only be obtained when the embedded subject is in NOM, as in (292). This pattern resembles the one exhibited by *wh*-constructions in section 5.3.2. Typically, both topicalization and *wh*-licensing/movement are identified as A'-operations. The parallelism can therefore be stated in terms of interactions between A- and A'-operations. In particular, A'-operations involving *wh* and thematic topics are incompatible with ECM as an A-operation, when they apply to the same DP at the embedded clausal

periphery.

(291) When embedded subject is marked by *bol*, ECM disallows the thematic reading

Bagš [$_{CP}$ Natsagdorj **-iig** **bol** aldartai zokhiolč gej] oyutn-uud-ad khel-sen
teacher N -ACC TOP famous writer C student-PL-DAT say-PST
'The teacher said to the students that Natsagdorj was a famous writer.'

[??/*Thematic: The teacher said that as for Natsagdorj, he was a famous writer.]

[Contrastive: The teacher said that Natsagdorj was a famous writer (not some other people).]

(292) When embedded subject is marked by *bol*, NOM subject allows the thematic reading

Bagš [$_{CP}$ Natsagdorj **bol** aldartai zokhiolč gej] oyutn-uud-ad khel-sen
teacher N.NOM TOP famous writer C student-PL-DAT say-PST
'The teacher said to the students that Natsagdorj was a famous writer.'

[Thematic: The teacher said that as for Natsagdorj, he was a famous writer.]

[Contrastive: The teacher said that Natsagdorj was a famous writer (not some other people).]

Similar to *wh*-constructions, thematic topic marking on the embedded object does not interfere with ECM. This point is illustrated with (293), in which the embedded object *nooluurin büteegdekhüüniig* ('cashmere products'-ACC) is marked with the topic marker *bol*. The fact that the object *cashmere product* in (293) is not in its canonical object position is indicated by the fact that it is interrupted by a sentential-level adverb 'every year' from the verb *yaw-* ('buy'). In

this example, the thematic reading of the embedded object is accessible. Meanwhile, the embedded subject *eej* ('mother') can receive ACC case marking. The ACC-subject arguably is located at the edge of the embedded CP, since it not only receives ECM but is also locally bound by the matrix subject.

(293) Object thematic topics does not interfere with ECM subject

Zaya$_1$ [$_{CP}$ eej-**iig**-ee$_1$ nooluur-in büteegdekhüün-iig
Z.NOM mother-ACC-REFL.POSS cashmere-GEN product-ACC
bol jil bür ikh yaw -dag gej] nadad khel-sen
TOP year every much buy -HABIT C 1SG.DAT say-PST
'Zaya said to me that her mother buys a lot of cashmere products every year.'

[Thematic: Zaya said that, as for cashmere products, her mother buys a lot every year.]

[Contrastive: Zaya said that her mother buys a lot of cashmere products every year (but not other products).]

Given the observations above, the core generalization about embedded thematic topics can therefore be descriptively stated as (294).

(294) Constraint on thematic topic interpretation on embedded subject

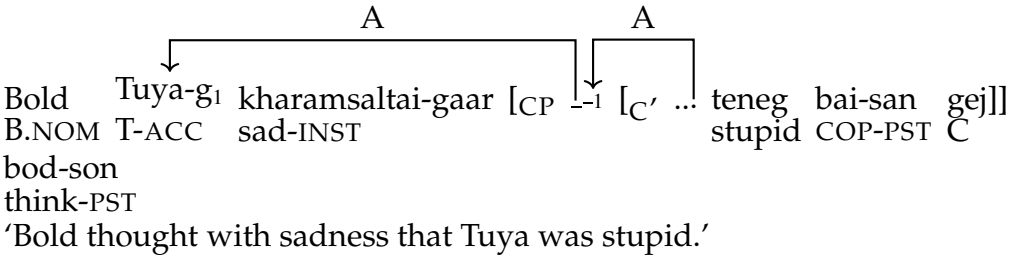
Subject.NOM ***bol*** can be an embedded thematic topic, but **subject.ACC** ***bol*** may not be.

5.5 A/A′-Operations at the Clausal Periphery: A Feature-Based Analysis

5.5.1 Overview of the Analysis

In this section, I summarize the important properties of Mongolian *wh*-questions, thematic topicalization, ECM and their proposed treatment. I then introduce a unified feature-based approach which accounts for their interactions at the embedded clausal periphery. First, it was concluded in Fong (2019) that Mongolian allows A-movement to and from the embedded Spec CP, and thus Spec CP is an A-position. The edge of CP is also a position where the embedded subject may receive ACC case from the matrix clause. Embedded subjects which do not move to Spec CP stay in Spec TP and receive NOM instead. In addition, A-movement launching from Spec CP into the matrix clause is not deemed a violation of the ban on improper movement, since Spec CP is an A-position.

(295) Spec CP as an A-position



'Bold thought with sadness that Tuya was stupid.'

Independently, I have presented novel data on finite CPs hosting embedded *wh*-questions and thematic topicalization. I have adopted (272), repeated as (296), for *wh*-questions with embedded scope, and (290), repeated as (297), for embedded thematic topics.

(296) Clausal periphery of Mongolian embedded *wh*-questions (= (272))

[CP [*ForceP* [TP... ...] Q*be/we*] C*gej*]

(297) Clausal periphery with an embedded thematic topic (= (290))

[$_{CP}$ [$_{ThP}$ [$_{TP}$ … …]] $_{C}$*gej*]

Further, I have presented and examined hitherto unnoticed patterns in which embedded *wh*-questions and thematic topics interact with ECM in a parallel manner. In particular, ECM is incompatible with a *wh*-subject taking embedded scope (descriptively summarized in (283), repeated below as (298)). ECM is also incompatible with an embedded thematic subject (summarized in (294), repeated below as (299)).

(298) Constraint on embedded subject *wh*-licensing (=(283))

***wh*-phrase.ACC**, when it is the subject of a finite embedded question.

(299) Constraint on thematic topic interpretation on embedded subject (=(294))

Subject.NOM *bol* can be an embedded thematic topic, but **subject.ACC *bol*** may not be.

I suggest that (298-299) are tied to the profile of the embedded clausal periphery (296-297). To model this connection, I offer two interrelated claims. The first claim is that raising of embedded subjects to Spec CP occurs in response to a ϕ-probe on C^0, along the line of what has been proposed in Fong (2019) and van Urk (2015). Since the choice between NOM and ACC case on the subject of embedded finite clauses in Mongolian is in principle optional, I assume that the ϕ-probe has the option of staying on C^0 or being inherited by a lower head (i.e., T^0). When the ϕ-probe remains on C^0, it agrees with the subject, and this suppresses the agreement with T^0 which would have resulted in NOM case

assignment, by the case assignment mechanism motivated in Chapter 4. By contrast, when the ϕ-probe is inherited by T^0, no ϕ-agreement with C^0 is triggered, so that the embedded subject is free to agree with T^0, and the case that emerges on the subject would be nominative. [14]

This leads to the second claim: the incompatibility between ECM and A'-operations (298-299) is due to the fact that agreement with the ϕ-probe on C^0 bleeds thematic topic and *wh*-licensing. Therefore, in the current account, the interactions between A- and A'-operations on an embedded subject are modeled in terms of relations between probes bearing different kinds of features. I lay out the analysis in greater detail in the next section.

5.5.2 An Agree-Based Approach to Mongolian ECM

The core aspect of the current analysis is couched in the view that movement of an element X requires prior establishment of a relation between X and a c-commanding probe with some featural requirement which X satisfies (Chomsky 2000). As both *wh*-licensing and topicalization interact with subject raising to Spec CP, I will start with an analysis of the raising operation. I assume a gen-

[14]This can be regarded as one of the natural extensions of proposals which regards Agree as a core component of movement. In particular, if agreement between a probe and an appropriate goal is a precondition for movement, then the availability of subject raising to Spec CP indicates the presence of an appropriate probe on C^0. The matter of how this probe can be formulated and how the optionality of the raising operation can be encoded are separate issues that are closely tied to cross-linguistic variations, and where exactly such optionality is located in the grammar awaits a more comprehensive resolution. Nevertheless, I believe that the results reported here are also compatible with alternative proposals, such as Zyman's $[*D*]^{EPP}$ features, or Pesetsky's [+HR]. The two components important for the current system are a) the precondition of A-movement to Spec CP is the successful establishment of an Agree relation involving appropriate features, and b) that A-movement to Spec CP is optional. Any system that includes these two components should in principle be compatible with the proposal advanced here. There are, however, a few more potential complications that may arise if we posit a ϕ-probe on C^0. I discuss these complications below in 5.5.2.

eral feature-based view of phrasal movement, according to which A-movement is tied to ϕ-agreement (specific formulation varies, see e.g., Chomsky 2007, Obata and Epstein 2011, van Urk 2015). I propose that optional subject raising to Spec CP (which feeds ACC case assignment) is due to (300).

(300) Subject raising to Spec CP

Raising of embedded subjects to Spec CP occurs in response to a ϕ-probe on C^0.

This ϕ-probe on C^0 works in tandem with the hybrid case assignment mechanism in Mongolian, which I argued for extensively in Chapter 4. I repeat the rules for nominative and accusative case below in (301).

(301) Hybrid Case Assignment Mechanism in Mongolian

a. If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as accusative case, unless NP1 has already been marked for case.

b. Nominative case is assigned by finite T^0.

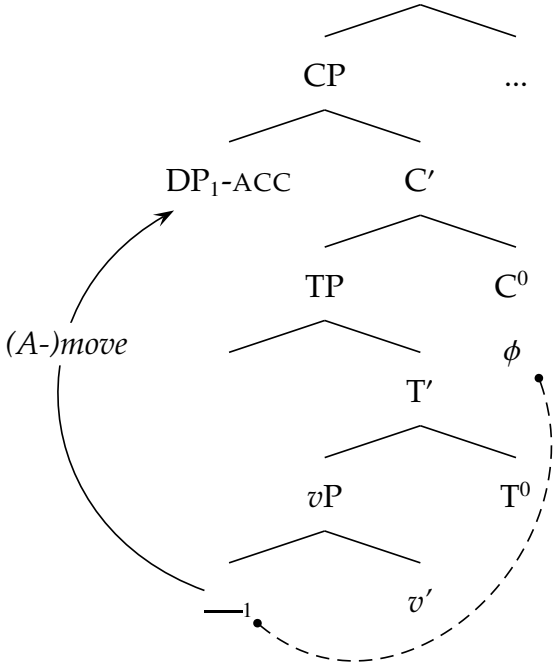
In order to illustrate this proposal, consider the data in (302), in which the subject of the finite embedded clause can either be in nominative or accusative case.

(302) Subject of finite embedded CP can be NOM or ACC (=(263))

Zaya [$_{CP}$ **bagš -iig/bagš** sain khün gej] khel -sen
Z.NOM teacher -ACC/teacher.NOM good person C say -PST
'Zaya said that the teacher is a good person.'

According to (300), movement to the edge of CP is driven by agreement with the ϕ-probe on C^0. This proceeds as follows, in (303), the ϕ-probe on C^0 searches its domain and agrees with the subject at Spec *v*P, since it is the closest goal bearing appropriate features. As a result of this agreement process, the subject DP undergoes movement to Spec CP. At the edge of CP, the subject DP receives dependent accusative case by competition with an eligible case competitor in the higher domain (e.g., the matrix subject). [15]

(303) Subject moves to Spec CP in response to ϕ on C^0



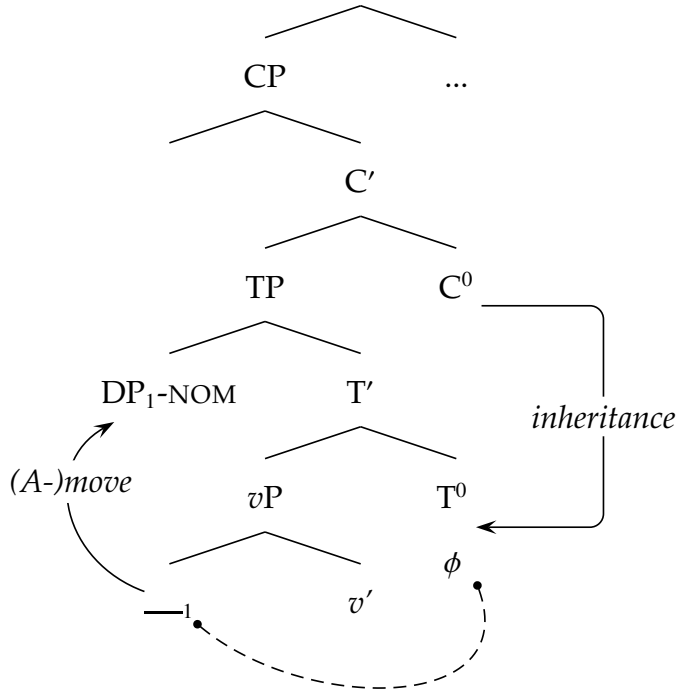
In (303), movement to Spec CP takes place in response to the ϕ-probe on C^0. Thus, this movement is A-movement and Spec CP is an A-position. This is

[15] As mentioned in Chapter 4, at Spec CP, the embedded subject is visible at the matrix VP phase, but not the matrix CP phase. I follow Baker and Vinokurova and suggest that the entire embedded CP shifts out of VP, which makes the embedded subject visible in the same phase as the matrix subject. The embedded subject therefore receives dependent ACC case via competition with the matrix subject.

essentially what has been proposed in Fong (2019) for Mongolian, building on Chomsky (2007) and van Urk (2015). However, it is worth noting that in the current formulation, ϕ-agreement with C^0 only triggers movement to Spec CP, but C^0 is not the accusative case assigner (nor the matrix v). In my account, ϕ-feature-driven movement to Spec CP feeds accusative case assignment in the sense that it puts the subject DP in a structural position accessible to dependent case competition.

Recall that the major feature of Mongolian ECM is that it is *optional*. The embedded subject can be in either accusative or nominative case. So what about nominative subjects? How are they licensed? I will suggest, along the lines of Miyagawa (2005b), that the ϕ-probe has the option of staying on C^0 or being inherited by T^0 (cf. a later account by Miyagawa 2010, which draws on αP and assume the ϕ-probe always gets inherited by a lower head). When the ϕ-probe is inherited by T^0, no ϕ-agreement with C^0 is triggered, so that the embedded subject is free to agree with T^0. Since T^0 is the functional head that assigns nominative case, nominative case will be licensed on the subject DP in this case. As indicated in (304), I further suggest that once the subject DP agrees with T^0, it moves to Spec TP. We will see some evidence for this movement in subsequent parts of the chapter. In the scenario depicted in (304), Spec CP is not an A-position, and thus ECM is not possible. Notably, my approach renders ECM an obligatory operation despite the fact that it yields an optional variation. The C^0 head may optionally keep its ϕ-feature specification or pass it down to T^0, but once it keeps its ϕ-probe, agreement with C^0 and movement to Spec CP become obligatory in syntax.

(304) The ϕ-probe on C^0 is inherited by T^0



Before turning to the core data involving topicalization and *wh*-licensing, I will summarize the key components of my analysis of ECM and discuss some potential alternatives. While maintaining Fong's suggestion that movement to Spec CP in Mongolian takes place in response to a ϕ-probe on C^0, I have proposed that ϕ-agreement with C^0 (resulting in ACC case assignment) suppresses agreement with T^0 (resulting in NOM case assignment). If C^0 passes down its ϕ-features to T^0, the subject DP does not agree with C^0 and is free to agree with T^0, resulting in nominative case assignment.

Taken together, the current proposal amounts to stating that the optionality of ECM in Mongolian is due to the fact that C^0 has the option to either keep its ϕ-probe or pass it down to T^0 (similar to the mechanism adopted in Miyagawa 2005b, cf. Miyagawa 2010; also cf. Takeuchi 2010 for a similar proposal based on optional feature inheritance for Japanese ECM). This analytical choice requires some further remarks given the standardly-assumed feature in-

heritance system. In standard formulations, ϕ-features occurring on C^0 are always inherited by T^0 (Chomsky 2007, 2008). According to *On Phases*, (C to T) feature inheritance follows from the C-I-imposed requirement that the A/A'-distinction be structurally established (Chomsky 2008: 144; also see Chomsky 2007: 22). M. D. Richards (2007) deduces from Chomsky's *On Phases* framework that feature inheritance is necessary and [uϕ] cannot remain on a phase head like C^0, based on the condition that Value and Transfer of uF must happen simultaneously (*Value-Transfer simultaneity*, see M. D. Richards 2007 for further discussion): If Transfer applies before feature Valuation, uF will be sent to the interfaces unvalued, and the derivation will not converge. On the other hand, if Transfer applies after feature Valuation, a valued uF becomes indistinguishable from an iF (see also Epstein and Seely 2002, Obata and Epstein 2011). Feature Inheritance, by which the relevant Agree probe come from C^0 and is inherited by T^0, naturally allows feature Valuation and Transfer to happen together at the phase level. Under this view, feature inheritance from C^0 to T^0 is always necessary. This mechanism is both conceptually motivated and empirically supported by the fact that CP is always associated with A'-operations, and TP A-operations in languages like English.

However, further research on other languages suggests that there are some scenarios in which ϕ-features apparently do need to remain on C^0, in one way or another. For example, Obata and Epstein (2011) observe that the existence of [uϕ] needs to be posited on C^0 in Kilega (also see Carstens 2005), an analysis which does not immediately fit into the system of feature-valuation and the timing of Transfer as suggested by Chomsky (2008) and M. D. Richards (2007). Obata and Epstein's main concern is similar to that pointed out by Richards: [uϕ], being uninterpretable, must be removed before reaching the semantic com-

ponent. However, if [uϕ] is on C^0, it will not be properly removed when C^0's c-command domain undergoes Transfer. As a result, the valued [uϕ] will enter the next phase level, becoming indistinguishable from an [iF], and thus will not be properly deleted. To circumvent this potential issue, Obata and Epstein draw on a parameterized view of edge features (EFs) – pure EFs and ϕ-EFs. Unlike [uϕ] which can be deleted only when certain structural conditions are satisfied, an EF is allowed on a phase head, since EF is always automatically deleted as a part of the operation Transfer (Chomsky 2007: footnote 16). Based on this discussion, Obata and Epstein propose that in Kilega-type languages in which C^0 apparently keeps its [uϕ], it is in fact an EF containing [uϕ]. Similar to Kilega, in Mongolian C^0 apparently does keep its ϕ-features when there is subject raising. While I have assumed that the ϕ-probe can simply remain on C^0 in Mongolian, I believe the Obata and Epstein-style formulation is also compatible with the current case. We could posit that there is a ϕ-edge feature (EF_ϕ) on C^0, which Agrees with an appropriate goal DP, then EF triggers movement of the DP to Spec CP. The fact that movement to Spec CP occurs in response to a ϕ-probe gives the relevant instance of movement A-properties, even though it is movement to a phase edge. In this system, EF_ϕ, being an edge feature, is deleted in the same way as simplex edge features. Therefore, the ϕ-features in EF_ϕ, by being essentially embedded as a part of the EF, get deleted automatically along with EF. Because ECM in Mongolian is optional, the presence of EF_ϕ on C^0 will need to be optional as well (that is, there are two C^0s, one comes with EF_ϕ and one does not). In this formulation, we also need to posit a ϕ-probe on T^0, responsible for nominative case assignment (see a similar formulation in van Urk 2015: 106), although the relationship between the ϕ-probe on T^0 and EF_ϕ on C^0 remains to be clarified. While fully recognizing these equally probable analytical options

and their potential implications, I believe the distinction between them do not give rise to significant empirical consequences in the exposition of the Mongolian ECM case at hand. Thus, I will not pursue this issue further in the current work, and continue to adopt the feature inheritance mechanism illustrated in (303-304).

The current feature-based proposal allows for a systematic treatment of the core data concerning interactions between A/A'-operations at the clausal periphery. The previous claim in Fong (2019) that there is a ϕ-probe on C^0 remained largely a speculation for Mongolian, given the predictions of van Urk's system. If C^0 indeed can be introduced with a ϕ-probe, then it is expected to have detectable properties or have at least some effects on the derivation that can be indirectly observed. The current chapter's novel data on A/A'-interactions offer a case study in which the potential ϕ-probe on C^0 affect the derivation in a way that is observable on the surface. Specifically, I argue that the incompatibility between ECM and A'-operations as summarized in (298-299) is due to the fact that agreement with the ϕ-probe on C^0 bleeds thematic topic and *wh*-licensing. I spell out the specific analyses for topicalization *vs.* ECM and *wh*-questions *vs.* ECM in the next two sections.

5.5.3 Topicalization vs. ECM

I start with the analysis of interactions between thematic topicalization and ECM. First, I take typical A'-features (thematic topic, *wh*) to always come from the leftmost periphery (i.e., C^0). This is consistent with the fact that thematic topic is possible inside an embedded clause only if it projects a CP headed by

[$_C$ *gej*]. Embedded clauses smaller than a CP, like the one in (305) (= (289)), are unable to host a thematic topic.

(305) Thematic topic unavailable in nonfinite embedded clauses (=(289))

Bagš [Bat(-ig) **bol** tawan nom unšikh]-iig khel-sen
Teacher.NOM B-ACC TOP five book read.INF]-ACC say-PST
'The teacher said that Bat will read 5 books. '

[*Thematic: The teacher said that as for Bat, he will read 5 books]

Given the structure for embedded thematic topics (306), I suggest that the Theme head Th^0 requires selection by C^0 to obtain its feature specifications. Specifically, I propose that an A'-probe with the *Theme* feature specification is introduced on C^0, and is inherited by Th^0. To some extent, the current proposal resembles Miyagawa's (2010) topic feature inheritance from C^0 to T^0/α^0. I also adopt his treatment of the topic head in which the topic probe (i.e., *Theme* in the current discussion) is not associated with any particular phrase in the structure. Following Miyagawa, I suggest the *Theme* feature, once inherited by Th^0, simply requires its specifier to be filled. In other words, *Theme* does not probe, and a DP may receive thematic topic interpretation only if it occupies Spec ThP. [16]

(306) Clausal periphery with an embedded thematic topic (= (290))

[$_{CP}$ [$_{ThP}$ [$_{TP}$ ... ...] Th^0] $_C$*gej*]

With this in mind, consider the case in which the thematic topic interpretation

[16]This is also consistent with the view of topicalization in Chomsky (2008:151) "Take.. topicalization of DP. EF of a phase head PH can seek any DP in the phase and raise it to Spec PH ... there are no intervention effects, unless we assume that phrases that are to be topicalized have some special mark." Chomsky further comments that positing such special mark seems superfluous, because "what is raised is identified as a topic by the final position it reaches, and any extra specification is redundant... We need not postulate an uninterpretable feature that induces movement. "

of a *bol*-marked embedded subject is incompatible with ECM. The relevant example is repeated as follows.

(307) Thematic topic reading unavailable on ECM subjects

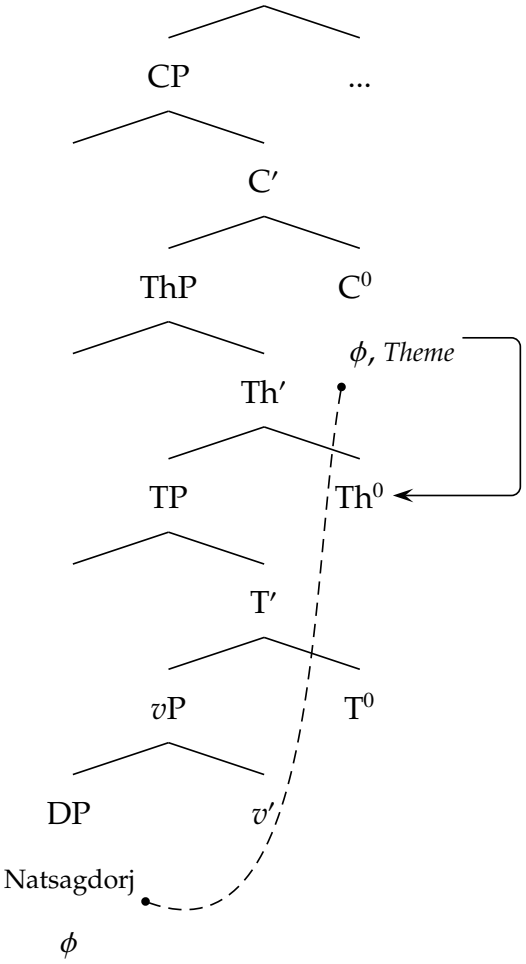
Bagš [$_{CP}$ Natsagdorj **-iig** **bol** aldartai zokhiolč gej] oyutn-uud-ad khel-sen
teacher N -ACC TOP famous writer C student-PL-DAT say-PST
'The teacher said that Natsagdorj was a famous writer.'

[??/*Thematic: The teacher said that as for Natsagdorj, he was a famous writer.]

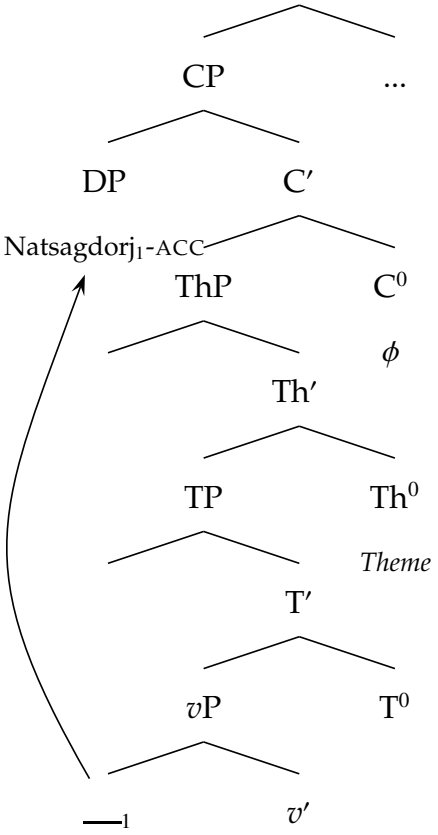
I suggest that the thematic interpretation is unavailable in (307) because agreement with the ϕ-probe on C^0 induces movement to Spec CP, bleeding thematic topic licensing on the subject. This process is illustrated with (308-309). First, as shown in (308), C^0 is introduced with with ϕ and *Theme*. Upon the merger of C^0, two processes happen simultaneously: Th^0 receives *Theme* by inheritance, and in turn requires its specifier to be filled. [17] At the same time, the ϕ-probe on C^0 immediately searches its domain and ϕ-agrees with the subject [$_{DP}$ Natsagdorj], triggering subject raising to Spec CP. The configuration after subject raising is shown in (309). As ϕ-agreement takes place upon the merger of C^0, the raised subject will always end up skipping Spec ThP. Therefore, when C^0 retains its ϕ-features, ECM becomes obligatory, and thus the subject can never become a thematic topic.

[17] Importantly, the requirement that Spec ThP must be filled cannot be simply satisfied by a trace. That is, this position cannot be satisfied "in passing". This treatment of Spec ThP is reminiscent of Rizzi (2006) and Rizzi and Shlonsky's (2007) criterial positions.

(308) ϕ-probe on C^0 Agrees with embedded subject



(309) Embedded subject moves to Spec CP in response to ϕ



Unlike the subject which must raise in response to ϕ on C^0, the object still remains within the domain of Th^0, and should in principle be able to raise to Spec ThP. This prediction is borne out by (293), repeated below as (310). In this sentence, the object *nooluurin büteegdekhüüniig bol* ('cashmere product'.ACC -TOP) receives thematic topic reading within the embedded clause. Recall from previous discussion that the object is no longer in its canonical verb-adjacent position, because it is interrupted by a sentential-level adverb 'every year' from the verb

'buy'.

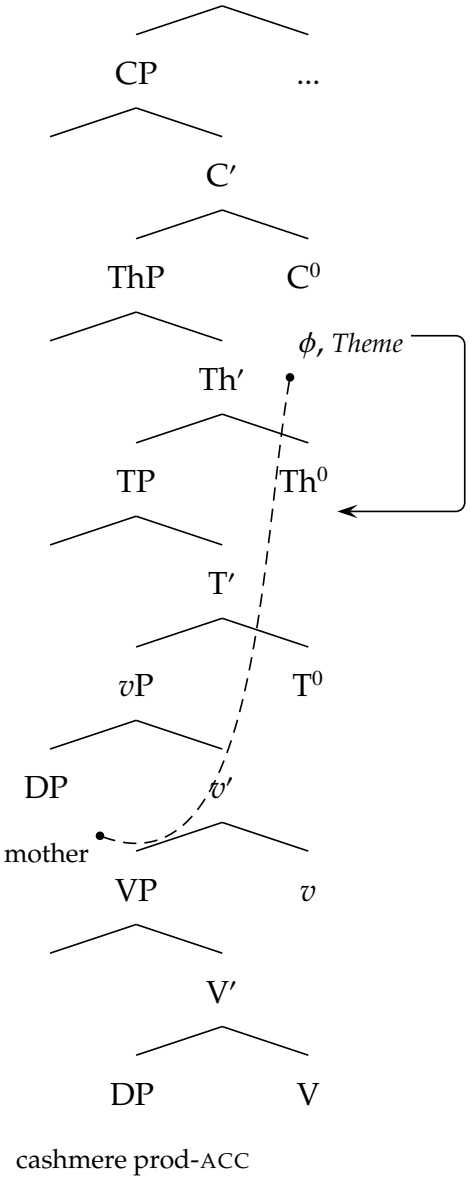
(310) Object thematic topics does not interfere w/ ECM subject (=(293))

Zaya$_1$ [$_{CP}$ eej-**iig**-ee$_1$ nooluur-in büteegdekhüün-iig
Z.NOM mother-ACC-REFL.POSS cashmere-GEN product-ACC
bol jil bür ikh yaw -dag gej] nadad khel-sen
TOP year every much buy -HABIT C 1SG.DAT say-PST
'Zaya said to me that her mother buys a lot of cashmere products every year.'

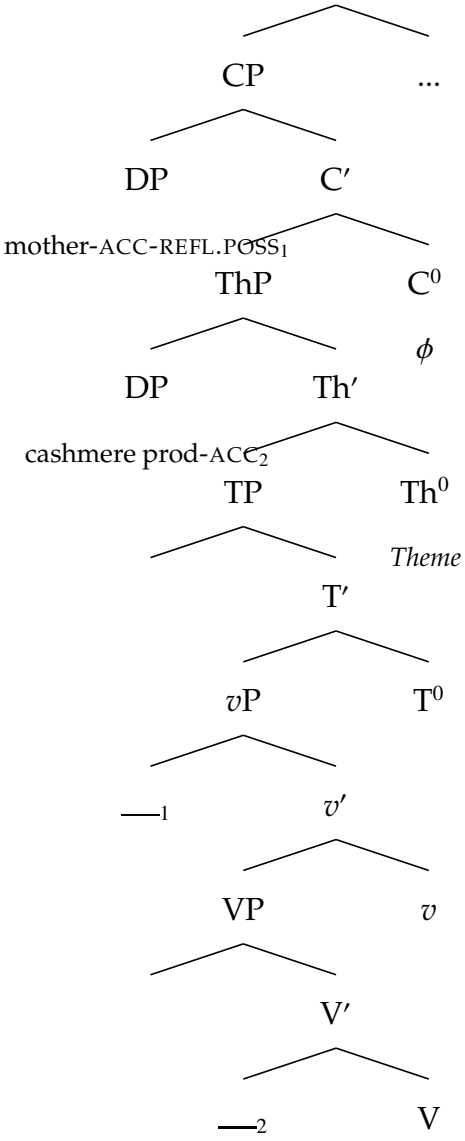
[Thematic: Zaya said that, as for cashmere products, her mother buys a lot every year.]

As illustrated in (311-312), I suggest that the embedded object in (310) ultimately receives thematic interpretation at Spec ThP. The derivation proceeds as follows. The operation in (311) is identical to the tree (308) above – upon the merger of C^0, Th^0 inherits the *Theme* feature from C^0, and the ϕ-probe on C^0 agrees with the embedded subject. As shown in (312), although the subject must raise to Spec CP in response to the ϕ-probe and skipping ThP, the object can independently raise to Spec ThP, receiving a thematic topic reading. Therefore, a construction with a subject undergoing ECM and an object acting as thematic topic like (310) is possible.

(311) ϕ probing, *Theme* feature inheritance by Th^0



(312) Subject moves to Spec CP, object raises to ThP



To sum up, under the current analysis, the interactions between ECM and thematic topicalization essentially result from the ϕ-probe on C^0 acting on a structure in which a ThP is projected lower than CP. If C^0 retains its ϕ-features, the ϕ-probe always ends up agreeing with the subject and inducing raising to

Spec CP. Since a DP may receive thematic topic interpretation only when it occupies Spec ThP, a subject attracted by ϕ on C^0 always ends up skipping the thematic topic position Spec ThP (importantly, as noted in footnote 17, Spec ThP cannot be filled "in passing"). The object, in contrast, does not interact with ϕ on C^0. Therefore, it is free to move to Spec ThP, receiving thematic interpretation there. On the other hand, if C^0 passes its ϕ-features down to T^0, the subject DP does not agree with C^0 or move to Spec CP. In this scenario, both the subject and the object can become the embedded thematic topic. Since no raising-to-Spec CP occurs in the absence of ϕ-features on C^0, when a subject becomes the thematic topic, it can only be in NOM case:

(313) NOM subject-*bol* allows thematic topic reading

Bagš [$_{CP}$ **Natsagdorj bol** aldartai zokhiolč gej] oyutn-uud-ad khel-sen
teacher N.NOM TOP famous writer C student-PL-DAT say-PST
'The teacher said that Natsagdorj was a famous writer.'

[Thematic: The teacher said that as for Natsagdorj, he was a famous writer.]

5.5.4 *Wh*-Licensing vs. ECM

In this section, I extend the above analysis to the interactions between embedded *wh*-questions and ECM. Based on the observations made in section 5.3, I suggest that Mongolian *wh*-questions do not involve covert movement of *wh*-phrases, and instead involve the establishment of an Agree relation between an A'-probe with *wh*-feature specifications and a goal bearing *wh*-features.[18] As an

A'-feature, the interrogative *wh* feature is similar to *Theme* in the sense that it is introduced on C^0 and is inherited by a lower head (i.e., $Force^0$). In effect, $Force^0$ starts functioning as a probe which seeks an appropriate goal to agree with only until C^0 is introduced.

Before turning to the core data, another key property of *wh*-questions in Mongolian needs to be introduced. Let us first consider the examples in (314).

(314) a. Navčaa [$_{CP}$ Zaya-g **ali** **nom-ig** unš-san **be** gej] asuul-san
N.NOM Z-ACC which book-ACC read-PST Q C ask-PST
'[$_{-Q}$ Navchaa asked [$_{Q}$ (that) which book Zaya read]] '

b. ***Khen** [$_{CP}$ Zaya-g ter nom-ig unš-san **be** gej] asuul-san
who.NOM Z-ACC that book-ACC read-PST Q C ask-PST
'[$_{-Q}$ Who asked [$_{Q}$ (that) Zaya read that book]] '

These examples instantiate a well-known generalization first proposed by K.-I. Harada (1972), that in languages like Japanese (as well as Mongolian), a *wh*-phrase must be contained within the CP where it takes scope. This is arguably a condition that holds at LF, given the radical reconstruction property of long distance scrambling (see section 3.4.3). We have also seen that in Mongolian Q-particles unambiguously indicate the *wh*-scope. Taken together, Harada's condition can be stated as follows for Mongolian:

(315) A *wh*-phrase must be interpreted within the scope of the *wh*-question particle at LF.

With this background in mind, consider (316), repeated from (280). In an embedded question, a *wh*-phrase acting as a subject argument may not undergo ECM.

[18]Alternative formulations of the nature of this A'-probe are also available. For example,

(316) ACC-case incompatible with *wh*-subject taking embedded scope (=(280))

Bold [$_{CP}$ khen/??*khen-iig ter nom-ig unš-san be gej]
B.NOM who.NOM/who-ACC that book-ACC read-PST *wh*-Q C
asuul-san
ask-PST
[Embedded scope only] 'Bold asked (that) who read that book.'

Patterns similar to (316) have previously been observed in Japanese by Y. Kitagawa (1985). According to Y. Kitagawa's account, the unavailability of ACC case in (317b) is due to the fact that the feature [+*wh*] makes CP a barrier to government.

(317) Japanese: ACC unavailable on *wh*-subjects with embedded scope (Y. Kitagawa 1985)

a. Kanozyo wa [$_{CP}$ sono otoko ga/o sagisi da to]
she TOP that guy NOM/ACC swindler PRES COMP[-WH]
siranakatta
did-not-know
'She didn't know that that guy was a swindler.'

b. Kanozyo wa [$_{CP}$ dono otoko ga/*o sagisi da
she TOP which guy NOM/*ACC swindler PRES
ka] siranakatta
COMP[+WH] did-not-know
'She didn't know which guy was a swindler.'

It is difficult to extend this account to Mongolian. As discussed in previous sections, when the *wh*-phrase is not the subject in a Mongolian embedded question, ECM is indeed allowed (318). The embedded question in (318) presumably has the same size as that in (316), both being [+*wh*] CP.

it is possible to extend Miyagawa's (2010) analysis of *wh*-questions to the current account. In Miyagawa's analysis, *wh*-questions are formed via a focus probe entering into Agree relation with the focus feature of the closest *wh*-phrase. See Miyagawa (2010): Chapter 5 for detailed discussion of the nature of such focus feature.

(318) ACC-subject compatible with *wh*-object taking embedded scope (=(279))

Bold [$_{CP}$ Bat-ig/Bat ali nom-ig unš-san be gej]
B.NOM B-ACC/Bat.NOM which book-ACC read-PST *wh*-Q C
asuul-san
ask-PST
[Embedded scope only] 'Bold asked (that) which book Bat was reading.'

Therefore, the question relevant for the Mongolian case here is why ECM becomes unavailable when the subject is a *wh*-phrase taking embedded scope. Recall from section 5.2 that Spec CP is regarded as an A-position, and thus the raising of embedded subject to Spec CP is a kind of A-movement. In the current Agree-based analysis, properties of A-movement are the properties of movement resulting from the interaction of a ϕ-probe with its goal, rather than the properties of a particular syntactic position. Under this view, we may attribute the contrast between (316) and (318) to an interpretation requirement stated as follows, bearing in mind that (319) merely states the observation, leaving a comprehensive explanation for it aside. [19]

(319) Feature-Driven Interpretation Requirement (FDIR)

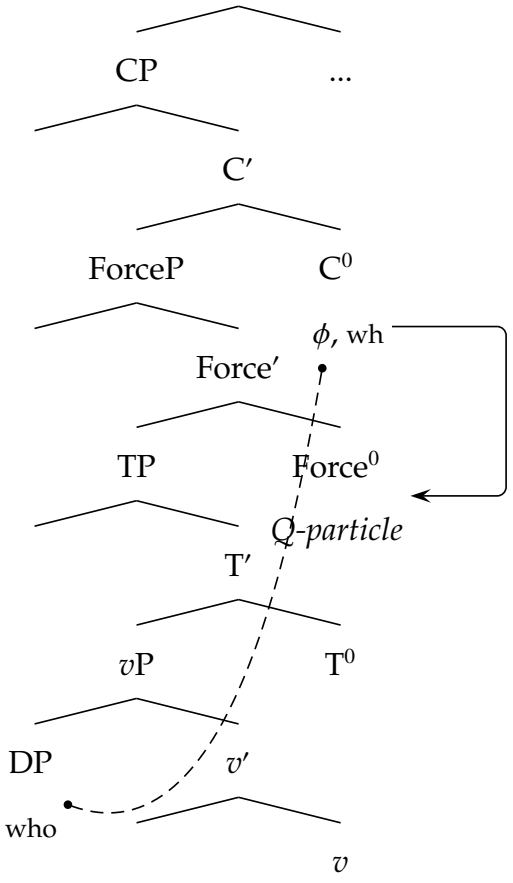
An element undergoing movement in response to a ϕ-probe is interpreted at its landing site.

FDIR stated in (319) correctly excludes ECM on a *wh*-subject taking embedded scope as in (316). Similar as before, suppose C^0 is introduced with a ϕ-probe along with *wh*, the latter being inherited by Force^0, as depicted in (320). If

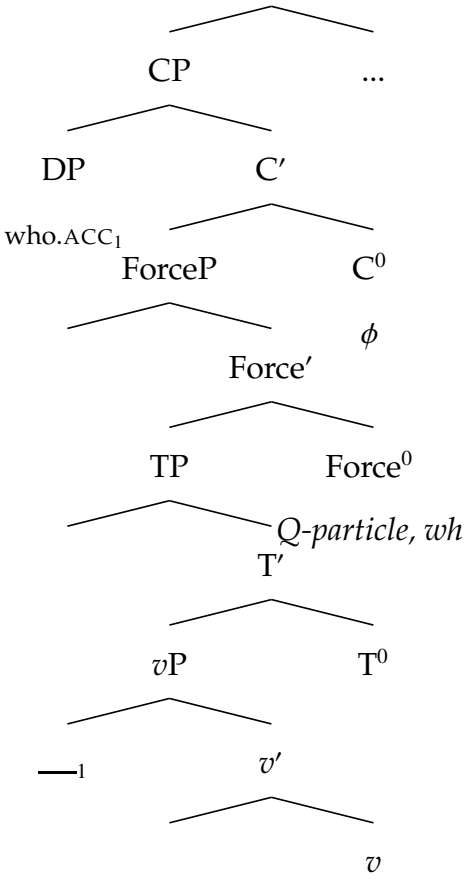
[19]FDIR in (319) amounts to stating that A-movement does not reconstruct, under the definition that A-movement is ϕ-feature driven. The real source of (319), and how much of it lies within the purview of narrow syntax, awaits future research. A potential line to consider might be van Urk's proposal that Agree with *wh* features is interpreted at LF as abstraction over choice functions, but Agree with ϕ-features gives rise to abstraction over individuals. That is, different types of Agree in syntax are interpreted at LF distinctly, although a general solution awaits further investigation.

the subject DP bears a *wh*-feature, both ϕ on C^0 and the *wh*-probe inherited by $Force^0$ will target the subject upon merger of C^0. As subject raising to Spec CP is a process driven by ϕ-feature agreement, FDIR (319) forces the subject to be interpreted at Spec CP. The subject *wh*-phrase is outside of the scope of $Force^0$, and thus will not be licensed, as depicted in (321).

(320) ϕ-probe on C^0 Agrees with embedded *wh*-subject



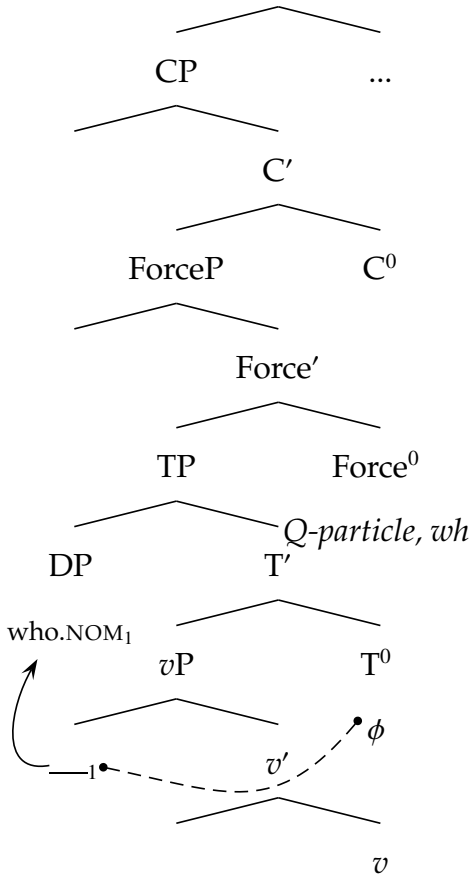
(321) *wh*-subject moves to and gets interpreted at Spec CP



On the other hand, if C^0 passes down its ϕ-features to T^0, the subject does not undergo ϕ-feature driven movement to Spec CP, and is free to agree with T^0, receiving NOM case. Since TP is within the scope of $Force^0$, nominative *wh*-

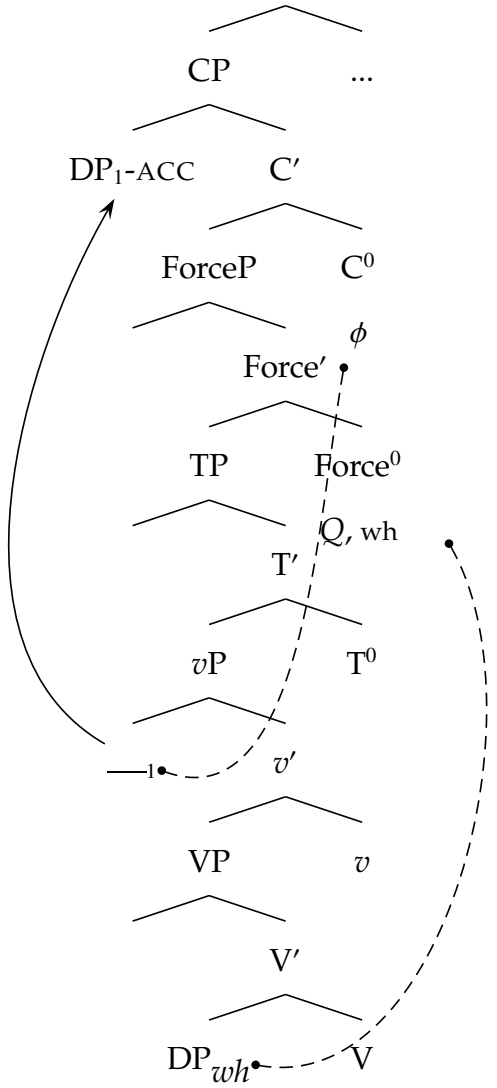
subjects can be properly licensed.

(322) NOM *wh*-subject can be properly licensed



In contrast to subjects, when it is the object that bears *wh*-features instead of the subject, *wh*-licensing does not interfere with ϕ-probing of C^0, and thus ECM should be possible. This is borne out by the data in (318), with the derivation schematized in (323). Here $Force^0$ targets the object DP bearing *wh*, and ϕ on C^0 targets the subject which does not bear *wh*. The subject can raise to Spec CP, and the object *wh*-phrase is properly licensed by $Force^0$.

(323) ϕ-probe on C^0 Agrees with subject, *wh* licenses object



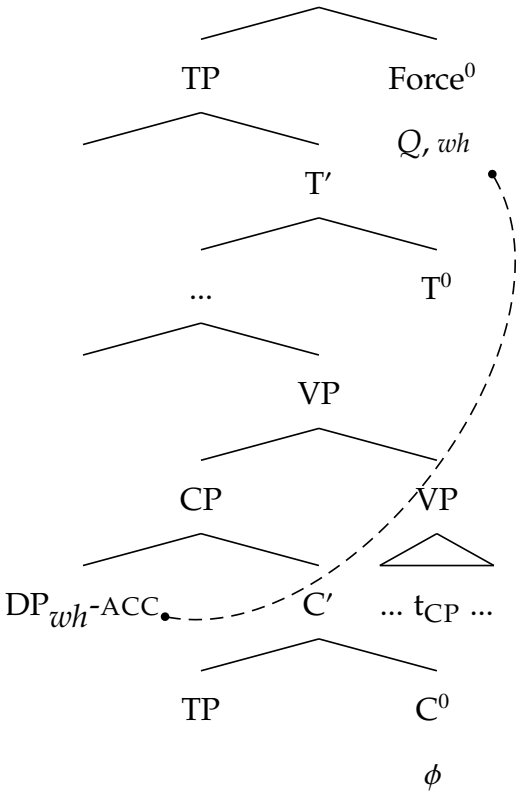
As a final piece of data to complete the discussion, consider the behavior of an ECM subject in a matrix scope question in (282), repeated in (324). Here the *wh*-phrase *khen* ('who') in the embedded subject position can undergo ECM. Under the current analysis, this means that the subject can raise to the embedded Spec CP in response to the ϕ-probe on C^0. Since the embedded clause is not a question, the downstairs C^0 does not come with *wh*, nor is there a ForceP projected inside the embedded domain. Since *wh*-licensing is taken to be

able to apply long-distance in the current analysis (as indicated by the facts in (143)), the Force^0 in the matrix clause can license the embedded subject either in embedded Spec CP (with ECM) or in a CP-internal position (without ECM). The visualization in (325) illustrates the former scenario, in which the subject DP is at the edge of CP, getting ACC case there and being *wh*-licensed by matrix Force^0.

(324) ACC-subject compatible with *wh*-subject taking matrix scope (= (282))

Bold [$_{CP}$ khen/khen-iig ter nom-ig unš-san gej] khel-sen be?
B.NOM who.NOM/who-ACC that book-ACC read-PST C say-PST
Q
[Matrix scope only] 'Who did Bold say (that) read that book?'

(325) Matrix Force^0 licenses embedded subject at Spec CP



5.5.5 Improper Movement

So far, I have explored the consequences of feature-driven phrasal movement by examining the interactions between A/A'-operations at the Mongolian clausal periphery. I identified two scenarios in which A-movement to Spec CP interacts with A'-operations. First, I showed that ECM is incompatible with *wh*-subjects taking embedded scope. In addition, ECM is incompatible with embedded subjects receiving a thematic topic reading. Since both *wh*-licensing and topicalization are A'-operations, their interactions with ECM suggest a unified account. Based on the distribution of complementizers in embedded *wh*-questions and embedded topicalization, I conclude that there exists an intermediate A'-domain between TP and CP in Mongolian, resulting in a [[[... A] **A'**] **A**] clausal periphery. I propose that Mongolian subject raising to Spec CP takes place in response to a ϕ-probe on C^0, feeding accusative case assignment on the subject. If raising happens, the subject essentially skips over the intermediate A'-domain, bleeding *wh*- and thematic topic licensing.

The major part of the empirical investigation in this chapter has focused on the consequences of previous proposals that some languages allow A-movement through CP, and therefore Spec CP can be an A-position in those languages (e.g., Tanaka 2002 for Japanese, J.-M. Yoon 1991 for Korean, Fong 2019 for Mongolian). The A-status of Spec CP raises important questions about the nature of the A/A'-distinction and how scope, usually determined by A'-movement, can be affected by A/A'-status. Specifically, if movement to Spec CP is a kind of A-movement, such movement should in principle interact with other operations that target CP, such as *wh* and topicalization.

The empirical data presented in this chapter indicate that in Mongolian, sub-

ject raising to Spec CP (feeding ECM) is incompatible with the subject having embedded *wh*-scope or embedded thematic topic interpretation. Using (326) as an example, repeated from (280), when the *wh*-subject obligatorily takes embedded scope, it cannot undergo ECM. Superficially, it seems that a ban on improper movement is operative – hypothetically, the subject has already undergone *wh*-movement in (326), and hence it may not further undergo A-movement to Spec CP, an A-position.

(326) ACC-case incompatible with *wh*-subject taking embedded scope (= (280))

Bold [$_{CP}$ khen/??*khen-iig ter nom-ig unš-san be gej] asuul-san
B.NOM who.NOM/who-ACC that book-ACC read-PST *wh*-Q C ask-PST
[Embedded scope only] 'Bold asked (that) who read that book.'

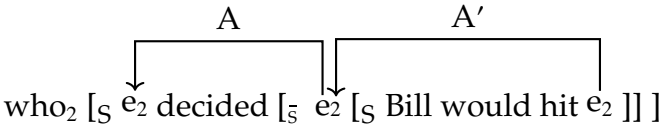
However, a careful examination into configurations like (326) reveals a crucial distinction between Mongolian and typical English improper movement cases. In particular, the canonical English improper movement scenario involves the interaction of two constraints: a) locality requirement of movement; and b) a well-formedness requirement on movement chains such as a ban on improper movement (specific formulation and explanations vary, see e.g., Chomsky 1973, May 1979, Lasnik and Uriagereka 1988, Cinque 1990, Müller and Sternefeld 1993, among others). But I argue that the same scenario in fact does not arise in Mongolian. Consider the classic account by May (1979), building on Chomsky (1973), for the ungrammaticality of English examples like (327).

(327) May (1979: 720)

Who$_1$ decided Bill would hit $\_\_{}_1$?

Example (327) is ungrammatical because a ban on improper movement [20] rules out the chain representation created by locality-governed movement, shown in (328), adapted from May's (2). Due to locality constraints, extraction out of a finite clause requires a prior stop at the edge of the clause. In (328), this obligatory intermediate stop is e_2 at $\bar{S}$, an A′-position in English. Essentially, the surface form of (328) is ruled out in English under the dual restrictions of locality plus a ban on improper movement – If locality is obeyed, then movement targeting the matrix S must stop at the intermediate A′-position at $\bar{S}$, violating the ban on improper movement. On the other hand, if the DP had skipped the intermediate $\bar{S}$ and directly moved to the matrix clause A-landing site, the ban on improper movement would have been circumvented, but locality would have been violated. There is no derivation available that satisfies both in (327)/(328). Restated in terms of phase theory, what (327)/(328) suggests is that a DP at the edge of a phase cannot undergo further A-movement, and can only undergo further A′-movement. Because locality alone does not rule out A-movement from a phase edge, an additional ban on improper movement has been invoked.

(328) Based on May (1979: 720)



While maintaining that locality and the well-formedness requirement of

[20] The ban is stated along the lines of "Conditions on Transformations", in which Chomsky suggests a prohibition of movement of a phrase in COMP to a non-COMP position. See Chomsky (1973), footnote 24 for further discussion. May argues that the source of such prohibition lies in binding. His account has two crucial components. First, the intermediate A′ landing site cannot be skipped due to locality (Tensed S condition and/or Specified Subject Condition). Second, A′-movement leaves behind variables which are subjected to binding Condition C. If A′-movement were followed by a further step of A-movement, the variable would have been bound from an A-position, violating Condition C.

chains (*A′→A) hold in English and Mongolian alike, I would like to argue that these restrictions do not end up achieving the same effect in Mongolian, due to differences in clausal architecture. In particular, suppose that in Mongolian a DP moving out of CP must stop at the edge of CP; from the perspective of locality the DP need not stop at ForceP or Th(eme)P, which are lower than CP. Unlike the English configuration in (328), in which the intermediate A′-landing site is not skippable (because it is the edge of a clause), in Mongolian subject raising to CP skipping the lower *wh*-positions (ForceP) or thematic topic positions (ThemeP) does not violate any locality restriction. Stated in more general terms, the scenario in Mongolian is that since its clausal periphery has the shape $[[[\ \ldots\ ]_{A}]_{\mathbf{A'}}]_{\mathbf{A}}$, movement can in principle directly target the A-edge of the clause, skipping the lower A′-domain.

(329) a. One-fell-swoop movement to CP obeys locality

$[_{CP} \ldots [_{CP}\ [_{C'}\ [_{ForceP/ThP} \ldots [$ SUBJECT ... ...] ...] C]]]

b. Movement to A-edge-position skips intermediate A′-domain

$[_{CP} \ldots [_{CP\ (A)}\ [_{A'} \ldots [$ SUBJECT ... ...] ...] C]]

If this is on the right track, the resemblance of the Mongolian phenomena and the canonical English improper movement cases is only superficial; and whatever constraints in the syntax that rule out English (327) cannot be used to rule out Mongolian (326) without some further stipulations. Since locality does not force the Mongolian A-movement under examination to have an intermediate

A'-stop, invoking a ban on improper movement becomes difficult. In addition, under the current account, Mongolian *wh*-licensing does not involve covert or overt movement. The proposal that the *wh*-phrase does not move adds further technical challenge to approaches that rely on a ban on improper movement. [21] In the current account, the Mongolian derivation depicted in (329) falls out directly from the Agree mechanism. The embedded subject moves to Spec CP in response to the ϕ-probe on C^0. Since ϕ-agreement is involved, subject raising to Spec CP behaves like A-movement. In addition, since the intermediate A'-domain is skipped, the subject never gets properly licensed by $Force^0$ or thematic topic head. Finally, this account also shares with previous Agree-based approaches in that no inherent A/A'-distinction is invoked.

5.6 ECM vs. Scrambling: Reconstruction, Features, and Case

5.6.1 Radical Reconstruction and Condition C

In this chapter, I have presented two sets of empirical facts suggesting that Mongolian ECM, a ϕ-feature-driven operation, bleeds *wh*- and topic interpretation. In particular, a *wh*-phrase in the subject position of an embedded question may not undergo ECM, and an ECM subject may not receive (embedded) thematic topic interpretation. I have attributed these facts to the previous insight that Spec CP in some languages can be an A-position (e.g., J.-M. Yoon 1991, Tanaka 2002, van Urk 2015, Fong 2019). Crucially, in Mongolian *wh*-features and the-

[21] This challenge is even more prominent when we look beyond the A/A'-movement distinction and consider selective opacity effects more generally, an important point discussed in great detail in Keine (2016, 2019).

matic topic features are hosted by heads lower than CP. Due to the structure of Mongolian clausal periphery, ECM subjects obligatorily raises to the edge of CP (when C^0 retains its ϕ-features). This movement bleeds topic and *wh*-licensing in the lower domain.

The basic intuition behind this proposal is the idea that ϕ-feature-driven movement does not reconstruct. This can be illustrated with the core *wh* vs. ECM examples, repeated below. As I have posited, following Fong (2019), that ECM subjects move to Spec CP in response to a ϕ-probe on C^0, a *wh*-phrase undergoing such movement may not reconstruct back into the scope of the embedded Q-particle at LF. As a result, an embedded question will not be properly licensed, hence the ungrammaticality of (330a). In contrast, while movement to Spec TP (resulting in NOM case assignment) is also driven by ϕ-features (on T^0), since TP is projected lower than the Q-particle, the subject is still within the scope of Q at LF. Therefore, (330b) is acceptable. To summarize, (330) is captured by the idea that movement driven by ϕ-features does not reconstruct for *wh*-interpretation.

(330) ECM does not show radical reconstruction

a. ECM pulls *wh*-phrase outside of the domain of Q, which does not reconstruct for *wh*-interpretation, cf. (330b)

??*Bold [$_{CP}$ khen-iig$_1$ [$_{C'}$ —$_1$ ter nom-ig unš-san be gej]] asuul-san
B.NOM who-ACC that book-ACC read-PST *wh*-Q C ask-PST
Int. 'Bold asked (that) who read that book.'

b. NOM subjects licensed in the domain of Q

Bold [$_{CP}$ [$_{TP}$ khen ter nom-ig unš-san] be gej]
B.NOM who-NOM that book-ACC read-PST *wh*-Q C

asuul-san
ask-PST

The fact that feature-driven movement to Spec CP does not reconstruct for *wh*-interpretation contrasts sharply with long distance scrambling (LDS), which does reconstruct for *wh*-interpretation. Recall from Chapter 3 that Mongolian LDS has the radical reconstruction property. The crucial examples are repeated below.

(331) LDS shows radical reconstruction

a. Base: Embedded *wh*-question

Bold [$_{+Q}$ Zaya-g **yamar nom-ig** aw-san **be** gej] asuul-san
B.NOM Z-ACC what book-ACC buy-PST Q C ask-PST
'Bat asked [Q what book Zaya bought]'

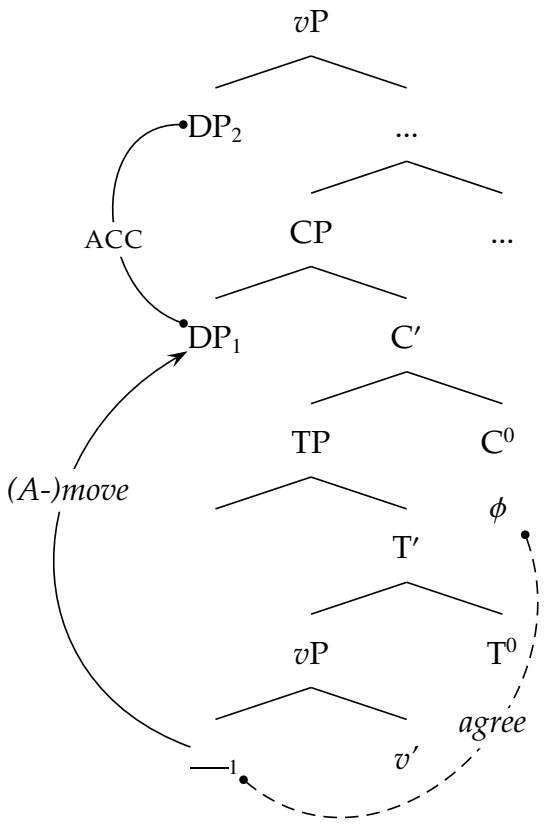
b. Scrambled: LDS *wh*-phrase licensed by embedded Q

Yamar nom-ig Bold [$_{+Q}$ Zaya-g ___$_1$ aw-san **be** gej] asuul-san
what book-ACC B.NOM Z-ACC buy-PST Q C ask-PST
'what book$_1$, Bat asked [Q Zaya bought ___$_1$]'

Significantly, although ECM (raising to Spec CP) does not show radical reconstruction for *wh*-interpretation but LDS does, both ECM and LDS interact with (dependent accusative) case assignment. Recall from Chapter 4 that accusative case in Mongolian is assigned as a dependent case. As a dependent case, accusative can be assigned in positions that are different from those where case is valued through Agree, which has nontrivial consequences on Condition C effects. Given the feature-driven analysis of ECM, the dependent case analysis implies that accusative case assignment is not a reflex of ϕ-feature agreement. Instead, accusative case assignment is separated from ϕ-agreement with C^0. To further illustrate this point, consider again the main proposal for Mongolian ECM, repeated below. In the typical case, where the ECM subject (DP_1) does

not further raise into the matrix clause, it may receive accusative case at Spec CP, where it is visible to DP_2 in the matrix clause and can participate in case competition with DP_2 (assuming DP_2 has not yet been valued for case). In (332), although the movement to Spec CP is driven by ϕ-agreement with C^0, C^0 is crucially not the case assigner. Case assignment is dissociated from ϕ-agreement in this example.

(332) Subject moves to Spec CP in response to ϕ on C^0



In addition, Spec CP is not the only position at which accusative can be assigned. Since accusative is a dependent case, in principle DP_1 can receive case as long as it is still within the local c-command domain of DP_2. Recall the subject scrambling/"hyperraising" examples from Chapter 4, in which an ECM subject

can move into the matrix clause while bleeding Condition C, so long as dependent accusative case can still be assigned to it (relevant examples repeated in (333)).

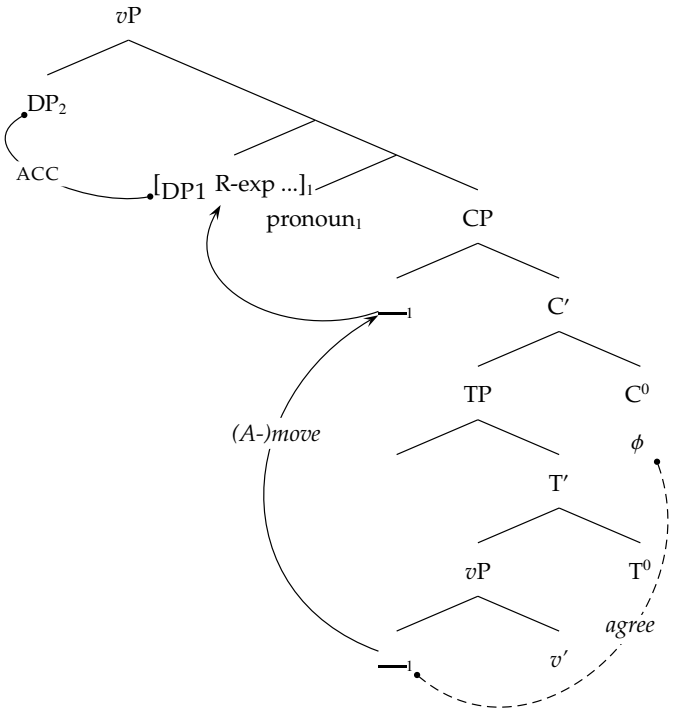
(333) No reconstruction in scrambling of ACC SUBJ (matrix DAT binder)

a. *Bi **tüün**$_1$**-d** [$_{CP}$[$_{DP}$ **Bat**$_1$ **-in** eej -iig] sain khün gej]
1SG.NOM 3SG-DAT B -GEN mother -ACC good person C
khel -sen.
say -PST
Int. 'I said to **him**$_1$ that **Bat**$_1$'s mother is a good person.'

b. ?[**Bat**$_1$ **-in** eej -iig]$_2$ bi **tüün**$_1$ **-d** [$_{CP}$ ___$_2$ sain khün gej] khel -sen.

According to my case-based analysis of Condition C effects in Chapter 4, the fact that scrambling (or hyperraising in Fong's term) of the embedded subject can bleed condition C in (333b) is due to the additional case assignment potential of dependent accusative case. In (333b), *Bat-in eej-iig* receives dependent accusative case not being in Spec of the embedded CP, but inside the matrix clause at a position where it is not c-commanded by the pronoun *tüünd* (3SG-DAT) but is still c-commanded by *bi* (1SG.NOM) (See Chapter 4 for detailed analysis). At this matrix intermediate position, the scrambled subject can receive accusative case by competition with the matrix subject, at the same time, it is located outside of the c-command domain of the matrix pronoun. Thus, a Condition C violation is circumvented. This process is illustrated with (334). Thus, the result in (333) is expected because the raised embedded subject can receive dependent case in the matrix clause.

(334) Subject raising into matrix clause bleeds Condition C



In this respect, movement of ECM subjects is similar to LDS of embedded objects, which is also capable of bleeding Condition C so long as the case requirement of the scrambled DP can be satisfied (e.g., (335)). LDS, unlike ECM, arguably does not involve ϕ-feature checking (for arguments that LDS does not involve feature checking at all, see Saito and Fukui 1998, Saito 2004; cf. Miyagawa 2003, 2005b, 2006).

(335) (=(207)) LDS does not involve ϕ-features, but bleeds Cond C

?[**Bat**$_1$**-in** esee-g]$_2$ Zaya **tüün**$_1$ **-d** [$_{CP}$ bagš -iig $\_\_{}_2$ unš-san
Bat-GEN essay-ACC Z.NOM he -DAT teacher -ACC read-PST
gej] khel-sen.
C say-PST
'**Bat**$_1$'s essay, Zaya said to **him**$_1$ that the teacher read.'

The main takeaway from the above discussion is the following: Although raising of the ECM subject to Spec CP takes place in response to ϕ-agreement with C^0, such ϕ-agreement is separated from accusative case assignment. In

addition, Condition C tracks case assignment, not ϕ-agreement. If this is on the right track, then radical reconstruction for *wh*-interpretation cannot be regulated by the same kind of case constraint that regulates Condition C.

In addition, consider nominative embedded subjects. Unlike ECM (involves ϕ-agreement) and LDS (does not involve ϕ-agreement) which interact with accusative case assignment, movement to TP involves ϕ-agreement with T^0 and nominative case assignment by T^0. Given my case-based analysis of Condition C, we predict that movement to Spec TP can bleed Condition C since it involves nominative case assignment. This prediction is borne out by the passivization data in Chapter 4, repeated below.

(336) Passivization bleeds Condition C

?[**Bat**$_1$-in nom]$_2$ bagš-aar **tüün**$_1$**-d** $\_\_{}_2$ ögö -gd -sön
B-GEN book.NOM teacher-INST 3SG-DAT give -PASS -PST
'**Bat**$_1$'s book was given to **him**$_1$ by the teacher. '

Taken together, the relevant properties of these three types of movement can be summarized in the table below.

(337) Three types of movement

Movement type	Involve ϕ-agreement?	Interact w/ case assignment?	What case is assigned?
Raising to Spec CP (ECM)	Yes, with C^0	Yes	ACC
Movement to Spec TP	Yes, with T^0	Yes	NOM
LDS	No	Yes	ACC

Given these three types of movement, the question I would like to explore is, how do the properties in (337) relate to the presence or absence of radical reconstruction in a given type of movement? We have seen from this chapter that raising to Spec CP (ECM) does not show radical reconstruction, but LDS does. In the meantime, both ECM and LDS interact with accusative case assignment, and thus they can both bleed Condition C in certain contexts (similarly, since movement to Spec TP involves nominative case assignment, it can also bleed Condition C given the appropriate structural configuration). In other words, although ECM and LDS differ in terms of radical reconstruction, they pattern similarly in terms of Condition C reconstruction. We have established that Condition C is regulated by case, then what exactly is the source of radical reconstruction?

(338) Radical reconstruction properties (to be completed)

Movement type	Shows radical reconstruction?
Raising to Spec CP (ECM)	No
Movement to Spec TP	
LDS	Yes

5.6.2 Movement with and without Feature Valuation

Since Saito (1989), radical reconstruction has been regarded as a defining property of LDS in languages like Japanese and Korean. As shown in the preceding sections, Mongolian patterns similarly with JK in that LDS of a *wh*-phrase can be freely undone at LF.

(339) Japanese LDS shows radical reconstruction (Saito 2004: 145)

?Dono hon-o$_1$ [John -ga [$_{CP}$ Mary-ga $\_\__1$ yonda ka] siritagatteiru]
which book-ACC$_1$ J -NOM M-NOM read Q want-to-know (koto)
fact
'[Which book$_1$, John wants to know [Q Mary read t$_1$]].'

(340) Mongolian LDS shows radical reconstruction

Yamar nom-ig Bold [$_{+Q}$ Zaya-g $\_\__1$ aw-san **be** gej] asuul-san
what book-ACC B.NOM Z-ACC buy-PST Q C ask-PST
'What book$_1$, Bat asked [Q Zaya bought $\_\__1$]'

The radical reconstruction property illustrated above sets scrambling apart from English A'-movement such as *wh*-movement and topicalization. Examples (341-342), taken from Saito (2004), illustrate the absence of radical reconstruction with English topicalization.

(341) ??[$_{CP\ (+Q)}$ Who$_1$ [$_{IP}$ t$_1$ said [$_{CP\ (-Q)}$ that [[the man that bought what]$_2$, [$_{IP}$ John knows [$_{CP\ (+Q)}$ whether [$_{IP}$ Mary likes t$_2$]]]]]]]

(342) $^*_{(-Q)}$ [$_{IP}$ Mary thinks [$_{CP\ (-Q)}$ that [[the man that bought what]$_2$, [$_{IP}$ John knows [$_{CP\ (+Q)}$ who$_1$ [$_{IP}$ t$_1$ likes t$_2$]]]]]]

While (341) is marginally allowed by speakers who accept embedded topicalization, (342) is significantly worse than (341). In (342), the phrase [the man that bought what], is topicalized out of a [+Q] CP into a [-Q] CP. If topicalization can be undone at LF, the *wh*-phrase *what* in (342) should be able to take scope at the most deeply embedded CP, which is [+Q]. On the other hand, if English topicalization does not have radical reconstruction, then it is expected that (342) is completely ungrammatical: the *wh*-phrase *what* needs to take scope at a [+Q] CP, but there is no [+Q] CP that contains it after topicalization. Therefore, (342) is ungrammatical because the *wh*-phrase *what* fails to receive an interpretation.

Thus, Saito concludes that unlike English A'(operator)-movement, scrambling need not establish a semantically significant operator-variable relationship and can be undone at LF.

According to the earlier account developed by Saito (1989), the defining property of "LF undoing" is that it does not leave a trace. This is because, as Saito independently demonstrates, all movement operations are subjected to the Proper Binding Condition (PBC), which holds at S-Structure as well as LF.

(343) Proper Binding Condition
Traces must be bound. (Fiengo 1977, May 1977)

To illustrate the PBC, consider the following examples, taken from Saito (1989).

(344) ??Who$_1$ do you wonder [which picture of t_1]$_2$ John likes t_2

(345) *[Which picture of t_1]$_2$ do you wonder who$_1$ John likes t_2

Example (344), being a weak subjacency violation, is marginal. In contrast, (345) is much worse than (344). According to Saito, this contrast indicates that (345) is not merely a subjacency violation, but also violates the PBC because the trace t_1 is unbound. If LF undoing were possible in English *wh*-movement, the PBC violation in (345) should be ameliorated, contrary to fact. [22]

Saito (1989) demonstrates that the PBC is a condition that applies to all instances of movement, including scrambling. Given this assumption, the fact that scrambling shows radical reconstruction in examples like (339) means that

[22]There are alternative explanations for this contrast aside from the PBC. Miyagawa (2005a) argues that (345) is much worse than (344) because the derivation in (345) is countercyclic. In order to derive (345), *who* needs to first raise from the phrase [*which picture of who*], then the derivation would have to "go back down" to raise [*which picture of t*], violating strict cyclicity.

scrambling must be able to be literally "undone" at LF. Since LF undoing does not leave a trace, there is no PBC violation in (339), and the scrambled *wh*-phrase in (339) can be properly interpreted within the scope of the embedded question at LF as if scrambling has never happened.

The classic account of radical reconstruction, as reviewed above, draws on the PBC which requires traces to be bound. Under the copy theory of movement, this property of scrambling can also be explained based on which copy gets interpreted. Regardless of the specific analysis, radical reconstruction is a core property of scrambling that is not shared by other types of movement such as English *wh*-movement/topicalization.

The crucial question for our discussion is, why does scrambling have the radical reconstruction property? In exploring this question for Mongolian, I would like to draw on the previous insight that radical reconstruction is attributed to the absence of feature checking (R. Lee 1994, Saito and Fukui 1998, Saito 2004). Under this view, Mongolian LDS is not feature-driven, and therefore we observe the radical reconstruction effect in (346).

(346) Mongolian LDS shows radical reconstruction

Yamar nom-ig Bold [$_{+Q}$ Zaya-g ___$_1$ aw-san **be** gej] asuul-san
what book-ACC B.NOM Z-ACC buy-PST Q C ask-PST
'What book$_1$, Bat asked [Q Zaya bought ___$_1$]'

In contrast, Mongolian ECM does involve ϕ-feature agreement with C^0. Therefore, ECM does not show radical reconstruction.

(347) ECM does not show radical reconstruction

??*Bold [$_{CP}$ khen-iig$_1$ [$_{C'}$ ___$_1$ ter nom-ig unš-san be gej]]
B.NOM who-ACC that book-ACC read-PST *wh*-Q C

asuul-san
ask-PST
Int. 'Bold asked (that) who read that book.'

What about movement targeting Spec TP? In regular cases, subjects undergo ϕ-agreement with T^0, and subsequently move to Spec TP. This movement is clearly feature-driven. Thus, the current approach would predict that it does not exhibit radical reconstruction property. This is difficult to confirm with the ECM/*wh*-licensing/topicalization data presented in this chapter so far. Since TP is projected below ForceP and ThemeP, we would not be able to directly observe the effect of movement to TP on the *wh*-/topic interpretation as we do with the ECM cases.

Nevertheless, by examining a set of data concerning the interaction between quantifier and negation in Mongolian, I will show that this prediction is indeed borne out. That is, movement to Spec TP does not show radical reconstruction. The set of Mongolian data to be examined in the subsequent discussion is inspired by Miyagawa's famous examples in support of his analysis of EPP-driven scrambling, although I utilize it to make a somewhat different point. Miyagawa's examples on Japanese intermediate scrambling are shown in (348).

(348) Quantifier-negation interaction in Japanese intermediate scrambling (Miyagawa 2001, 2003)

a. Zen'in -ga sono tesuto-o uke-naket-ta (yo/to omou)
all -NOM that test-ACC take-NEG-PAST
'All did not take that test.'

*not>>all, all>>not

b. Sono tesuto-o_1 zen'in -ga t_1 uke-naket-ta (yo/to omou)
that test-ACC all -NOM take-NEG-PAST
'That test, all did not take. '

not>>all, (all>>not)

Miyagawa (2003) assumes that for negation to take scope over an element α, negation c-commands α (cf. Klima 1964). In (348a), 'all' is in the subject position, and it can only be interpreted outside the scope of negation. That is, none of the people referred to by 'all' took the test. According to Miyagawa, this is because the subject 'all' raises from Spec vP, where it is c-commanded by negation, to Spec TP, which is outside of the domain of negation. Crucially, this is a type of A-movement, and thus the subject can only be interpreted at the Spec TP landing site, and cannot have the reconstructed reading in which negation scopes over the subject 'all'. [23] In contrast, if the object is scrambled above the subject 'all' (348b), the interpretation in which 'all' scopes under negation becomes possible. According to Miyagawa, this is because in this example the object undergoes scrambling and occupies Spec TP, satisfying EPP on T^0. When this happens, the subject need not move at all. Thus, 'all' stays in situ in Spec vP, which allows 'all' to be interpreted under the scope of negation.

Given the above background, consider the following example (349) from Mongolian. The news article which this sentence is taken from reports that the Minister of Health of Mongolia stated that the hospital will rank the infected people based on how severe their Covid symptoms are, and provide beds for those who are most in need. Given this context, the interpretation of (349) is clearly that one will admit only some people into the hospital, but not everyone. This is what Miyagawa refers to as the "partial negation" reading, in which negation scopes over the quantifier.

[23] cf. well-known cases in English, as discussed in e.g., McCloskey (1997)

(349) Kowid19 tus-san khun bolgon-iig emneleg-t khewtuulekh-gui
Covid19 get-PST.PTCP person every-ACC hospital-DAT admit-NEG
'(One) will not admit everyone who got Covid-19 into hospitals.'

[source: https://ivoice.mn/?p=16990] not>every; *every>not

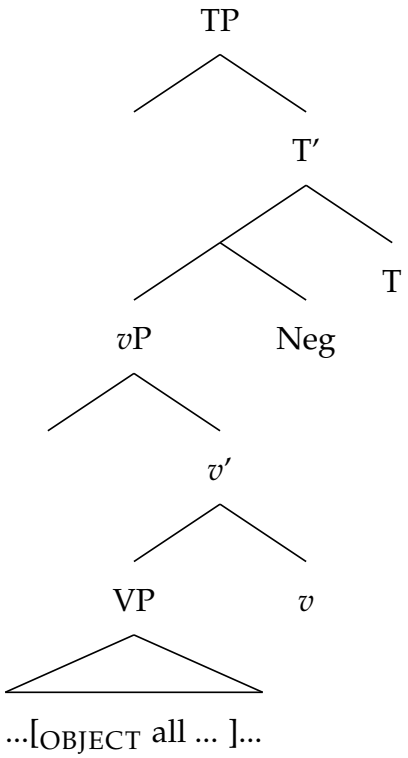
Substituting *bolgon* 'every' with *bukh* 'all' gives rise to the same interpretation where the negation scopes above 'all'.

(350) Kowid19 tus-san bukh khun-iig emneleg-t khewtuulekh-gui
Covid19 get-PST.PTCP all person-ACC hospital-DAT admit-NEG
'(One) will not admit all who got Covid-19 into hospitals.'

not>all; *all>not

I follow the reasoning in Miyagawa (2003) and suggest that such interpretation is due to the structure in which the negation c-commands the quantified DP in the object position, shown in (351).

(351)



In contrast, if 'all' occurs in the subject position, as shown in (352), the universal quantifier in the subject position must be interpreted outside of the scope of negation. The reading is that none of the people referred to by 'all' took the test.

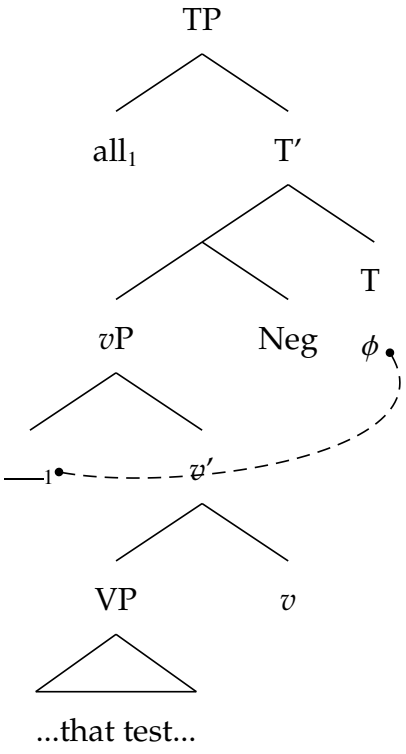
(352) Bao, Hasebe, and Maki (2015:90)

Bükü kümün -ø tere silgalta -du orulča -gsan ügei
all people -NOM that test -to take -PAST.ADN NEG
'All did not take that test.'

*not > all, all > not

The crucial point this example illustrates is that movement of the subject from Spec *v*P to Spec TP does not reconstruct. Under the current analysis, this is because the movement of the subject to Spec TP involves ϕ-agreement with T^0. As a result, the subject can only be interpreted at its landing site.

(353)



Furthermore, unlike Japanese, in which intermediate scrambling of an object DP

changes the scope interpretation, in Mongolian intermediate scrambling has no effect on the scope interpretation between the quantified phrase and negation.

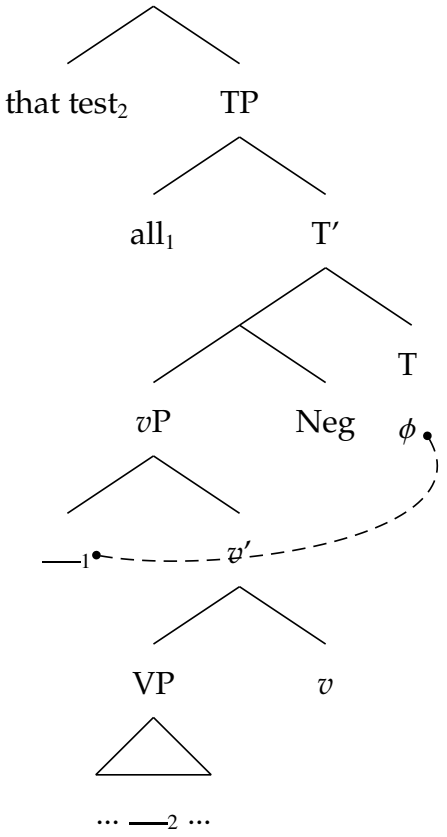
(354) Bao et al. (2015:90)

Tere silgalta-du$_1$ bükü kümün ___$_1$ orulča-gsan ügei
that test-to all people-NOM take-PST.PTCP NEG
'That test, all did not take.'

*not > all, all > not

This result suggests that unlike Japanese, in which either the object or the subject can move to satisfy EPP on T^0 (assuming Miyagawa's analysis), in Mongolian the Spec of TP can only be occupied by the subject, not by the object. This is expected under the current approach. The subject DP is the closest matching goal for the ϕ-probe on T^0. Thus, ϕ-agreement occurs between T^0 and the subject, raising the subject to Spec TP. This movement involves ϕ-agreement, so the raised DP must be interpreted at its landing site and may not reconstruct and be interpreted under the scope of negation (this may follow from Miyagawa's suggestion that A-movement to T^0 does not reconstruct, cf. FDIR (319) under the current formulation). The object 'that test' then undergoes intermediate scrambling to a position higher than the subject, perhaps a TP adjoined position, giving rise to the surface order without affecting the scope interpretation. This process is illustrated in (355).

(355)



Taken together, the pattern that emerges is that raising to Spec CP and Spec TP both involve ϕ-agreement, and they do not show radical reconstruction. On the other hand, scrambling does not involve ϕ-agreement, and it shows radical reconstruction. This is summarized in (356).

(356) Radical reconstruction properties (Mongolian)

Movement type	Shows radical reconstruction?	Involves (ϕ-)agreement?
Raising to Spec CP (ECM)	No	Yes, with C^0
Movement to Spec TP	No	Yes, with T^0
LDS	Yes	No

There are two points I wish to make in light of the discussion so far. First, the pattern in (356) is a natural consequence of the idea that radical reconstruction in Mongolian is attributed to the absence of feature checking. This is the idea proposed in R. Lee (1994) and later developed in Saito and Fukui (1998) and Saito (2004). One of the major arguments in support of this idea, as offered by Saito (1989), is that scrambling differs from English A'-movement such as *wh*-movement and topicalization in that only the former has the radical reconstruction property. This contrast would follow naturally if we assume that scrambling does not involve feature-checking, but English A'-movement does (it is driven by *wh*, *topic*, or other A'-features). Another key argument, building on the idea that scrambling is "semantically vacuous", concerns the P/EPP feature-triggered movement which has no semantic import (building on Chomsky 2000). Saito (2004) argues that even movement triggered by this type of feature is not subject to radical reconstruction and should be distinguished from JK scrambling. The conclusion is therefore that radical reconstruction, the defining property of JK-type scrambling, should be attributed to the absence of feature checking. This is stated in (357).

(357) Radical reconstruction is attributed to the absence of feature checking.

The discussion of the three types of Mongolian phrasal movement in (356) offers an argument for (357) from another perspective. Under the current Agree-based approach, Mongolian ECM involves raising to Spec CP in response to a ϕ-probe on C^0, and the licensing of nominative subjects involves raising to Spec TP in response to the ϕ-probe on T^0. I have shown that neither type of movement shows radical reconstruction, which contrasts sharply with LDS. Therefore, we obtain the following three-way distinction.

(358) a. A-movement: ϕ-features → No radical reconstruction

b. Operator movement: *wh/topic* features → No radical reconstruction

c. Scrambling: not feature-driven → Radical reconstruction

The second point is that Condition C reconstruction, which can be regarded as a kind of partial reconstruction, and radical reconstruction, which is total, have distinct sources in the grammar. [24] Specifically, under the current approach Condition C reconstruction is governed by case, but radical reconstruction is governed by features and Agree. Given the appropriate structural configuration, all three types of movement in (358) may feed case assignment. Thus, all three have the potential to bleed Condition C. However, since scrambling does not involve feature-checking, it nevertheless shows radical reconstruction, which differs from feature-driven movement. There are a number of relevant issues that emerge from such a proposal. I will address them in Chapter 6, section 6.3.

5.7 Summary of Chapter 5

In this chapter, I have reported an additional case study of ECM in Mongolian, and explored its implications on the status of the A/A'-distinction, the status of Spec CP, and reconstruction. Mongolian ECM has two notable features. First, the ACC case marking on the embedded subject is optional; second, the embedded clauses which allow for ECM subjects are finite CPs. In light of these empirical facts, previous research has suggested that in Mongolian the ECM subjects

[24] It has been argued elsewhere, although on the basis of a different set of phenomena, that partial reconstruction and total reconstruction must be derived by very different mechanisms (Sauerland and Elbourne 2002). Cf. Hornstein (1995).

receive their ACC case marking at the embedded Spec CP. Given that the ECM subjects can further A-move into the matrix clause, it is suggested that Spec CP in Mongolian can be an A-position (Fong 2019). Building on these previous results, I have presented two sets of novel empirical data which bear on the consequence of Spec CP being an A-position. The first set of data shows that an embedded *wh*-subject taking embedded *wh*-scope may not undergo ECM. The second set of data shows that an embedded subject receiving thematic topic interpretation within the embedded clause similarly cannot undergo ECM. Since Spec CP is often considered to be relevant for *wh-/topic* interpretation, the interaction between ECM and *wh/topic* licensing in Mongolian helps further illuminate the nature of Spec CP in this language.

The first point made in this chapter is that the co-occurrence of Q-particle and complementizers indicates a rich clausal periphery in Mongolian. This observation, along with other facts, lead to the proposal that the type of Mongolian embedded clauses examined here has a [[[... A] **A'**] **A**] periphery. Spec CP is, as Fong proposes, an A-position. In addition, ForceP (relevant for embedded *wh*-interpretation) or ThemeP (relevant for embedded thematic topic interpretation) may project an A'-domain below CP, but above TP. While such a proposal does not immediately fit into the previous generalization that A'-domains are usually higher than A-domains, I showed that the proposal can nevertheless be maintained under the Agree-based view of phrasal movement, without directly making reference to the distinction between A- and A'-positions. Under an Agree-based view of phrasal movement, A- and A'-movement show different properties because of the differences involved in the Agree relationships. For example, under this view, A-movement occurs in response to ϕ-probes, but *wh*-movement involve *wh*-features. Based on the view that movement is feature-

driven, movement types can be distinguished based on the features involved, instead of some inherent distinctions between A- and A'-landing sites.

This leads to the second point of my proposal, which is that subject raising to Spec CP occurs in response to a ϕ-probe on C^0. Therefore, Spec CP behaves like an A-position when subject raises to Spec CP following ϕ-agreement, as previously proposed by van Urk (2015) and Fong (2019). Crucially, this ϕ-agreement-induced movement has consequences on *wh* and thematic topic interpretations. A subject cannot take embedded *wh*-scope, nor can it become an embedded thematic topic, when it raises in response to the ϕ-probe on C^0, a result directly falls out from the embedded clausal periphery and the location of relevant probes. Although the consequence of ϕ-feature-driven movement on interpretation, formulated here as a Feature-Driven Interpretation Requirement, remains to be further explored, the fact that movement in response to ϕ-probe does not reconstruct for *wh*-interpretation suggests an asymmetry between movement types involving different probes, offering a foundation for further investigation.

On the basis of this case study, I have further explored the consequence of the current Agree-based proposal in section 5.6. I have focused on one particular domain in which ECM and scrambling differ – reconstruction for *wh*-interpretation. It has been established in the current case study that a raised embedded subject (resulting in ECM) does not reconstruct for *wh*-interpretation. In contrast, Mongolian long distance scrambling (LDS), similar to that in Japanese and Korean, does reconstruct for *wh*-interpretation, known as the radical reconstruction property. In particular, a *wh*-element which has undergone LDS in syntax may nevertheless be interpreted within the scope of an embedded question particle at LF. I have given an overview of previous research on this topic,

especially Saito's (2004) observation that in contrast to LDS (in languages like Japanese), English A'-movement such as *wh*-movement and topicalization does not have radical reconstruction. Saito (also see R. Lee 1994, Saito and Fukui 1998) suggests that the radical reconstruction property of scrambling is attributed to the absence of feature checking. According to this view, if we assume that scrambling in Mongolian is not feature-driven, then it is expected to show radical reconstruction. In contrast, ECM in Mongolian is feature-driven (it occurs in response to the ϕ-probe on C^0), thus, it does not show radical reconstruction. To further test the validity of this hypothesis, I have brought in a third type of phrasal movement – subject movement to Spec TP. According to my analysis, a subject moves to Spec TP in response to the ϕ-probe on T^0. I have shown that radical reconstruction is also absent in this kind of movement, which is predicted by the current approach. The current study, in combination with the previous observation regarding the contrast between scrambling and English A'-movement, lead to the following three-way distinction:

(359) a. ECM (A-movement): ϕ-features → No radical reconstruction
b. Operator movement: *wh/topic* features → No radical reconstruction
c. Scrambling: not feature-driven → Radical reconstruction

Crucially, the radical reconstruction property, which I have attributed to the absence of feature checking, is separated from Condition C reconstruction, which I have attributed to case assignment under Wholesale Late Merger in Chapter 4. Due to the hybrid case assignment modality of Mongolian, scrambling, ECM, and subject movement to Spec TP can all in principle feed case assignment under proper structural contexts. Thus, all three types of movement can potentially bleed Condition C given an appropriate structural con-

figurations (specifically, the case assignment position and the position of the pronoun binder are both relevant, as stated in the condition on WLM in (189)). These results suggest that Binding Condition C reconstruction and radical reconstruction might potentially have distinct sources in the grammar, an idea which awaits more in-depth evaluation in future research.

CHAPTER 6

CONCLUSIONS AND EMERGING ISSUES

In this dissertation, I have examined the free word order phenomenon in connection to other types of phrasal movement such as ECM, based on a detailed empirical study of Mongolian. More broadly, the discussion offered in this dissertation has addressed three interconnected questions. First, what makes scrambling, an operation with mixed A/A'-effects, possible in the grammar? Second, what are the sources of different types of reconstruction effects? Third, what are the implications of the current findings on a general movement typology based on the A/A'-distinction? I have approached these issues from both the traditional perspective on scrambling based on the A/A'-dichotomy (Chapter 3), and more recent perspectives on phrasal movement that do not draw on such a distinction (Chapter 4 and 5). In this final chapter, I summarize the major findings of the dissertation and discuss some emerging issues.

6.1 Properties of Mongolian Scrambling (Chapter 1-3)

In Chapter 1-3, I have provided a systematic introduction to the free word order phenomenon in Mongolian, in light of previous research on similar phenomena in languages such as Japanese, Hindi, Korean, and German. I have argued that Mongolian scrambling obeys general locality constraints on phrasal movement. On this basis, I have adopted a movement approach which derives free word order via scrambling in syntax.

The empirical data drawn from my fieldwork show that Mongolian exhibits a wide range of word order flexibility. The language has three types of

DP scrambling: short scrambling, intermediate scrambling, and long distance scrambling. In Chapter 3, I have examined the core properties of these scrambling types and related them to the classic approach to scrambling based on the A/A'-distinction. Scrambling in Mongolian, similar to that in languages like Japanese, Korean, and Hindi, is not a uniform phenomenon. Rather, it shows a diverse range of movement properties which cannot be immediately captured by a movement typology based on the A/A'-dichotomy. I have demonstrated that short scrambling in Mongolian shows consistent A-properties, but intermediate and long distance scrambling show mixed A/A'-properties. In addition, I have also argued that Mongolian has clausal scrambling in which an embedded CP scrambles to matrix pre-subject positions. Clausal scrambling, unlike DP scrambling, shows consistent reconstruction effects. Building on these empirical findings, Chapter 4 and 5 further explore the reason why Mongolian scrambling behaves in just the way it does, focusing specifically on reconstruction effects. I review some of the core arguments in Chapter 4 and 5 below, and also discuss some emerging issues and suggest avenues for future research.

6.2 Condition C Reconstruction (Chapter 4)

In Chapter 4, I have focused on a core empirical phenomenon regarding which A- and A'-movement differ – Condition C reconstruction. While Condition C reconstruction effects are widely used as an A/A'-diagnostic, the full empirical picture of Mongolian scrambling turns out to reveal paradoxical patterns that cannot be immediately captured by the correlation between movement types and Condition C. I have proposed that the crucial contrast in Condition C effects concerns whether scrambling targets a case position or not, rather than whether

scrambling involves A- or A'-movement. Building on Takahashi and Hulsey (2009), I have argued that a case-based approach to Condition C not only explains the paradox raised by Mongolian scrambling, but also crucially predicts a correlation between a language's case system and its Condition C patterns. Drawing on independent evidence from the language, I have argued in support of the following hybrid case assignment modality in Mongolian:

(360) Hybrid Case Assignment Mechanism in Mongolian

a. If there are two distinct argumental NPs in the same phase such that NP1 c-commands NP2, then value the case feature of NP2 as accusative case, unless NP1 has already been marked for case.

b. Nominative case is assigned by finite T^0.

c. Dative case is a nonstructural case.

I have connected the hybrid case mechanism to the paradoxical patterns of scrambling in terms of Condition C reconstruction – depending on *how* Condition C is violated at the base order, the same type of scrambling both show and does not show reconstruction effects. I have demonstrated that these patterns, which are unexpected under the A/A'-distinction, are neatly accounted for under the Wholesale Late Merger mechanism coupled with the way case assignment works in Mongolian. Notably, accusative case in Mongolian is a dependent case, and hence can be assigned in positions that are different from those where accusative is valued through Agree (as Takahashi and Hulsey have argued for English). The case-based analysis predicts Mongolian scrambling to exhibit a different pattern of Condition C reconstruction effects from languages like English because of this, and the prediction is indeed borne out. In addition to local scrambling, I have further demonstrated this point using clause-external

scrambling. In particular, I have shown that even long distance scrambling, which is at least partially A'-movement, bleeds Condition C in a way that mirrors the patterns in local scrambling. I show that this otherwise puzzling fact is a natural consequence of the current case-based proposal, which does not directly draw on the A/A'-distinction.

Given the current account, some instances of LDS in Mongolian can bleed Condition C because a long distance scrambled DP can receive dependent accusative case inside the matrix clause. This raises a nontrivial theoretical question regarding the unvalued case features within a phase. [1] While at this point no definitive conclusion can be drawn from the current data, I would like to offer some speculations on possible ways to address this issue. According to the proposal advanced in Chapter 4, an object can be assigned accusative case after it is preposed long distance. (361) illustrates the configuration.

(361) subject embedded object-ACC_1 [$_{\text{CP}}$ [$_{\text{TP}}$ subject $\_\__1$ verb] C] verb

While an object indeed should be able to receive accusative case after moving several clauses up, allowing such an operation raises a potential issue under the standard phase theory and the copy theory of movement: If the embedded CP in (361) constitutes a phase and the complement TP is transferred to the interpretive components after the phase is constructed, then the copy of the scrambled phrase in the embedded object position is transferred without being assigned case, which is potentially problematic for derivation convergence.

In Chomsky (1995b), movement is driven by the need to eliminate uninter-

[1] This issue was originally pointed out by an anonymous reviewer of Gong (in progress). While the current evidence from Mongolian is inconclusive, I believe this is an important issue that should be recognized, and I thank them for raising this question.

pretable features. Once we adopt the copy theory of movement, intuitively we need to ensure that the lower copy does not get transferred bearing unvalued uninterpretable features, or else the derivation will crash at the interface. How are uninterpretable features on lower copies eliminated? Chomsky suggests that "the features of a chain are considered a unit: if one is affected by an operation, all are" (Chomsky 1995b: fn. 12; cf. Nunes 1995 for a different view on this issue; these discussions can be further situated in the context of successive A-chains in Chomsky 1995b section 4.5.6). However, under such a proposal it is not clear what happens if the tail of the chain is transferred when the feature of the head of the chain has not yet been valued. This problem becomes especially acute when a movement chain feeding case assignment spans across multiple phases, as in Mongolian.

Due to its generality, this issue can be addressed from different angles, and thus the discussion I offer here will be tentative and abstract. Consider (361), in which the lower copy (the tail of the chain) does not get case, and only the head of the chain receives ACC case. My point of departure is that the system should in principle be able to distinguish copies from syntactic objects formed by distinct applications of Select (exactly how the system distinguishes them is a long-standing theoretical issue. See a recent discussion in Chomsky 2021, see also Collins and Groat 2018 for a review of prominent issues). Suppose that an A-chain CH = (α, β) is a legitimate LF object, subjected to the Chain Condition (I further assume the Chain Condition holds for linked chains, in the sense of Chomsky and Lasnik 1993); and in contrast, a copy is not an object. The existence of constructions such as (361) in languages like Mongolian suggests that unvalued uF of a copy at a lower phase somehow does not cause the derivation to crash. If the uF of the lower copy indeed remains unvalued, one possible

way to explain this is to suggest that the system can somehow see that the relevant unvalued uF belongs to a copy (instead of an object), and that the relevant chain has not yet terminated. I believe this suggestion is reasonable given recent discussions in Minimalism. According to Chomsky (2013), while "the standard convention has been to take each of the copies to be an independent element... the convention has no particular merit. It's quite reasonable to take α to be 'in the domain of D' iff every occurrence of α is a term of D". Following this suggestion, there is no need to treat copies as independent elements. This idea can be applied to different scenarios. For example, as discussed in Chomsky (2013), in English, when a subject DP merges with vP, forming a new object γ = {DP, vP}, a Problem of Projection arises. However, the system recognizes that the subject DP is only a copy – since the subject DP further moves from vP to TP (in English). The copy of DP at vP-level is therefore not treated as an independent element (or alternatively, this can be formulated as γ does not properly contain the DP, see Saito 2016 for relevant discussion) and thus the result is labeled as vP. Just as the system is able to recognize that an element is a copy for labeling purposes, it seems reasonable to suggest that the same mechanism is able to determine that, upon transfer of a certain domain, certain unvalued case features belong to a copy and that the relevant chain has not yet terminated. Consequently, the case features on a copy do not cause the derivation to crash at the interface. The details of such a mechanism is not clear at this point, but I believe it is reasonable to suggest that a system of this sort can address the challenges posed by (361). Ultimate resolution of this and related issues will best be situated within a much larger set of empirical phenomena concerning phase theory and the copy theory of movement, and I leave this for future work.

To summarize, the case study presented in Chapter 4 provides additional

support for the view that Wholesale Late Merger is controlled by case assignment, as originally suggested in Takahashi (2006) and Takahashi and Hulsey (2009). The facts in Mongolian suggest that Wholesale Late Merger mechanism is potentially compatible with different modes of case assignment. While the investigation in Chapter 4 leaves some open questions, it has provided a novel perspective of investigating Binding Condition C reconstruction effects in scrambling and has made a series of predictions that awaits evaluation and confirmation in future research.

6.3 The A/A′-Distinction and Radical Reconstruction (Chapter 5)

In Chapter 5, I have generalized the findings in Chapter 1-4 to a larger claim about the status of the A/A′-distinction in the current theory. Adopting the view that Internal Merge requires the establishment of an Agree relation (Chomsky 2000, 2001, 2004, 2007), I have argued in support of the view that certain differences between A/A′-movement can be derived by the Agree mechanism and case assignment. Based on a case study on the interaction between ECM and *wh/topic* licensing in Mongolian, I have argued for the following points. First, the co-occurrence of Q-particle and complementizers indicates that Mongolian has an elaborated [[[... A] **A′**] **A**] clausal periphery. The topmost projection is CP, headed by the complementizer *gej* (see Chapter 2 for additional properties of the complementizer *gej*). I have adopted previous claims (by e.g., Fong 2019) that Spec CP can be an A-position. In addition, ForceP (relevant for embedded *wh*-interpretation) or ThemeP (relevant for embedded thematic topic

interpretation) may project an A'-domain below CP and above TP. I have shown that this proposal can be maintained under the Agree-based view of phrasal movement, without directly making reference to the distinction between A- and A'-positions. This is closely tied to the second point established in Chapter 5, which is that subject raising to Spec CP (resulting in ECM) occurs in response to a ϕ-probe on C^0. Therefore, Spec CP behaves like an A-position when subject raises to Spec CP in response to ϕ-agreement. Crucially, this ϕ-agreement-induced movement has consequences on *wh* and thematic topic interpretation. A *wh*-phrase subject marked with accusative case cannot take embedded *wh*-scope, nor can it become an embedded thematic topic, a result directly falls out from the embedded clausal periphery and the location of relevant probes. Furthermore, I have explored the consequence of the current Agree-based proposal, by conducting a comparison between ECM and scrambling in terms of radical reconstruction. In particular, ECM, along with other feature-driven movement such as subject movement to Spec TP, do not show radical reconstruction. Contrastively, scrambling shows radical reconstruction. Drawing on the previous proposals by Saito and Fukui (1998) and Saito (2004), I have attributed the radical reconstruction property of scrambling to the absence of feature checking. Under the current account, radical reconstruction is separated from Binding Condition C reconstruction, which I have argued to be related to case assignment in Chapter 4.

Given these results, I would like to point out some emerging issues that arise from the current discussion and offer some speculations. As it stands, the analysis proposed in Chapter 5 assumes that scrambling is not feature-driven (following in particular the proposals advanced in Saito 2004, Saito and Fukui 1998). This concerns the issue of optionality, an important topic discussed extensively

in the study on scrambling. On the assumption that free word order arises from the application of movement operation, a natural question arises as to what motivates it. This issue becomes more acute under the Minimalist assumption that movement only takes place in order to satisfy some conditions (Last Resort). A number of studies suggest that scrambling is a feature-driven movement in the syntax proper, hence not an optional operation (e.g., Miyagawa 1994, 1997, 2001, 2003, 2005a; Grewendorf and Sabel 1999; Sabel 2001; Kitahara 2002; Ko 2007, among others; also see Bailyn 2006 for relevant discussion). In contrast, researchers such as Saito (2004, 2009), Fukui (1993b), and Tada (1993) have defended the view that scrambling is an optional movement in syntax and is not driven by feature checking (in particular, see e.g., Saito 2004, Saito and Fukui 1998). As far as the set of empirical facts presented in Chapter 5 goes, it is clear that scrambling differs from ϕ-feature driven movement operations in terms of radical reconstruction. In addition, scrambling also differs from *wh*-movement and topicalization, as argued in previous research (e.g., Saito 2004). While in the analysis I have followed Saito in attributing radical reconstruction to the absence of feature checking, it is possible that there are other ways to distinguish scrambling from other types of movement. For example, it seems plausible to posit that scrambling can be driven by pure edge features. Since scrambling cross-linguistically is not a homogeneous phenomenon, to what extent it can be characterized on a par with standard feature-driven movement remains an open question, and more detailed investigations into individual languages would be needed to further elucidate this issue.

Finally, in connection to the current proposal that Condition C reconstruction and radical reconstruction have different sources in the grammar, I present an additional set of novel data from Mongolian which raises an interesting em-

pirical problem and discuss its potential ramifications. We have seen that LDS shows radical reconstruction effects. The key example is repeated below.

(362) Radical reconstruction in LDS

Yamar nom-ig$_1$ Bold [$_{+Q}$ Zaya-g ___$_1$ aw-san **be** gej] asuul-san
what book-ACC B.NOM Z-ACC buy-PST Q C ask-PST
'What book$_1$, Bat asked [Q Zaya bought ___$_1$]'

The *wh*-phrase is scrambled outside of the embedded interrogative clause into the matrix clause, which is declarative. Nevertheless, the sentence is well-formed. This suggests that the moved *wh*-phrase can undergo radical reconstruction at LF so that it is properly interpreted within the scope of the embedded question. Under the current account, this radical reconstruction property is attributed to the absence of feature checking in LDS.

We have also seen that Condition C reconstruction, as argued in Chapter 4, is governed by case assignment. Therefore, even though LDS is not feature-driven, some instances of LDS nevertheless bleed Condition C because it may feed accusative case assignment at a higher position. An example is repeated below.

(363) (=(207)) LDS does not involve ϕ-features, but bleeds Cond C

?[**Bat**$_1$**-in** esee-g]$_2$ Zaya **tüün**$_1$ **-d** [$_{CP}$ bagš -iig ___$_2$ unš-san
Bat-GEN essay-ACC Z.NOM he -DAT teacher -ACC read-PST
gej] khel-sen
C say-PST
'**Bat**$_1$'s essay, Zaya said to **him**$_1$ that the teacher read.'

Now consider the following sentences. In (364a), a *wh*-phrase containing an R-expression 'Elon Musk' undergoes LDS out of an embedded interrogative into the matrix declarative clause. This movement does not ameliorate a Condition

C violation induced by the matrix subject. In contrast, if the *wh*-phrase is instead scrambled over a pronoun matrix object binder (recall that linear order between the matrix pronoun and the embedded clause does not affect Condition C), as in (364b), the sentence is in fact acceptable.

(364) a. *[**Elon Musk**-i$_1$ tukhai yamar nom-ig]$_2$, **ter**$_1$ [$_{CP}$ bid nar-ig ___$_2$
EM-GEN about what book-ACC 3SG.NOM 1PL-ACC
unšsan be gej] asuulsan
read Q C asked
'[What [book about Elon Musk$_1$]]$_1$, he$_1$ asked [Q we have read ___$_2$].'

b. [**Elon Musk**-iin$_1$ tukhai yamar nom-ig]$_2$, bagš [$_{CP}$ oyutnuud-iig
[EM-GEN about what book-ACC] teacher students-ACC
___$_2$ unšikh kheregtei we gej] **tüün-ees**$_1$ asuulsan
read need Q C 3SG-ABL asked
[What book about Elon Musk$_1$]$_2$, the teacher asked him$_1$ [Q that the students need to read ___$_2$]

This contrast cannot be immediately captured by the idea that long distance scrambling (LDS) uniformly shows radical reconstruction. What is especially problematic is (364b). Under Saito's analysis that LDS always shows radical reconstruction and is semantically vacuous, we expect the scrambled phrase in (364b) to undergo total reconstruction back to its original position, triggering a Condition C violation there, contrary to fact. On the other hand, if the scrambled phrase does not reconstruct and is directly interpreted at its surface position inside the matrix clause, we expect that the *wh*-phrase would fail to be properly interpreted because it is located outside of the scope of Q at LF. [2]

As far as the current discussion goes, a possible explanation for the status

[2]cf. Lasnik and Saito (1999), in which they propose examples such as these indicate that Condition C should apply at S-Structure. There are many studies which address the issue of where binding Condition C applies (e.g., Chomsky 1995b, Sauerland 1998, Fox 2000, Sportiche 2005, Lebeaux 1998, among many others). I will not pursue this question here.

of (364b) is that the restrictor of the *wh*-element is introduced into the derivation after LDS has applied, following the Takahashi-Hulsey style wholesale late merger mechanism. The reason why late merge is possible in (364b) is familiar by now: there is a dependent case sponsored position inside the matrix clause, above the ablative pronoun binder. The restrictor can be introduced there without violating Condition C. As there is no copy of the restrictor present in the lower copy, all that is subjected to radical reconstruction is the *wh*-determiner. The following can be an LF-representation for (364b). Since licensing of an embedded interrogative only requires the *wh*-determiner, which is reconstructed, the result is well-formed.

(365) [book about Elon Musk$_1$] the teacher [book about Elon Musk$_1$] asked him$_1$ [$_{CP}$ Q that the students need to read [what]]

This is similar to the explanation provided by Nishigauchi (2002) for the following Japanese data (cf. Lasnik and Saito 1999). According to Nishigauchi, a constituent containing the R-expression can be introduced late in the derivation (assuming the mechanisms of Lebeaux 1988, Sauerland 1998), circumventing a Condition C violation.

(366) Nishigauchi (2002:85)

[Hanako$_1$-no dono syasin-o]$_2$ Masao-ga [kanozyo$_1$-ga ___$_2$ itiban
H-GEN which picture-ACC M-NOM she-NOM best
ki-ni-itte iru ka] siri-tagatte iru koto
fond of be Q want-to-know is fact
'[Which picture of Hanako$_1$]$_2$ Masao wants to know [[she$_1$ likes ___$_2$ best]Q]'

It remains to be investigated whether such an analysis is indeed tenable. At

least two points need to be considered. First, it needs to be carefully evaluated in light of alternative proposals, especially Miyagawa (2006).[3] One possibility that Miyagawa suggests is that before LDS applies, the [+*wh*] feature on the *wh*-phrase enters into an agreement relation with the corresponding feature on C^0/Force^0. The [+*wh*] selection requirement is met, and then the *wh*-phrase is free to move out of the indirect question. However, under this analysis we would not be able to distinguish LDS from ECM in Mongolian; the former reconstructs for *wh*-interpretation whereas the latter does not. Another point which Miyagawa makes is that in Japanese a long distance scrambled phrase is interpreted as a kind of partitive, which can be regarded as an instance of D-linking (Pesetsky 1987). Whether the same effect obtains in Mongolian remains to be confirmed with a larger group of speakers. If there are indeed significant semantic differences when the *wh*-phrase is scrambled long-distance, it might potentially illuminate the issue of how a sentence like (364b) is interpreted. Second, the implications of this set of data also needs to be considered in light of Fox's (2000) *scope-Condition C parallelism* (also see *LF coherence*: Hornstein 1995, Romero 1997, 1998, Fox 2000, Lebeaux 1998, Wurmbrand and Bobaljik 1999, among others, which states that generally a given element may not take scope from one position yet be interpreted for the purpose of binding in another position). At first glimpse, the Mongolian data in (364b) and the Japanese data in (366) seem to exemplify cases in which scope and binding Condition C are interpreted in distinct positions. The work by Nishigauchi (2002) mentioned above discusses various scenarios where Fox's theory applies in scrambling. Nevertheless, it remains to be clarified how Nishigauchi's example (366), as well as

[3]There are other proposals which may also shed light on this set of data, for example Boeckx (2001), Sauerland and Elbourne (2002). I focus on Miyagawa's analysis here because it directly pertains the issue of Condition C-*wh* interaction in long distance scrambling.

the similar Mongolian data, fit into this larger picture. [4] I leave this issue for future research.

[4] A related issue is how a late merge mechanism such as Lebeaux's or Takahashi and Hulsey's interact with operator scope reconstruction. See Fox (2000) Chapter 6 for discussion of various scenarios of reconstruction in light of Lebeaux's theory, especially 6.5.2, in which he discusses a case of partial reconstruction that does not need to include the late-merged adjunct.

APPENDIX A

MONGOLIAN CYRILLIC SCRIPT TRANSLITERATION

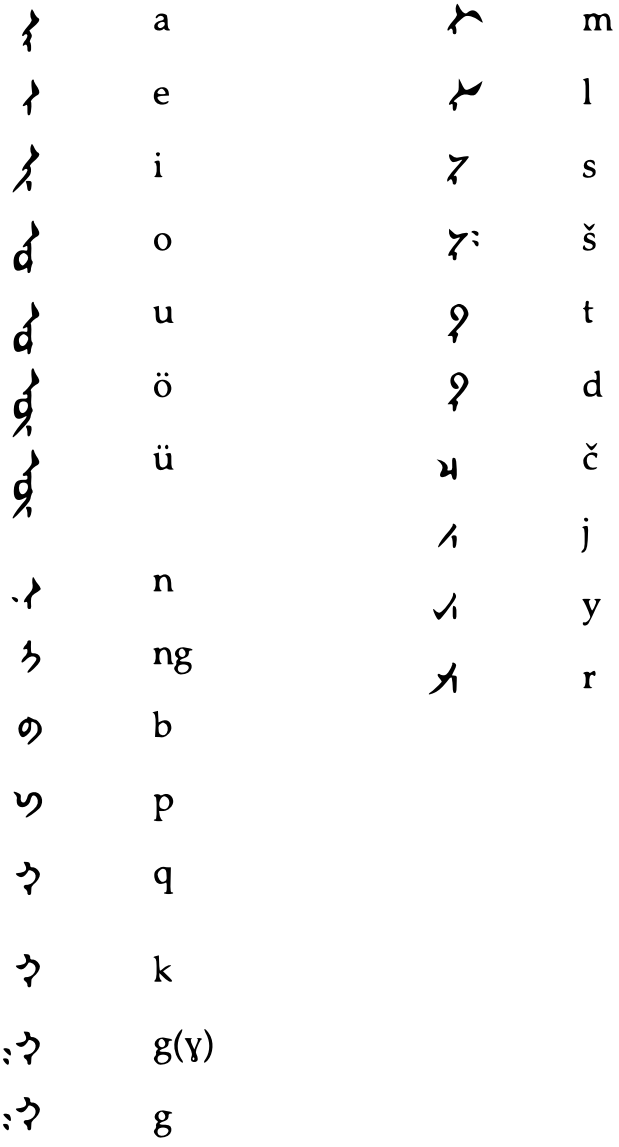
Note: For a complete transliteration system including transcriptions, see Legden and Purev (in press).

Mongolian Cyrillic	Transliteration	Mongolian Cyrillic	Transliteration
а	a	**р**	r
б	b	**с**	s
в	w	**т**	t
г	g	**у**	u
д	d	**ү**	ü
е	e	**ф**	f
ё	yo	**х**	kh
ж	ž	**ц**	ts
з	z	**ч**	č
и	i	**ш**	š
й	i	**щ**	šč
к	k	**ъ**	ʻ
л	l	**ы**	i
м	m	**ь**	i
н	n	**э**	e
о	o	**ю**	yu
ө	ö	**я**	ya
п	p		

APPENDIX B

MONGOLIAN VERTICAL SCRIPT TRANSLITERATION

Note: Vertical script reflects word-initial forms only. Middle, word-final forms are omitted. The surface forms of letters alternate when combined with different sounds. This list includes letters of the original classical Mongolian alphabet only and does not include letters used in loan words. See a complete list in Tserenpil and Kullmann (2015).



REFERENCES

Abe, J. (1993). *Binding conditions and scrambling without A/A' distinction*. University of Connecticut.

Aoun, J. (1979). Case and theta-theory.

Aoun, J., & Benmamoun, E. (1998). Minimality, reconstruction, and PF movement. *Linguistic Inquiry*, *29*(4), 569–597.

Aravind, A. (2021). Successive cyclicity in DPs: Evidence from Mongolian nominalized clauses. *Linguistic Inquiry*, *52*(2), 377–392.

Atwood, C. P. (2004). *Encyclopedia of Mongolia and the Mongol empire*. Facts on file New York.

Bailyn, J. F. (1995). *A configurational approach to Russian "free" world order* (Unpublished doctoral dissertation). Cornell University.

Bailyn, J. F. (2006). Against the scrambling anti-movement movement. In *Formal approaches to slavic linguistics* (Vol. 14, pp. 35–49).

Baker, M. (1988). *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.

Baker, M. (2015). *Case: Its principles and its parameters* (No. 146). Cambridge University Press.

Baker, M., & Vinokurova, N. (2010). Two modalities of case assignment: Case in Sakha. *Natural Language & Linguistic Theory*, *28*(3), 593–642.

Bao, L., Hasebe, M., & Maki, H. (2015). The negation markers in modern Inner Mongolian. In H. Maki, L. Bao, & M. Hasebe (Eds.), *Essays on mongolian syntax* (pp. 81–100). KAITAKUSHA.

Bayer, J., & Kornfilt, J. (1994). Against scrambling as an instance of move-alpha. In *Studies on scrambling*.

Beck, S. (1996). *Wh-construction and transparent logical form*. Doctoral disserta-

tion, Universität Tübingen.

Beck, S. (2006). Intervention effects follow from focus interpretation. *Natural Language Semantics*, *14*(1), 1–56.

Beck, S., & Kim, S.-S. (1997). On wh- and operator scope in Korean. *Journal of East Asian Linguistics*, *6*(4), 339–384.

Bertagaev, T. A. (1968). Mongol'skie jazyki: vvedenie Mongolic languages: introduction. *Jazyki narodov SSSR*, *5*, 7–12.

Bhatt, R. (2003). Topics in the syntax of the modern Indo-Aryan languages: Scrambling. *Handout of class lecture, MIT*.

Bhatt, R., & Anagnostopoulou, E. (1996). Object shift and specificity: Evidence from ko-phrases in Hindi. In *Papers from the 32nd regional meeting of the Chicago Linguistics Society, Chicago* (p. 11-22).

Bhatt, R., & Keine, S. (2019). Secondary strong crossover in Hindi and the typology of movement. In *Proceedings of the 49th Annual Meeting of the North East Linguistic Society.* (Vol. 1).

Bhatt, R., & Keine, S. (2021). Crossover asymmetries. *Handout at the Syracuse-Cornell Workshop on Word Order and Scrambling.*.

Bhatt, R., & Pancheva, R. (2004). Late merger of degree clauses. *Linguistic Inquiry*, *35*(1), 1–45.

Bhatt, R., & Pancheva, R. (2007). Degree quantifiers, position of merger effects with their restrictors, and conservativity. *Direct Compositionality*, 102–131.

Binnick, R. (1979). *Modern mongolian: A transformational syntax*. University of Toronto Press.

Binnick, R. (1987). On the classification of the Mongolian languages. *Central Asiatic Journal*, *31*(3/4), 178–195.

Binnick, R. (2011). *The past tenses of the Mongolian verb: Meaning and use*. Brill.

Bobaljik, J. D., & Wurmbrand, S. (2012). Word order and scope: Transparent interfaces and the 3/4 signature. *Linguistic Inquiry*, *43*(3), 371–421.

Boeckx, C. (2001). Scope reconstruction and a-movement. *Natural Language & Linguistic Theory*, *19*(3), 503–548.

Bošković, Ž. (2004). Topicalization, focalization, lexical insertion, and scrambling. *Linguistic inquiry*, *35*(4), 613–638.

Bošković, Ž., & Takahashi, D. (1998). Scrambling and last resort. *Linguistic inquiry*, *29*(3), 347–366.

Browning, M., & Karimi, E. (1994). Scrambling to object position in persian. *Studies on scrambling: Movement and non-movement approaches to free word-order phenomena*, 61.

Carstens, V. (2005). Agree and EPP in Bantu. *Natural Language & Linguistic Theory*, *23*(2), 219–279.

Carstens, V., & Diercks, M. (2009). Parameterizing case and activity: Hyper-raising in Bantu. *Linguistics publications (MU)*.

Charnavel, I., & Sportiche, D. (2016). Anaphor binding: What French inanimate anaphors show. *Linguistic Inquiry*, *47*(1), 35–87.

Cho, J.-H. (1994a). On scrambling: reconstruction, crossover, and anaphor binding. *Theoretical issues in Korean linguistics*, 255–274.

Cho, J.-H. (1994b). *Scrambling in Korean: Crossover, reconstruction and binding theory* (Unpublished doctoral dissertation). University of Connecticut.

Chomsky, N. (1973). Conditions on transformations. In S. Anderson & P. Kiparsky (Eds.), *A festschrift for Morris Halle* (p. 232–286). New York: Academic Press.

Chomsky, N. (1976). Conditions on rules of grammar. *Linguistic Analysis*, 303–51.

Chomsky, N. (1977). On wh-movement. In P. Culicover, T. Wasow, & A. Akmajian (Eds.), *Formal syntax* (p. 71–132). New York: Academic Press.

Chomsky, N. (1981). *Lectures on government and binding: The Pisa lectures*. Walter de Gruyter.

Chomsky, N. (1986a). *Barriers*. MA: MIT Press.

Chomsky, N. (1986b). *Knowledge of language: Its nature, origin, and use*. Greenwood Publishing Group.

Chomsky, N. (1993). A minimalist program for linguistic theory. *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*.

Chomsky, N. (1995a). Categories and transformations. In *The Minimalist Program.* MIT Press.

Chomsky, N. (1995b). *The Minimalist Program*. MIT press.

Chomsky, N. (2000). Minimalist inquiries: The framework (MITOPL 15). *Step by step: Essays on Minimalist syntax in honor of Howard Lasnik*, 89–155.

Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (Ed.), *Ken Hale: A life in language* (pp. 1–52). Cambridge, MA: MIT Press.

Chomsky, N. (2004). Beyond explanatory adequacy. In A. Belletti (Ed.), *Structures and beyond (= the cartography of syntactic structures, vol. 3)* (pp. 104–31). Oxford & New York: Oxford University Press.

Chomsky, N. (2007). Approaching UG from below. *Interfaces + recursion = language?*, 1–29.

Chomsky, N. (2008). On phases. *Current Studies in Linguistics Series*, *45*, 133.

Chomsky, N. (2013). Problems of projection. *Lingua*, *130*, 33–49.

Chomsky, N. (2021). Minimalism: Where are we now, and where can we hope to go. *GENGO KENKYU (Journal of the Linguistic Society of Japan)*, *160*, 1–41.

Chomsky, N., & Lasnik, H. (1993). The theory of principles and parameters. In

Syntax: An international handbook of contemporary research. Berlin and New York: Walter de Gruyter.

Činggeltei. (1980). *Odo üy-e-yin Mongγol kelen-ü jüi (A Grammar of Modern Mongolian)*. Hohhot: Inner Mongolian People's Publishing House.

Činggeltei. (1991a). *A grammar of the Mongolian language*. Inner Mongolia People's Publishing House.

Činggeltei. (1991b). *Mengguyu Yufa (A Grammar of the Mongolian Language)*. Hohhot: Inner Mongolian People's Publishing House.

Cinque, G. (1990). *Types of A'-dependencies*. MIT Press.

Collins, C., & Groat, E. (2018). Distinguishing copies and repetitions. *Ms. ling. auf. net/lingbuzz/003809*.

Corver, N., & Van Koppen, M. (2011). NP-ellipsis with adjectival remnants: a micro-comparative perspective. *Natural Language & Linguistic Theory*, *29*(2), 371–421.

Corver, N., & van Riemsdijk, H. (1994). Introduction: approaches to and properties of scrambling. *Studies on scrambling. Movement and non-movement approaches to free word–order phenomena*, 1–17.

Dayal, V. (1994). Binding facts in Hindi and the scrambling phenomenon. *Theoretical perspectives on word order in South Asian languages*, 237–262.

Dayal, V. (2017). Does Hindi-Urdu have feature-driven wh-movement to spec, vP? *Linguistic Inquiry*, *48*(1), 159–172.

Déprez, V. M. (1989). *On the typology of syntactic positions and the nature of chains: move [alpha] to the specifier of functional projections* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Despić, M. (2011). *Syntax in the absence of determiner phrase* (Unpublished doctoral dissertation). University of Connecticut.

Despić, M. (2013). Intensifiers, focus, and clitics: Is pronoun position truly an argument for D in SC? *The nominal structure in Slavic and beyond*, *116*, 39.

Diesing, M. (1992). *Indefinites*. MIT Press.

Driemel, I. (2020). Pseudo-incorporation and its movement patterns. *Glossa: A journal of general linguistics*, *5*(1).

Elbourne, P. (2001). E-type anaphora as NP-deletion. *Natural Language Semantics*, *9*(3), 241–288.

Elbourne, P. (2005). *Situations and Individuals* (Vol. 90). MIT press Cambridge, MA.

Epstein, S. D., & Seely, T. D. (2002). Rule applications as cycles in a level-free syntax. *Derivation and explanation in the Minimalist Program*, 65–89.

Fanselow, G. (2001). Features, θ-roles, and free constituent order. *Linguistic inquiry*, *32*(3), 405–437.

Farmer, A. K. (1980). *On the interaction of morphology and syntax* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Ferreira, M. (2004). Hyperraising and null subjects in Brazilian Portuguese. *MIT Working Papers in Linguistics*, *47*, 57–85.

Fiengo, R. (1977). On trace theory. *Linguistic Inquiry*, *8*(1), 35–61.

Folli, R., & Harley, H. (2007). Causation, obligation, and argument structure: On the nature of little v. *Linguistic Inquiry*, *38*(2), 197–238.

Fong, S. (2019). Proper movement through Spec-CP: An argument from hyperraising in Mongolian. *Glossa: A journal of general linguistics*, *4*(1).

Fox, D. (1999). Reconstruction, binding theory, and the interpretation of chains. *Linguistic Inquiry*, *30*(2), 157–196.

Fox, D. (2000). *Economy and semantic interpretation* (Vol. 35). MIT press.

Fox, D. (2002). Antecedent-contained deletion and the copy theory of move-

ment. *Linguistic Inquiry*, *33*(1), 63–96.

Frank, R., Lee, Y.-S., & Rambow, O. (1996). Scrambling, reconstruction and subject binding. *Rivista di Grammatica Generativa, vol. 21 (1996), p. 67-106*.

Fraurud, K. (2001). Possessives with extensive use. *Dimensions of possession*, *47*, 243.

Freidin, R. (1986). Fundamental issues in the theory of binding. In *Studies in the acquisition of anaphora* (pp. 151–188). Springer.

Fukui, N. (1993a). A note on improper movement.

Fukui, N. (1993b). Parameters and optionality. *Linguistic inquiry*, 399–420.

Gong, Z. M. (2021). Postsyntactic lowering and linear relations in Dagur noun phrases. *Glossa: a journal of general linguistics*, *6*(1).

Gong, Z. M. (in progress). Case in wholesale late merger: evidence from Mongolian scrambling, ms. *Cornell University*.

Grewendorf, G., & Sabel, J. (1999). Scrambling in German and Japanese: Adjunction versus multiple specifiers. *Natural Language & Linguistic Theory*, *17*(1), 1–65.

Guntsetseg, D. (2011). *The so-called reflexive(-possessive) suffix in Mongolian.* slides from Workshop "The World of Reflexives".

Guntsetseg, D. (2016). *Differential case marking in Mongolian*. Harrassowitz Verlag Wiesbaden.

Gurtu, M. (1992). *Anaphoric relations in Hindi and English*. Munshiram Manoharlal.

Haig, J. H. (1976). Shadow pronoun deletion in Japanese. *Linguistic Inquiry*, *7*(2), 363–371.

Haig, J. H. (1980). Some observations on quantifier floating in Japanese. *Linguistics*, *18*.

Hale, K. (1980). Remarks on Japanese phrase structure: Comments on the papers on Japanese syntax. *MIT working papers in linguistics*.

Hale, K. (1982). Preliminary remarks on configurationality. In *Proceedings of nels* (Vol. 12, pp. 86–96).

Halpert, C. (2019). Raising, unphased. *Natural Language & Linguistic Theory*, *37*(1), 123–165.

Hankamer, J., & Sag, I. (1976). Deep and surface anaphora. *Linguistic inquiry*, *7*(3), 391–428.

Harada, K.-I. (1972). Constraints on WH-Q binding. *Studies in descriptive and applied linguistics*.

Harada, S. I. (1977). Nihongo-ni 'henkei'-wa hituyoo-da. *Gengo*, *6*(11-12).

Harley, H. B. (1995). *Subjects, events, and licensing* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Hashimoto, K. (2006). Mongoru-go 3 ninshō kōsetsugo no topikku hyōji/shōten hyōji (the third person proclitic as topic/focus markers in mongolian). *Ninchi kagaku kenkyū*, 7–23.

Hawkins, J. (1978). *Definiteness and indefiniteness: A study in reference and grammaticality prediction*. London: Croom Helm.

Heim, I., & Kratzer, A. (1998). *Semantics in generative grammar*. Blackwell Oxford.

von Heusinger, K., Klein, U., & Guntsetseg, D. (2011). The case of accusative embedded subjects in Mongolian. *Lingua*, *121*(1), 48–59.

Higginbotham, J. (1980). Pronouns and bound variables. *Linguistic Inquiry*, *11*(4), 679–708.

Hinds, J. V. (1973). On the status of the VP node in Japanese. *Language Research*.

Hiraiwa, K. (2001). Multiple agree and the defective intervention constraint in

Japanese. *MIT working papers in linguistics*, *40*(40), 67–80.

Hiraiwa, K. (2005). Indeterminate-agreement: Some consequences for the case system. *MIT Working Papers in Linguistics*, *50*, 93–128.

Hoji, H. (1985). *Logical form constraints and configurational structures in Japanese* (Unpublished doctoral dissertation). University of Washington, Seattle.

Hoji, H. (1991). Raising-to-object, ECM and the major object in Japanese. In *Japanese syntax workshop. university of rochester.*

Hoji, H. (2005). Major object analysis of the so-called raising-to-object construction in Japanese. *New Horizons in the Grammar of Raising and Control, Harvard University*.

Hong, K.-S. (1990). Subject-to-object raising in Korean. *Grammatical relations: A cross-theoretical perspective*, 215–225.

Hong, K.-S. (1997). Subject-to-object raising construction in English and Korean. *Language Research*, *33*(3), 409–433.

Hong, S.-M. (2005). *"exceptional" case-marking and resultative constructions*. University of Maryland, College Park.

Hornstein, N. (1995). *Logical form: From GB to minimalism*. John Wiley & Sons.

Huang, C. J. (1982). Move WH in a language without WH movement. *The Linguistic Review*, *1*.

Ito, A. (2007). Argument structure of Japanese ditransitives. *Nanzan Linguistics Special*(3), 127–150.

Janhunen, J. (2006). *The Mongolic Languages*. Routledge.

Janhunen, J. (2012). *Mongolian* (Vol. 19). John Benjamins Publishing.

Jelinek, E. (1984). Empty categories, case, and configurationality. *Natural Language & Linguistic Theory*, 39–76.

Kara, G. (2005). Books of the Mongolian nomads: Indiana University Uralic and

Altaic series.

Karimi, S. (2003). *Word order and scrambling*. Malden, MA: Blackwell.

Karimi, S. (2008). *A minimalist approach to scrambling -Evidence from Persian*. De Gruyter Mouton.

Kayne, R. S. (1994). *The antisymmetry of syntax* (Vol. 25). MIT press.

Keine, S. (2016). *Probes and their horizons*. Doctoral dissertation, University of Massachusetts Amherst.

Keine, S. (2018). Case vs. positions in the locality of A-movement. *Glossa: A journal of general linguistics*, *3*(1).

Keine, S. (2019). Selective opacity. *Linguistic Inquiry*, *50*(1), 13–62.

Kester, E.-P. (1996). Adjectival inflection and the licensing of empty categories in DP. *Journal of Linguistics*, *32*(1), 57–78.

Kester, E.-P. (1998). The nature of adjectival inflection. *Glot international*, *3*.

Kidwai, A. (2000). XP-adjunction in universal grammar: Scrambling and binding in Hindi-Urdu. In *Oxford studies in comparative syntax*. Oxford University Press, USA.

Kim, S.-S. (2002). Focus matters: Two types of intervention effect. In *Paper presented at WCCFL 21, Santa Cruz.*

Kitagawa, C. (1982). Topic constructions in Japanese. *Lingua*, *57*(2-4), 175–214.

Kitagawa, Y. (1985). Barriers to government. In *Proceedings of North East Linguistics Society 16* (p. 18).

Kitagawa, Y. (1986). *Subjects in Japanese and English*. Doctoral dissertation, University of Massachusetts at Amherst.

Kitahara, H. (2002). Scrambling, case, and interpretability. *Derivation and explanation in the Minimalist Program*, 167–183.

Klima, E. (1964). Negation in English. In *The structure of language: Readings in the*

philosophy of language (pp. 246–323). Englewood Cliffs, NJ: Prentice-Hall.

Ko, H. (2007). Asymmetries in scrambling and cyclic linearization. *Linguistic inquiry*, *38*(1), 49–83.

Ko, H. (2018). Scrambling in Korean syntax. In *Oxford research encyclopedia of linguistics.*

Koopman, H., & Sportiche, D. (1982). Variables and the bijection principle.

Kornfilt, J. (2013). *Turkish*. Routledge.

Kotek, H. (1994). *Composing questions*. Doctoral dissertation, Massachusetts Institute of Technology.

Kotek, H. (2019). *Composing questions* (Vol. Linguistic Inquiry Monograph 80). MIT Press.

Kuno, S. (1975). *The structure of the Japanese language*. MIT Press.

Kuno, S. (1976). Subject raising. In M. Shibatani (Ed.), *Syntax and Semantics 5: Japanese Generative Grammar.*

Kuno, S. (2007). Revisiting subject raising in Japanese. In B. Frellesvig, M. Shibatani, & J. C. Smith (Eds.), *Current Issues in the History and Structure of Japanese.*

Kuroda, S.-Y. (1983). What can Japanese say about government and binding? In *Wccfl2.*

Kwon, J. (2010). Scrambling of Korean embedded clauses. *Studies in Generative Grammar*, *20*(2), 229–249.

Lasnik, H. (1999). Chains of arguments. In *Working Minimalism* (pp. 189–215). MIT Press.

Lasnik, H., & Saito, M. (1992). *Move α: Conditions on its application and output* (No. 22). MIT press.

Lasnik, H., & Saito, M. (1999). On the subject of infinitives. In *Minimalist*

analysis.

Lasnik, H., & Uriagereka, J. (1988). *A course in GB syntax: Lectures on binding and empty categories*. MIT press.

Lebeaux, D. (1988). *Language acquisition and the form of the grammar*. Doctoral dissertation, University of Massachusetts, Amherst.

Lebeaux, D. (1998). *Where does binding theory apply?* MIT Press.

Lee, R. (1994). *Economy of representation*. Doctoral dissertation, University of Conneticut.

Lee, Y.-S. (1993). *Scrambling as case-driven obligatory movement*. Doctoral dissertation, University of Pennsylvania.

Legden, T., Luethy, S., & Bold-Erdene, B. (2008). *Sain baina uu? Three*. Ulaanbaatar: Ekimto.

Legden, T., & Purev, U. (in press). *Mongolian: an elementary textbook*. Georgetown University Press.

Levin, T. (2017). Successive-cyclic case assignment: Korean nominative-nominative case-stacking. *Natural Language & Linguistic Theory*, *35*(2), 447–498.

Levin, T., & Preminger, O. (2015). Case in Sakha: Are two modalities really necessary? *Natural Language & Linguistic Theory*, *33*(1), 231–250.

Lewis, M. P. (2009). *Ethnologue: Languages of the world*. SIL international.

Lobeck, A. (1993). Strong agreement and identification: evidence from ellipsis in english.

Lobeck, A. (1995). *Ellipsis: Functional heads, licensing, and identification*. Oxford University Press on Demand.

López, L. (2012). *Indefinite objects: Scrambling, choice functions, and differential marking*. MIT Press.

Mahajan, A. (1990). *The A/A-bar distinction and movement theory* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Mahajan, A. (1994). Toward a unified theory of scrambling. *Studies on scrambling: Movement and non-movement approaches to free word-order phenomena*, 301–330.

Mahajan, A. (1997). Rightward scrambling. *Rightward movement*, 185–213.

Marantz, A. (1991). Case and licensing. *ESCOL '91: proceedings of the eighth eastern states conference on linguistics*, 234–253.

Marantz, A. (1993). Implications of asymmetries in double object constructions. In *Theoretical aspects of Bantu grammar* (pp. 113–150). CSLI.

May, R. (1977). *The grammar of quantification* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

May, R. (1979). Must COMP-to-COMP movement be stipulated? *Linguistic Inquiry*, *10*(4), 719–725.

McCloskey, J. (1997). Subjecthood and subject positions. In *Elements of grammar* (pp. 197–235). Springer.

McGinnis, M. (2004). Lethal ambiguity. *Linguistic inquiry*, *35*(1), 47–95.

Miyagawa, S. (1980). *Complex verbs and the lexicon* (Unpublished doctoral dissertation). The University of Arizona.

Miyagawa, S. (1989). *Syntax and semantics: Structure and case marking in Japanese*. Academic Press.

Miyagawa, S. (1994). Scrambling as an obligatory movement. *Proceeding of the Nanzan University International Symposium on Japanese Language Education and Japanese Language Studies*, 81-92.

Miyagawa, S. (1997). Against optional scrambling. *Linguistic Inquiry*, 1–25.

Miyagawa, S. (2001). The EPP, scrambling, and wh-in-situ. In M. Kenstowicz

(Ed.), *Ken hale: A life in language* (pp. 293–338). Cambridge, MA: MIT Press.

Miyagawa, S. (2003). A-movement scrambling and options without optionality. *Word order and scrambling*, 177–200.

Miyagawa, S. (2005a). EPP and semantically vacuous scrambling. *The free word order phenomenon: Its syntactic sources and diversity*, 181–220.

Miyagawa, S. (2005b). On the EPP. In *Proc. of the epp/phase workshop, 2005.*

Miyagawa, S. (2006). On the "undoing" property of scrambling: A response to bošković. *Linguistic Inquiry*, *37*(4), 607–624.

Miyagawa, S. (2010). *Why agree? why move?: Unifying agreement-based and discourse-configurational languages* (Vol. 54). MIT Press.

Miyagawa, S. (2017). Causatives. *The handbook of Japanese linguistics*, 236–268.

Miyagawa, S. (2021). Case, Late Merge, and A/A'-movements. *Handout at the Syracuse-Cornell Workshop on Word Order and Scrambling.*.

Miyagawa, S., & Oikonomou, D. (2021). Case and A/A'-movements. *Presentation at MIT Syntax Square.*.

Miyagawa, S., & Tsujioka, T. (2004). Argument structure and ditransitive verbs in Japanese. *Journal of East Asian Linguistics*, *13*(1), 1–38.

Miyara, S. (1982). Reordering in Japanese. *Linguistic Analysis*, *9*(4).

Mizuno, M. (1995). Gendai mongorugo no jūzokusetsushugo ni okeru kakusentaku. In *Tokyo University Linguistic Papers (TULIP).*

Montalbetti, M. (1984). *After binding: On the interpretation of pronouns* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Müller, G. (1995). *A-bar syntax* (Vol. 42). Mouton de Gruyter.

Müller, G. (2014). A local approach to the williams cycle. *Lingua*, *140*, 117–136.

Müller, G., & Sternefeld, W. (1993). Improper movement and unambiguous binding. *Linguistic inquiry*, *24*(3), 461–507.

Müller, G., & Sternefeld, W. (1994). Scrambling as A-bar movement. *Studies on Scrambling. Berlin: Mouton de Gruyter*, 331–85.

Murphy, A. (2018). Pronominal inflection and NP ellipsis in German. *The Journal of Comparative Germanic Linguistics*, *21*(3), 327–379.

Neeleman, A., & Reinhart, T. (1998). Scrambling and the PF interface. *The projection of arguments: Lexical and compositional factors*, 309–353.

Nishigauchi, T. (1986). *Quantification in syntax*. Doctoral dissertation, University of Massachusetts Amherst.

Nishigauchi, T. (2002). Scrambling and reconstruction at LF. *Gengo Kenkyu (Journal of the Linguistic Society of Japan)*, *2002*(121), 49–105.

Nugteren, H. (1997). On the classification of the "peripheral" Mongolic languages. *Studia Uralo-Altaica*, *39*, 207–216.

Nunes, J. M. (1995). *The copy theory of movement and linearization of chains in the Minimalist Program*. University of Maryland, College Park.

Obata, M., & Epstein, S. D. (2011). Feature-splitting internal merge: Improper movement, intervention, and the A/A-bar distinction. *Syntax*, *14*(2), 122–147.

Oka, T. (1988). Abstract case and empty pronouns. *Tsukuba English Studies*, *7*, 187–227.

Ormazabal, J., & Romero, J. (2013). Differential object marking, case and agreement. *Borealis*, *2*(2), 221.

Pesetsky, D. (1987). Wh-in-situ: Movement and unselective binding. In E. Reuland & A. ter Meulen (Eds.), *The representation of (in)definiteness.* Cambridge, MA: MIT Press.

Pesetsky, D. (2000). *Phrasal movement and its kin*. MIT press.

Pesetsky, D., & Torrego, E. (2011). Case. *The Oxford handbook of linguistic Mini-*

malism, 52-72.

Podobryaev, A. (2013). Differential case marking in Turkic as intermediate dependent case. In *Proceedings of the 8th workshop on Altaic formal linguistics, ed. umut özge.*

Poppe, N. (1955). *Introduction to Mongolian Comparative Studies* (Vol. 110). Helsinki: Suomalais-ugrilainen Seura.

Poppe, N. (1970). *Mongolian language handbook* (No. 4). Center for Applied Linguistics.

Poppe, N. (1974). *Grammar of written Mongolian*. Otto Harrassowitz Verlag.

Postal, P. (1971). *Cross-over phenomena*. Holt, Rinehart and Winston.

Postal, P. (1972). A global constraint on pronominalization. *Linguistic Inquiry*, *3*(1), 35–59.

Postal, P. (1993). Remarks on weak crossover effects. *Linguistic Inquiry*, *24*(3), 539–556.

Pylkkänen, L. (2008). *Introducing Arguments* (Vol. 49). MIT press.

Ramstedt, G. J. (1902). *Über die konjugation des Khalkha-Mongolischen* (Vol. 19). Druckerei der Finnischen litteraturgesellschaft.

Reinhart, T. (1976). *The syntactic domain of anaphora* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Reinhart, T. (1983). *Anaphora and semantic interpretation*. Chicago: University of Chicago Press.

Rezac, M. (2003). The fine structure of cyclic agree. *Syntax*, *6*(2), 156–182.

Richards, M. D. (2007). On feature inheritance: An argument from the phase impenetrability condition. *Linguistic Inquiry*, *38*(3), 563–572.

Richards, N. (2010). *Uttering trees* (Vol. 56). MIT Press.

van Riemsdijk, H., & Williams, E. (1981). NP-structure. *The Linguistic Review*, *1*,

171–217.

Rizzi, L. (1986). On chain formation. In H. Borer (Ed.), *The syntax of pronominal clitics: Syntax and semantics 19* (pp. 65–95). New York: Academic Press.

Rizzi, L. (2006). On the form of chains: Criterial positions and ECP effects. *Current Studies in Linguistics Series*, *42*, 97.

Rizzi, L., & Shlonsky, U. (2007). Strategies of subject extraction. *Interfaces+ recursion= language*, *89*, 115–160.

Rodríguez-Mondoñedo, M. (2007). *The syntax of objects: Agree and differential object marking*. Citeseer.

Romero, M. (1997). Problems for a semantic account of scope reconstruction. In *Proceedings of the tübingen workshop on reconstruction* (pp. 119–146).

Romero, M. (1998). The correlation between scope reconstruction and connectivity effects. In *Proceedings of the 16th west coast conference on formal linguistics, Palo Alto, CA, CSLI.*

Ross, J. R. (1967). *Constraints on variables in syntax* (Unpublished doctoral dissertation). MIT.

Rybatzki, V. (2003). Intra-Mongolic taxonomy. In J. Janhunen (Ed.), *The Mongolic Languages* (pp. 1–52). Routledge.

Saab, A., & Lipták, A. (2016). Movement and deletion after syntax: Licensing by inflection reconsidered. *Studia Linguistica*, *70*(1), 66–108.

Sabel, J. (2001). Wh-questions in Japanese: Scrambling, reconstruction, and wh-movement.

Sabel, J., & Saito, M. (Eds.). (2005). *The free word order phenomenon: Its syntactic sources and diversity*. Mouton de Gruyter.

Safir, K. (1984). Multiple variable binding. *Linguistic Inquiry*, 603–638.

Safir, K. (2017). Weak crossover. *The Wiley Blackwell Companion to Syntax, Second*

Edition, 1–40.

Safir, K. (2019). The A-/A'-distinction as an epiphenomenon. *Linguistic Inquiry*, *50*(2).

Saito, M. (1982). *Case marking in Japanese: A preliminary study*. MIT.

Saito, M. (1983). Comments on the papers on generative syntax. *Studies in generative grammar and language acquisition*, 79–89.

Saito, M. (1985). *Some asymmetries in Japanese and their theoretical implications, Ph.D dissertation* (Unpublished doctoral dissertation). MIT.

Saito, M. (1989). Scrambling as semantically vacuous A'-movement. In M. Baltin & A. Kroch (Eds.), *Alternative conceptions of phrase structure.* University of Chicago Press.

Saito, M. (1992). Long distance scrambling in Japanese. *Journal of East Asian Linguistics*, *1*(1), 69–118.

Saito, M. (2003). A derivational approach to the interpretation of scrambling chains. *Lingua*, *113*(4-6), 481–518.

Saito, M. (2004). Japanese scrambling in a comparative perspective. In *Peripheries* (pp. 143–163). Springer.

Saito, M. (2009). Optional A-scrambling. *Japanese/Korean Linguistics*, *16*, 44–63.

Saito, M. (2010). On the nature of the complementizer to. *Journal of Japanese Linguistics*, *26*(1), 87–102.

Saito, M. (2012). Sentence types and the Japanese right periphery. In *Discourse and grammar* (pp. 147–176). De Gruyter Mouton.

Saito, M. (2016). (A) Case for labeling: labeling in languages without ϕ-feature agreement. *The Linguistic Review*, *33*(1), 129–175.

Saito, M., & Fukui, N. (1998). Order in phrase structure and movement. *Linguistic Inquiry*, *29*(3), 439–474.

Saito, M., & Hoji, H. (1983). Weak crossover and move α in Japanese. *Natural Language & Linguistic Theory*, *1*(2), 245–259.

Sakai, H. (1998). Raising asymmetry and improper movement. *Japanese/Korean Linguistics*, *7*, 481–497.

Sanzheev, G. (1973). *The Modern Mongolian Language [Languages of Asia and Africa]*. Moscow: Nauka.

Sauerland, U. (1998). *On the making and meaning of chains* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Sauerland, U., & Elbourne, P. (2002). Total reconstruction, PF movement, and derivational order. *Linguistic Inquiry*, *33*(2), 283–319.

Schwartz, A. (1972). The VP-constituent of SVO languages. In *Syntax and Semantics volume 1* (pp. 213–235). Brill.

Schwarz, F. (2009). *Two types of definites in natural language*. University of Massachusetts Amherst.

Sells, P. (1990). Is there subject-to-object raising in Japanese. *Grammatical relations: A cross-theoretical perspective*, 445–457.

Shibagaki, R. (2014). *Analysing secondary predication in East Asian languages*. Cambridge Scholars Publishing.

Simpson, A. (2000). *Wh-movement and the theory of feature-checking*. John Benjamins Publishing.

Sportiche, D. (2005). Division of labor between merge and move: Strict locality of selection and apparent reconstruction paradoxes. In *Proceedings of the workshop divisions of linguistic labor, the la bretesche workshop* (Vol. 378, pp. 80–126).

Street, J. (1963). *Khalkha Structure, Uralic and Altaic Series, vol. 24*. Bloomington IN: Indiana University Publications.

Svantesson, J. O. (2000). Mongolic vowel shifts and the classification of the Mongolic languages. *Altai Hakpo*, *10*, 193–207.

Svantesson, J.-O. (2003). Khalkha. In J. Janhunen (Ed.), *The Mongolic languages.* Routledge.

Svantesson, J.-O., Tsendina, A., Karlsson, A., & Franzén, V. (2005). *The phonology of mongolian*. OUP Oxford.

Szabolcsi, A. (1981). The possessive construction in Hungarian: A configurational category in a non-configurational language. *Acta Linguistica Academiae Scientiarum Hungaricae*, *31*(1/4), 261–289.

Szabolcsi, A. (1983). The possessor that ran away from home.

Szabolcsi, A. (1994). The noun phrase. In *The syntactic structure of hungarian* (pp. 179–274). Brill.

Tada, H. (1990). *Scrambling(s).* Workshop on Japanese Syntax, Ohio State University.

Tada, H. (1993). *A/A-bar partition in derivation* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Takahashi, S. (2006). *Decompositionality and identity* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

Takahashi, S., & Hulsey, S. (2009). Wholesale late merger: Beyond the A/$\bar{\text{A}}$ distinction. *Linguistic Inquiry*, *40*(3), 387–426.

Takano, Y. (1998). Object shift and scrambling. *Natural Language & Linguistic Theory*, *16*(4), 817–889.

Takano, Y. (2003). Nominative objects in Japanese complex predicate constructions: A prolepsis analysis. *Natural Language & Linguistic Theory*, *21*(4), 779–834.

Takeuchi, H. (2010). Exceptional case marking in Japanese and optional feature

transmission. *Nanzan Linguistics*, *6*, 101–128.

Tanaka, H. (2002). Raising to object out of CP. *Linguistic Inquiry*, *33*(4), 637–652.

Terada, M. (1990). *Incorporation and argument structure in Japanese* (Unpublished doctoral dissertation). University of Massachusetts Amherst.

The Tibetan & Himalayan Library. (n.d.). *Transliteration Systems for Uyghur-Mongolian or Vertical or Old Script and Transliteration of Cyrillic Khalkha*, https://www.thlib.org/index.php.

Thompson, M. A. (2008). *A study of the analogical extension of the Mongolian hidden-n declension in colloquial standard Khalkha* (Unpublished doctoral dissertation). Indiana University.

Tonoike, S. (1980). More on intra-subjectivization. In Y. Otsu & A. Farmer (Eds.), *Theoretical Issues in Japanese Linguistics.* Cambridge, MA: MIT Working Papers in Linguistics.

Torrego, E. (1998). *The dependencies of objects* (Vol. 34). MIT Press.

Tserenpil, D., & Kullmann, R. (2015). *Mongolian Grammar, 5th Edition*. Kullnom Verlag, Switzerland.

Ueda, M. (1988). Exceptional case-marking in Japanese. *Sophia Linguistica*, *23*, 39–46.

Ura, H. (1994). Varieties of raising and the feature-based bare phrase structure theory. (7).

Ura, H. (1995). *Multiple feature-checking: A theory of grammatical function splitting* (Unpublished doctoral dissertation). Massachusetts Institute of Technology.

van Urk, C. (2015). *A uniform syntax for phrasal movement: A case study of Dinka Bor* (Unpublished doctoral dissertation). Massachusetts Institute of Technology, Department of Linguistics and Philosophy.

Vladimirtsov, B. (1929). *Sravnitel'naya grammatika mongol'skogo pis'mennogo yazyka i khalkhasskogo narechiya: Vvedeniye i fonetika (Comparative grammar of the Mongolian literary language and the Khalkha dialect: Introduction and phonetics)*. Moscow: NAUKA Glavnaya redaktsiya vostochnoy literatury.

Wasow, T. (1972). *Anaphoric relations in English* (Unpublished doctoral dissertation). Massachusetts Institute of Technology Cambridge.

Wasow, T. (1979). *Anaphora in generative grammar* (Vol. 2). John Benjamins Publishing.

Webelhuth, G. (1985). German is configurational. *The Linguistic Review*, *4*.

Webelhuth, G. (1989). *Syntactic saturation phenomena and the modern germanic languages* (Unpublished doctoral dissertation). University of Massachusetts-Amherst.

Webelhuth, G. (1992). *Principles and parameters of syntactic saturation*. Oxford University Press.

Whitman, J. (1979). Scrambled, over easy, or sunny side up? In *Papers from the 15th regional meeting of the Chicago Linguistic Society* (pp. 342–352).

Whitman, J. (1987). Configurationality parameters. *Issues in Japanese linguistics*, 351–374.

Williams, E. (2003). *Representation theory*. MIT Press.

Woolford, E. (1999). Animacy hierarchy effects on object agreement. *New dimensions in African linguistics and languages*, *3*, 205–215.

Woolford, E. (2006). Lexical case, inherent case, and argument structure. *Linguistic inquiry*, *37*(1), 111–130.

Wurmbrand, S. (2010). Reconstructing the A/A-bar distinction in reconstruction. *University of Pennsylvania Working Papers in Linguistics*, *16*(1), 27.

Wurmbrand, S. (2019). Cross-clausal A-dependencies. In *Eszter ronai, laura*

stigliano & yenan sun, proceedings of the Chicago linguistic society meeting (Vol. 54, pp. 585–604).

Wurmbrand, S., & Bobaljik, J. (1999). Modals, raising and A-reconstruction. *University of Leiden*.

Yatsushiro, K. (2003). VP internal scrambling. *Journal of East Asian Linguistics*, *12*(2), 141–170.

Yoon, J. H. (2007). Raising of major arguments in Korean and Japanese. *Natural Language & Linguistic Theory*, *25*(3), 615–653.

Yoon, J.-M. (1991). *The syntax of A-chains: A typological study of ECM and scrambling* (Unpublished doctoral dissertation). Cornell University.

Yoshimura, N. (1989). Parasitic pronouns. In *Proceedings of japanese-korean linguistics.*

Yoshimura, N. (1992). *Srambling and anaphora in Japanese* (Unpublished doctoral dissertation). University of Southern California.

Yuan, M. (2019). Dependent case and clitic dissimilation in Yimas. *Natural Language & Linguistic Theory*, 1–49.

Zyman, E. (2018). The rich syntax of grammatical relations: Raising and hyperraising in P'urhepecha. *Santa Cruz, CA: University of California, Santa Cruz dissertation*.

Zyman, E. (2021). Raising out of finite clauses (hyperraising), ms. *The University of Chicago*.