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Voice, Case and the External Argument

The perspective from Urdu

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Declaration

This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text. I further state that no substantial part of my thesis has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. It does not exceed the prescribed word limit for the relevant Degree Committee.

Voice, Case and the External Argument: The perspective from Urdu

Sana Ausaf Kidwai

Abstract

This dissertation explores the relationships between Voice, case and the external argument, as seen in Urdu. The dissertation investigates three broad connections between these phenomena. The first is that between the external argument and accusative case, as reported in Burzio's Generalisation (Burzio, 1986). I argue that the presence of an external argument does not play a role in accusative case assignment; instead, the crucial factor is the type of Voice head present. This brings us to the second connection explored in this thesis, Voice and case. I propose that the active/non-active distinction can be recast in terms of case. Non-active Voice heads assign an inherent oblique case to their specifier, while active Voice heads assign structural accusative case to an argument in their c-command domain, that is, the direct object. Assuming each functional head can only assign case once, the status of non-active Voice as an inherent case-assigner not only explains but predicts that it will not assign accusative case. Lastly, I investigate the effect of case on the notion of subjecthood. I show that the behaviour of an argument with respect to some subject properties is conditioned by its case; however, this connection is only indirect, and reflects the relationship or lack thereof between the argument and T.

This dissertation provides new insights into the relationships between Voice, case assignment and the external argument in Urdu, specifically related to the nature of Voice heads, Burzio's Generalisation and notions of subjecthood. Analyses of several other phenomena, such as agreement, applicative constructions, light verb constructions, and ergative case assignment, are also presented as part of the discussion. The dissertation leaves us with big-picture questions surrounding the functional role of Voice, and the typology of Voice heads, both in Urdu and cross-linguistically, as well as questions about issues related to case, such as the structural representation of case, case assignment mechanisms, and the relationship between case and agreement.

Through the course of the dissertation, I also highlight dialectal differences between Hindi and Urdu, and how these might be captured formally. The syntactic literature generally uses the umbrella term 'Hindi-Urdu', with little to no consideration of dialectal differences. Distinguishing between Hindi and Urdu is a first step in taking into account dialectal variation, bearing in mind, of course, that this is still an extremely broad division for what is a spectrum with many dialects within 'Hindi' and 'Urdu'.

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Glossing Abbreviations

I follow the Leipzig Glossing Convention[1] in this thesis, with some additions. The full list of abbreviations is given below for convenience.

1	first person	IPFV	imperfective
2	second person	LOC	locative
3	third person	M	masculine
AC	anticausative	NMLZ	nominalizer
ACC	accusative	NOM	nominative
CAUS	causative	NPST	non-past
DAT	dative	OBL	oblique form
DIR	direct form	PASS	passive
ERG	ergative	PFV	perfective
F	feminine	PL	plural
FUT	future	PRS	present
GEN	genitive	PROG	progressive
HON	honorific	PST	past
IMP	imperative	PTCP	participle
INF	infinitive	SG	singular
INS	instrumental		

[1] https://www.eva.mpg.de/lingua/resources/glossing-rules.php

Notes on Transliteration

The Urdu data presented in this dissertation has been transliterated into Roman characters. While there is no standardised way of doing this, I have tried to stay consistent within my own transliteration. Below are some of the less transparent mapping rules I have used.

Mapping rules:

- Dental d: [d̪] → d
- Dental t: [t̪] → t
- Retroflex d: [ɖ] → D
- Retroflex t: [ʈ] → T
- Retroflex r: [ɽ] → R
- Uvular voiceless fricative: [χ] → kh
- Uvular voiced fricative: [ʁ] → gh
- Voiceless palato-alveolar affricate: [tʃ] → ch
- Voiced palato-alveolar affricate: [dʒ] → j
- Aspiration: [_ʰ] → H
- Nasalisation: [˜] → n

Chapter 1

Introduction

Voice, case and the external argument have been linked in works on both case assignment and argument structure. This dissertation explores these three phenomena in Urdu, and, in particular, the relationships between them.

Let us take Burzio's Generalisation as a starting point to understand the long-standing connection between Voice, case and the external argument. Burzio (1986: p.178) reported that accusative case is only assigned when the external θ-role is too. As a result, accusative case is not found in constructions without an external argument, such as unaccusatives. One way of accounting for Burzio's Generalisation is to propose that the external θ-role and accusative case are both assigned by the same functional head, and thus, manipulating the properties of this head will affect the presence of both simultaneously. Around the same time that Burzio put forward his generalisation, Marantz (1984) argued that subjects are not introduced by the verb itself, but by a functional head outside VP, thus earning the name *external arguments*. In similar work, Kratzer (1996) named this functional head Voice. Consequently, Voice has become a natural choice for pinning down the link between accusative case assignment and the external argument.

A second link between case and the external argument is the effect of case on the behaviour of the external argument. The idea that non-nominative (or quirky case) subjects behave differently from nominative ones is found in several places in the literature. For example, in many languages, only arguments with certain cases can trigger agreement (Bobaljik, 2008; Baker, 2013; Preminger, 2014). Additionally, it has been proposed that the structural position a subject occupies may also depend on the case it bears, with nominative or structural case subjects being higher than others (Chomsky, 1995: p.282–84; Preminger, 2014: Ch.8; Poole, 2016; Bošković, 2019). This structural position may subsequently affect which subject diagnostics the argument is able to pass.

In this dissertation, I examine a number of Voice and case-related phenomena in Urdu to provide further insight into the relationships between Voice, case and the

external argument. I look at the following relationships in particular:

(i) Voice and object case (Chapters 3, 4)

(ii) Voice and subject case (Chapter 4)

(iii) The external argument and object case (Chapter 4)

(iv) Subjecthood and subject case (Chapter 5)

Urdu is a good case study to explore these relationships because it exhibits all the interactions generally reported in the literature, but not always as expected. Urdu is perhaps most interesting for the relationships given in (i) and (iii), as it has often been cited as an exception to Burzio's Generalisation, due to the seeming possibility of accusative case in passive-looking structures (Hook, 1979; Davison, 1982; Mohanan, 1994: pp.94–96; Mahajan, 1995; Bhatt, 2003c, 2007; Srishti, 2011: Ch.5). This allows us to explore a potential counter-example, which may provide new insights into the relationship between Voice and accusative case assignment, as well as the dependence of accusative case on the presence of the external argument. Also with respect to (i), Urdu is known to be a differential object marking language, in which accusative case-marking is conditioned by interpretive factors, such as animacy and specificity. We can therefore investigate the extent to which functional heads, like Voice, play a role in determining case assignment, that is, what part of case assignment is determined by functional heads, and what is not. In relation to (ii), Urdu has a rich case system, and the external argument in both actives and passives is case-marked. To this end, we can explore whether the external argument is assigned case from Voice or another functional head in different Voice constructions, which will provide further insights into the properties of Voice as a case-assigning functional head. Finally, with respect to (iv), Urdu is a language in which subjects can be marked with almost all cases available in the language. This allows us to probe the effect of case on subject behaviour in depth, and compare different types of arguments with structural and non-structural cases.

This dissertation presents new insights into the relationship between Voice, case assignment and the external argument, specifically related to the nature of Voice heads in Urdu, Burzio's Generalisation, and notions of subjecthood. It also provides new or enhanced accounts of several other phenomena, as seen in Urdu, such as agreement, applicative constructions, and ergative case assignment. The dissertation leaves us with big-picture questions surrounding the functional role of Voice and the typology of Voice heads, both in Urdu and cross-linguistically, as well as questions about issues related to case, such as its structural representation, case assignment mechanisms, and the relationship between case and agreement.

In the rest of this chapter, I present an overview of the dissertation (section 1.1) and provide an introduction to Urdu (section 1.2).

1.1 Overview of the Dissertation

Chapter 2 sets out the relevant theoretical background. I present the syntactic architecture adopted in this dissertation, as well as key assumptions regarding argument structure and case assignment.

Chapter 3 investigates the conditions on accusative case assignment in active contexts. Urdu exhibits differential object marking under which human objects are obligatorily marked while non-human objects are optionally so. Bringing in facts from pseudo-noun-incorporation, I argue this is so because nominals differ in their licensing requirements: human objects require licensing of an uninterpretable case-feature, non-humans do not. I present a feature-licensing account of differential object marking along the lines of Kalin (2014: Ch.4). After receiving accusative case, objects must undergo object shift and move out of VP. When object shift is not possible, the object must not be assigned case to prevent a case-marked nominal from remaining within VP. This is what causes dative intervention: the presence of the dative indirect object bleeds object shift, hence, the direct object cannot receive accusative case in these ditransitives. The conditions on differential object marking and the need for object shift show us that the presence of the requisite functional head, active Voice, is not always enough for case assignment. Finally, this chapter also looks at object agreement triggered by non-accusative objects, and presents a modified version of Bhatt & Walkow's (2013) analysis to account for different agreement configurations in Urdu.

Chapter 4 looks at case assignment in non-active contexts. I argue that the availability of accusative case does not depend on the presence of an external argument, but rather on the properties of Voice. I first look at canonical passives, and show that the *by*-phrase is introduced as an argument, not an adjunct. This means that the external argument condition of Burzio's Generalisation is met in passives. Yet, accusative case is not assigned. Instead, instrumental case is assigned to the *by*-phrase as an inherent case by non-active Voice. I then turn to so-called accusative-preserving passives. I argue that these are not true passives, and instead have an active Voice head, which makes accusative case possible, and in fact expected, in these constructions. Lastly, I look at constructions with unaccusative verbs and the light verb *jaa* 'go'. I propose that the light verb in these constructions is in fact an anticausative marker. Marked anticausatives have been argued to have a non-active Voice head in some languages (Alexiadou, Anagnostopoulou & Schäfer, 2015). I show that like passives, marked anticausatives in Urdu can have

an external argument (an *oblique causer*), which gives us evidence for the presence of a non-active Voice head. However, this non-active Voice head is non-thematic, in the sense of Schäfer (2008) and Alexiadou et al. (2015), in that it does not assign a θ-role. This accounts for the non-agentive interpretation of oblique causers, and the lack of an implicit argument in the absence of an overt oblique causer. At the end of the chapter, I propose a typology of Voice heads in Urdu, with respect to their argument-introducing and case-assigning properties.

Chapter 5 discusses subjecthood. Many works have shown that subjecthood is not associated with a single structural position, but rather that there are multiple possible subject positions (Bobaljik & Jonas, 1996; Kiss, 1996; McCloskey, 1997; Svenonius, 2002b; Cardinaletti, 2004; Poole, 2016). One determining factor for which position a subject is found in has been proposed to be its case, with structural case subjects being structurally higher than non-structural case subjects. I test the behaviour of different types of subjects (base-generated/derived, agents/non-agents, structurally/non-structurally case-marked) with respect to subject properties in the language. I show that that the behaviour of an argument with respect to some subject properties is conditioned by the case it bears; however, this connection is only indirect, and is in fact reflective of the need for Agree between the argument and the requisite functional head, in this case, T.

Finally Chapter 6 provides a chapter-by-chapter synopsis, and discusses the implications of the findings for Voice, case and the external argument, as well as the implications for the structural representation of case and overall contributions to Urdu syntax.

1.2 Brief Introduction to Urdu

Urdu is an Indo-European language spoken primarily in Pakistan and India, as well as diaspora communities around the world. The dialect reported in this paper is that of the Muhajir community of Karachi, Pakistan, colloquially known as the Urdu-speaking community.[1] The Urdu-speaking community consists of those who migrated to Pakistan from Uttar Pradesh, India, during the partition of the Indian sub-continent in 1947, and their descendants. The data reported consists primarily of my own native speaker judgements, corroborated with other native speakers, as well as examples reported in the literature (cited as appropriate).

Urdu is highly similar to Hindi, with the two being mutually intelligible and often indistinguishable. This has led to the use of the umbrella-term 'Hindi-Urdu' in much of the syntactic literature. I do not follow this convention, however, and refer only

[1]The term *Urdu-speaking community* refers to those of a particular descent (as described in-text), not simply any speakers of Urdu.

to Urdu. This choice has been made to draw attention to dialectal variation, which is hardly ever considered in syntactic work on Hindi-Urdu. Yet such variation is inevitable, especially within such a large group of speakers,[2] who are in contact with different languages and language families. For example, dialects in Pakistan have more contact with Iranian languages, while dialects in India are in contact with Dravidian languages (Ethnologue). This leads not only to lexical variation between dialects, but also the development of different syntactic features and constructions over time. Drawing a broad distinction between Hindi and Urdu is the first step in documenting and analysing dialectal variation in these languages.

In addition to this terminological choice, I have also highlighted points of difference between Hindi and Urdu in several places in the dissertation. These insights have been gathered mainly through informal discussions with native speaker linguists.[3] Such differences are not only important for the study of dialectal variation, but also have implications for syntactic typologies and micro-variation within grammar. I hope these nuggets of information are not only interesting but also encourage others to pursue syntactic studies of Hindi-Urdu from this perspective.

A final point to mention regarding terminology: when reporting other people's findings, I have used the label they have chosen to use in their work (Hindi, Urdu or Hindi-Urdu). At times, I cite works in support of my judgements or analyses of Urdu, even though the respective authors may not have referred specifically to Urdu in their work. I do this when there is no obvious difference in their reported judgements and the judgements for the dialect under study here.

In the rest of this section, I give a brief description of the key points of Urdu grammar relevant to this dissertation. Davison (2015) provides a good overview of Hindi-Urdu grammar. Mohanan (1994) presents the basic patterns of almost all aspects of argument structure and case-marking in Hindi, and analyses them in a framework similar to Lexical Functional Grammar. Masica (1991) and Subbarao (2012) situate Hindi-Urdu within the larger South Asian linguistic area.

1.2.1 Word order

Urdu is a predominantly head-final language, with SOV word order.[4, 5]

[2] According to the Ethnologue (accessed August 2023), Hindi has 345 million speakers, making it the world's 5th most-spoken language, and Urdu has 70.6 million speakers, making it the world's 20th most-spoken language.

[3] Thanks to participants at *(Formal) Approaches to South Asian Languages 10, 11* and *13* for helpful discussions, in particular, Sakshi Bhatia and Rajesh Bhatt.

[4] The reader will notice that some objects are not glossed for case. This follows argumentation in section 3.6.4 showing that these objects do not have their case-feature valued. Thus, there is no null accusative in my system.

[5] Most trees in this dissertation are drawn as head-initial for easy reading, with the exception of trees which specifically illustrate the order of morphological units.

(1) *Rami=ne seb kHa-ya.*
Rami=ERG apple eat-PFV.M.SG
'Rami ate an apple.'

The exceptions to this are DPs and CPs, which are both head-initial.

(2) [$_{DP}$ ***yeh*** *laal seb*]
[$_{DP}$ this red apple]
'this red apple'

(3) *Rami=ne soch-a* [$_{CP}$ ***keh*** *vo seb kHa-ey ga*].
Rami=ERG think-PFV.M.SG [$_{CP}$ that 3SG apple eat-FUT.3SG FUT.M.SG]
'Rami thought that he will eat an apple.'

There are extensive scrambling options available in the language. All permutations of basic SOV are possible, as shown in (4).

(4) a. *Rami=ne seb kHa-ya.* (ex.1 repeated) (SOV)
b. *Rami=ne kHa-ya seb.* (SVO)
c. *seb Rami=ne kHa-ya.* (OSV)
d. *seb kHa-ya Rami=ne.* (OVS)
e. *kHa-ya Rami=ne seb.* (VSO)
f. *kHa-ya seb Rami=ne.* (VOS)

Scrambling has discourse effects, such as focus and topicalisation. Scrambling in Hindi-Urdu has been studied extensively, most notably by Mahajan (1990) and A. Kidwai (2000).

1.2.2 Tense and aspect

Urdu has three grammatical tenses: past, present and future. These tenses are expressed as auxiliaries, and in the case of future tense, through additional inflection of the verb.

(5) a. *Rami=ne seb kHa-ya* ***tHa.*** (past)
Rami=ERG apple eat-PFV.M.SG be.PST.M.SG

'Rami had eaten an apple.'

b. *Rami=ne seb kHa-ya* ***he.*** (present)
Rami=ERG apple eat-PFV.M.SG be.PRS.3SG

'Rami has eaten an apple.'

c. *Rami seb kHa-**ey*** ***ga.*** (future)
Rami.NOM apple eat-FUT.3SG FUT.M.SG

'Rami will eat an apple.'

There are three aspects available in past and present tense: perfective, imperfective habitual (glossed and referred to simply as 'imperfective'), and imperfective progressive (glossed and referred to simply as 'progressive'). Perfective and imperfective aspect are seen as affixes on the main verb, while progressive aspect is expressed as an auxiliary.

(6) a. *Rami=ne seb kHa-**ya*** *he.* (perfective)
Rami=ERG apple eat-PFV.M.SG be.PRS.3SG

'Rami has eaten an apple.'

b. *Rami seb kHa-**ta*** *he.* (imperfective)
Rami.NOM apple eat-IPFV.M.SG be.PRS.3SG

'Rami eats apples.'

c. *Rami seb kHa* ***rah-a*** *he.* (progressive)
Rami.NOM apple eat PROG-M.SG be.PRS.3SG

'Rami is eating an apple.'

The tense auxiliary can be dropped with perfective aspect to express the simple past (7).[6, 7] Most perfective examples given in this dissertation drop the auxiliary.

[6]Note that auxiliary-drop is not an indication of non-finiteness. Ergative case is possible on the subject, which is not so in non-finite clauses (see section 5.2.1). Following Bhatt & Keine (2017), Kaur & Goncharov (2022) and Goncharov & Kaur (2023), I assume that finite T is present even when the auxiliary is dropped (contra Davison, 2002).

[7]Tense auxiliaries can also be dropped with imperfective aspect, although in more limited contexts and with some variation between dialects and speakers. For example, Goncharov & Kaur (2023: p.3) report that auxiliary-drop is possible with imperfective aspect in *when*-clauses and with quantification adverbs in Hindi. Auxiliary-drop is not possible in either of these contexts in the Urdu dialect reported here, although it is possible with negation (i-a) and conditionals (i-b).

(7) *Rami=ne seb kHa-**ya**.*
Rami=ERG apple eat-PFV.M.SG

'Rami ate an apple.'

1.2.3 Case system

1.2.3.1 Morphology

Urdu has a rich case system with seven cases: nominative, ergative, accusative, dative, instrumental, genitive and locative. Their respective forms are shown in Table 1.1.

Case	Form
Nominative	Ø
Ergative	*ne*
Accusative	*ko*
Dative	*ko*
Instrumental	*se*
Genitive	*k-a/i/e*
Locative	*mein/par/tak/*Ø

Table 1.1: The Urdu case markers.

Accusative and dative cases are syncretic, leading some to assume that they are the same case (Davison, 2004a,b; Mahajan, 1990). I take accusative and dative to be distinct cases for reasons discussed in section 3.7.1. The genitive case marker agrees in gender and number with the head noun in the nominal phrase. Locative case has multiple realisations, including a null exponent. Each of the realisations of locative case has a distinct semantic meaning, making them similar to postpositions in this regard. There has been some debate as to whether the case markers in Urdu are postpositions (Mahajan, 1990; Davison, 2004b) or clitics (Mohanan, 1994: pp.59–61; Butt & King, 2004: pp.169–72).[8] S. Kidwai (2019: pp.8–13) applies a series of

(i) a. *Rami seb **nahi** kHa-ta.*
Rami.NOM apple not eat-IPFV.M.SG
'Rami doesn't eat apples.'

b. ***agar** Rami seb kHa-ta...*
if Rami.NOM apple eat-IPFV.M.SG...
'If Rami ate apples...'

[8]There is also a minority camp which argues that the morphological forms (direct/oblique; see Table 1.3) selected by the markers in Table 1.1 are the true case system, and that the markers themselves are only postpositions (Spencer, 2005; Kulikov, 2009: pp.442–43). See S. Kidwai (2019: pp.16–18) for arguments against this approach.

diagnostics to show that the case markers are clitics, and not postpositions. I discuss the postpositional nature of some case markers in more detail in section 2.3.2.

The case markers always have the forms shown in Table 1.1. The only exception are accusative or dative pronouns which have an additonal fused form of the pronoun and case marker available, shown in boldface in the partial paradigm in Table 1.2.

	NOM	ERG	ACC/DAT	INS
1SG	*mein*	*mein=ne*	*mujH=ko/**mujHe***	*mujH=se*
2SG	*tum*	*tum=ne*	*tum=ko/**tumhein***	*tum=se*
3PL	*vo*	*un=ne/unho=ne*	*un=ko/**unhe***	*un=se*

Table 1.2: Case marking on pronouns.

Case affects the morphological form of the noun stem. Nominals with nominative case are in *direct* form (8a), while nominals with other cases are in *oblique* form (8b). This includes null locative case (9b).

(8) a. ***laRka*** *seb kHa rah-a he.*
boy.DIR.NOM apple eat PROG-M.SG be.PRS.3SG

'The boy is eating an apple.'

b. ***laRke***=*ne* *seb* *kHa-ya.*
boy.OBL=ERG apple eat-PFV.M.SG

'The boy ate an apple.'

(9) a. ***Daak-khaana*** *band he.*
post-office.DIR.NOM close be.PRS.3SG

'The post office is closed.'

b. *laRka* ***Daak-khaane*** *jaa rah-a he.*
boy.NOM post-office.OBL.LOC go PROG-M.SG be.PRS.3SG

'The boy is going to the post office.'

The direct and oblique forms are indistinguishable in most noun classes, as shown in Table 1.3. The difference is only seen in masculine singular nouns ending in *-a* (row i), and in all plural nouns (rows ii–iii) and pronouns (row iv). For all other noun classes, such as masculine singular nouns with other endings (row v) or feminine singular nouns (row vi), the direct and oblique forms are syncretic.

Determiners and adjectives are not marked with case, but they do agree in direct/oblique form with the head noun (10). This is also seen with nouns that do not show the direct/oblique contrast themselves (e.g. *seb* 'apple').

		DIR	**OBL**	
i.	M.SG ending in *-a*	*laRka*	*laRke*	'boy'
ii.	M.PL	*seb*	*seb-on*	'apples'
iii.	F.PL	*laRki-yan*	*laRki-yon*	'girls'
iv.	Pronouns	*vo*	*us/un*	'3SG/PL'
v.	Other M.SG	*seb*	*seb*	'apple'
vi.	F.SG	*laRki*	*laRki*	'girl'

Table 1.3: Direct and oblique forms of nominals.

(10) a. ***vo*** ***achHa*** *laRka* / *seb...*
that.DIR good.DIR boy.DIR / apple.DIR...

'that good boy/apple...'

b. ***us*** ***achHe*** *laRke* / *seb* *=ko...*
that.OBL good.OBL boy.OBL / apple.OBL =ACC...

'that good boy/apple...'

In the rest of this dissertation, I will generally not gloss direct and oblique morphology, except where necessary to the exposition.

1.2.3.2 Subject cases

Case on transitive subjects is conditioned by aspect. In finite clauses, ergative case is seen on the subject of perfectives (11a), and nominative case is found elsewhere (11b).

(11) a. ***Rami=ne*** / **Rami* *chocolate* *kHa-i* *tHi.*
Rami=ERG / *Rami.NOM chocolate eat-PFV.F.SG be.PST.F.SG

'Rami ate chocolate.'

b. ***Rami*** / **Rami=ne* *chocolate* *kHa-ta* *tHa.*
Rami.NOM / *Rami=ERG chocolate eat-IPFV.M.SG be.PST.M.SG

'Rami used to eat chocolate.'

Subjects of intransitives (both unergative and unaccusative) are generally nominative (12a). Some speakers also accept ergative subjects with intransitive verbs related to bodily functions (12b). Ergative case is optional in intransitives, and adds a volitional reading (see section 5.2.2).

(12) a. ***Rami*** / **Rami=ne* *hans-a.*
Rami.NOM / *Rami=ERG laugh-PFV.M.SG

'Rami laughed.'

b. ***Rami*** / ***Rami=ne*** *kHaans-a.*
Rami.NOM / Rami=ERG cough-PFV.M.SG

'Rami coughed (on purpose).'

In addition to ergative and nominative case, all other cases except accusative are also found on subjects. Most relevant to us are dative subjects of psych-predicates (13). Dative subjects are discussed in detail in section 5.3. The reader is directed to Mohanan (1994: Ch.6–7) for details regarding other subject cases.

(13) ***Rami=ko*** *khushi* *hui.*
Rami=DAT happiness happen.PFV.F.SG

'Rami felt happy.'

1.2.3.3 Object cases

Direct objects can be either marked with accusative case or remain unmarked. These options are available with both ergative and nominative subjects (14, 15). Accusative case is the result of differential object marking, conditioned by animacy and specificity, which is discussed in depth in Chapter 3.

(14) a. *Rami=ne* ***chocolate=ko*** *kHa-ya.*
Rami=ERG chocolate=ACC eat-PFV.M.SG

'Rami ate the chocolate.'

b. *Rami=ne* ***chocolate*** *kHa-i.*
Rami=ERG chocolate eat-PFV.F.SG

'Rami ate chocolate.'

(15) *Rami* ***chocolate(=ko)*** *kHa* *rah-a* *he.*
Rami.NOM chocolate(=ACC) eat PROG-M.SG be.PRS.3SG

'Rami is eating (the) chocolate.'

In ditransitives, experiencers, recipients, and goals are dative (16a), sources are instrumental (16b), and location goals are locative (16c).

(16) a. *Rami=ne* ***Omar=ko*** *kitaab bHej-i.*
Rami=ERG Omar=DAT book send-PFV.F.SG

'Rami sent Omar a book.'

b. *Rami=ne* ***Omar=se*** *kitaab li.*
Rami=ERG Omar=INS book take.PFV.F.SG

'Rami took a book from Omar.'

c. *Rami=ne khat* ***Dibbay=mein*** *rakH-a.*
Rami=ERG letter box=LOC put-PFV.M.SG

'Rami put the letter in the box.'

1.2.3.4 Adverbial cases

In addition to arguments, adverbials may also have case in Urdu. For example, adverbs are always marked with instrumental case (17) while certain temporal adjuncts have accusative case (18). Ahmed (2010) provides a detailed exposition of accusative adjuncts in Urdu.

(17) *Rami* ***jaldi=se*** *aa-ya.*
Rami.NOM quickly=INS come-PFV.M.SG

'Rami came quickly.'

(18) a. *chor* ***mangal=ko*** *aa-ya.*
thief.NOM Tuesday=ACC come-PFV.M.SG

'The thief came on Tuesday.'

b. *chor* ***raat=ko*** *aa-ya.*
thief.NOM night=ACC come-PFV.M.SG

'The thief came in the night.' (Ahmed, 2010: p.5)

I do not discuss adverbial cases in this work.

1.2.4 Agreement

Urdu has case-sensitive agreement. Agreement is always with the highest unmarked argument in the clause. If the subject is nominative, it triggers agreement (19a). If the subject is non-nominative, agreement is with the object (19b). When there is

no unmarked argument in the clause, default agreement (third person, masculine, singular) is seen (19c).

(19) a. ***laRke*** *chocolate* *kHa-eyn* *ge.* (subject)
boy.M.PL.NOM chocolate.F.SG eat-FUT.3PL FUT.M.PL

'The boys will eat chocolate.'

b. *laRkon=ne* ***chocolate*** *kHa-i* *he.* (object)
boy.M.PL=ERG chocolate.F.SG eat-PFV.F.SG be.PRS.3SG

'The boys have eaten chocolate.'

c. *hum=ne* *chocolate=ko* *kHa-ya* *he.* (default)
1PL=ERG chocolate.F.SG=ACC eat-PFV.M.SG be.PRS.3SG

'We have eaten the chocolate.'

Not all verb forms show all ϕ-features – in fact, no single inflectional item shows all three features. Table 1.4 summarises the distribution of features across different tense and aspect marking. Note that the future shows all three features only because it is composed of two inflectional items, seen in (19a), one of which carries person and number marking, and the other of which carries gender and number marking. Butt & Sadler (2003) discuss verbal agreement morphology in Urdu in depth, and provide an analysis situated in Lexical Functional Grammar.

Verb form	**# and gender**	**# and person**
Past, perfect, imperfect, progressive, past *be*	✓	–
Imperative, subjunctive, non-past *be*	–	✓
Future	✓	✓

Table 1.4: Verb forms and ϕ-features (Butt & Sadler, 2003: p.79).

This concludes our overview of Urdu grammar.

Chapter 2

Theoretical Background

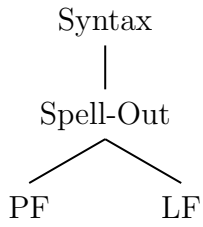
In this chapter, I describe the basic syntactic architecture this dissertation employs (section 2.1), and provide relevant theoretical background for two of its key themes, namely, argument structure (section 2.2) and case assignment (section 2.3).

2.1 Syntactic Architecture

This dissertation is situated in Minimalist syntax (Chomsky, 1995, 2000; and subsequent) and Distributed Morphology (DM) (Halle & Marantz, 1993, 1994; Marantz, 1997; Harley & Noyer, 1999; Embick & Noyer, 2007; see Bobaljik, 2017, for an overview).

The computational system builds a structure in Narrow Syntax (henceforth, Syntax), and outputs it to Spell-Out, as illustrated in (1). At Spell-Out, the derivation splits, and is sent to Phonological Form (PF) and Logical Form (LF). Phonological exponents are filled in at PF, and semantic interpretation is assigned at LF.

(1)



Syntactic structure is built using the operation *Merge* (2). Merge takes two syntactic objects (lexical items, or phrases which have been outputted by previous instances of Merge) and produces an unordered set as a new object (i.e. a new phrase).

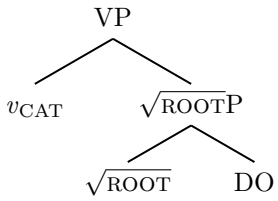
(2) Merge(α, β): {α, β}

According to DM, morphological units are also built in Syntax. Two types of elements can be inserted at the terminal nodes: *abstract morphemes* and *roots*.

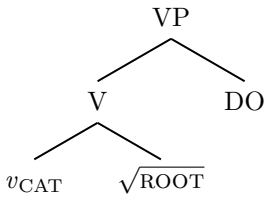
Abstract morphemes consist of features, such as [past], [plural], [feminine], and form functional categories or functional heads. Roots are encyclopaedic entries, such as $\sqrt{\text{EAT}}$, $\sqrt{\text{DONUT}}$, $\sqrt{\text{DELICIOUS}}$. Roots are category-neutral, and are Merged with category-defining heads in syntax to receive a lexical category. I use V as a shorthand for a verbalised root, $v_{\text{CAT}}+\sqrt{\text{ROOT}}$.

There is some debate as to whether internal arguments are selected by roots (Harley, 2014) or roots plus a category-defining head (Merchant, 2019). In the former approach, the direct object is a complement to $\sqrt{\text{ROOT}}$, forming $\sqrt{\text{ROOT}}$P; v_{CAT} then Merges with $\sqrt{\text{ROOT}}$P (3a). In the latter approach, the root is categorised before the direct object Merges with it as a complement (3b). The choice between the two approaches does not have any obvious implications for the purposes of this dissertation. For notational ease, I show the direct object as a complement to V, hence, following the latter approach (3b).

(3) a.



b.



The remaining argument structure is built by functional heads, such as Voice and Appl, which introduce arguments in their specifiers. Further details about argument structure are given in section 2.2.

At PF, the terminal nodes are matched to phonological features through *Vocabulary Insertion*. These phonological exponents are called *Vocabulary Items*. The Vocabulary Item which matches the most features on the terminal node, without having any extra features itself, will usually be selected over other possible items. The correspondence between Vocabulary Items and features (as opposed to heads) means that it is theoretically possible for multiple heads to be spelled out together as a single Vocabulary Item.

2.2 Argument Structure

I follow the approach that argument structure is configurational, determined by functional projections and not by the verb alone (Marantz, 1984, 1997; Hale & Keyser, 1993, and subsequent; see Marantz, 2013, for an overview). The *external argument* (EA) is introduced outside of VP, in contrast to the *internal argument*, introduced inside VP. The EA-introducing head has received many labels in the literature, most prominently, v/v^* (Chomsky, 1995, 2001) and Voice (Kratzer, 1996). In addition to introducing the EA, the same head is also taken to perform a range

of other functions, including verbalising the root (in some DM-style approaches), introducing event semantics, assigning accusative case, and demarcating the verbal phase (as nicely summarised by Harley, 2017). Pylkkänen (2002, 2008) was the first to argue that this functional load may be spread across two functional heads. She called these heads Voice and CAUSE; I will call them Voice and *v*. Pylkkänen also introduced a *Voice-bundling* parameter: in Voice-bundling languages, the functions of Voice and *v* are subsumed under a single head; in Voice-splitting languages, Voice and *v* are independent heads with the functions listed above divided between them. The distinction between Voice and *v*, and the division of labour between them has been much discussed in the literature since Pylkkänen's original proposal (Alexiadou, Anagnostopoulou & Everaert, 2004; Alexiadou, Anagnostopoulou & Schäfer, 2006, 2015; Folli, Harley & Karimi, 2005; Harley, 2009, 2012, 2013, 2017; Legate, 2014; Wood, 2015; Kastner, 2020; Tyler, 2020; Nie, 2020a,b).

I take Voice to be responsible for introducing the EA and assigning accusative case. In addition, Voice is also the locus of the active/non-active alternation, which, as we will see in Chapter 4, stems from its EA-introducing and case-assigning properties. *v* introduces event semantics.[1]

There is morphological evidence to show that Voice and *v* are two separate heads in Urdu. The causative alternation shows two patterns in Urdu, described in detail by Bhatt & Embick (2017). In the NULL class, the intransitive form is derived from a causative root by vowel simplification (4).[2] Conversely, in the -AA class, the causative is formed by adding *-a* to an intransitive root (5).

(4)

	Causative		**Unaccusative**		**Gloss**
a.	*bigaaR-na*	[bɪgaːɽ-na]	*bigaR-na*	[bɪgəɽ-na]	'to spoil'
b.	*ubaal-na*	[ʊbaːl-na]	*ubal-na*	[ʊbəl-na]	'to boil'
c.	*gHol-na*	[gʰol-na]	*gHul-na*	[gʰʊl-na]	'to dissolve'
d.	*kHol-na*	[kʰol-na]	*kHul-na*	[kʰʊl-na]	'to open'

(5)

	Unaccusative		**Causative**		**Gloss**
a.	*bah-na*	[beh-na]	*bah-a-na*	[bəh-a-na]	'to flow'
b.	*jal-na*	[dʒəl-na]	*jal-a-na*	[dʒəl-a-na]	'to burn'
c.	*pigal-na*	[pɪgəl-na]	*pigl-a-na*	[pɪgl-a-na]	'to melt'
d.	*chamak-na*	[tʃəmək-na]	*chamk-a-na*	[tʃəmk-a-na]	'to shine'

[1] I leave it open whether or not *v*, which introduces event semantics, can also perform the functions of DM's categorising *v* (v_{CAT}).

[2] Bhatt & Embick (2017) show that the vowel change is predictable only as a vowel simplification process, and not as a vowel lengthening one, which would not be the case if the causative was formed from an intransitive root in the NULL class.

Bhatt & Embick (2017) propose that *-a* is the spell-out of a causative head, which I take to be *v*. When -AA class verbs are passivised, both the passive auxiliary, *jaa*, and the causative morpheme, *-a*, are seen (6c), showing the distinction between Voice and *v*.

(6) a. *baraf pigal rah-i he.* (unaccusative)
ice.NOM melt PROG-F.SG be.PRS.3SG

'The ice is melting.'

b. *Rami baraf pigl-**a** rah-a he.* (causative)
Rami.NOM ice melt-CAUS PROG-M.SG be.PRS.3SG

'Rami is melting (the) ice.'

c. *baraf pigl-**a**-i **jaa** rah-i he.* (passive)
ice.NOM melt-CAUS-PFV.F.SG PASS PROG-F.SG be.PRS.3SG

'The ice is being melted.'

The separation of Voice and *v* is also seen in passives of light verbs. It has been shown that Urdu light verbs occupy a range of functional heads (Butt & Ramchand, 2005; Butt, King & Ramchand, 2008; Kidwai & Sobolak, to appear). Importantly, at least some light verbs occupy *v*. In a detailed study, Sobolak (2023: Ch.4) shows that the light verb *le* 'take' in Urdu occupies a position below the EA-introducing head. She calls this head Inner Asp; we may think of it as a type of *v* (see below on flavours of *v*). When *le* is passivised, passive morphology stacks on top of it (7b), once again showing that Voice and *v* are distinct.

(7) a. *Rami=ne kHaana kHa **li**-ya.*
Rami=ERG food eat take-PFV.M.SG

'Rami ate food [completely].'

b. *kHaana kHa **li**-ya **gya**.*
food eat take-PFV.M.SG PASS.PFV.M.SG

'The food was eaten [completely].'

This is unlike causatives in languages where the functions of Voice and *v* are performed by a single head. For example, in Persian, passives are formed by changing the light verb itself rather than adding passive morphology, as shown by Folli et al. (2005). This is seen in the contrast between (8a) and (8b) below.

(8) Persian:

a. *Minu bachcha-ro kotak* ***zad***. (active)
Minu child-ACC beating hit

'Minu hit the child.'

b. *bachche kotak* ***xord***. (passive)
child beating collided

'The child got hit.' (Folli et al., 2005: p.1376)

In addition to Voice and v being distinct, I assume that are different 'flavours' of v, which introduce different event semantics, hence, leading to different types of predicates (Harley, 1995, 2009, 2017; Marantz, 1997; Cuervo, 2003, 2020; Alexiadou et al., 2004; Folli & Harley, 2005, 2007; Schäfer, 2009a). Some flavours that have been identified in the literature are v_{BE} (stative), v_{BECOME} (change of state), v_{DO} (activity), and v_{CAUS} (causative), with variation in how different authors use these labels. In Urdu, these flavours reveal themselves in the semantics of light verbs. In (9), the choice of light verb determines what type of predicate is formed: adding the light verb *aa* 'come' to the eventive noun *yaad* 'memory' forms a stative predicate (9a), while adding the light verb *kar* 'do' forms a causative (9b). This suggests that *aa* and *kar* occupy v heads with different event semantics, possibly v_{BE} and v_{CAUS}, respectively.

(9) a. *Nadya=ko kahani yaad* ***aa-i***.
Nadya=DAT story.NOM memory come-PFV.F.SG

'Nadya remembered the story.' / 'The memory of the story came to Nadya.'

b. *Nadya=ne kahani yaad* ***ki***.
Nadya=ERG story memory do.PFV.F.SG

'Nadya recalled/memorised the story.' (Butt, 2010: p.52)

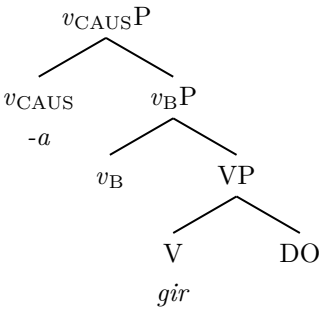
I take it that unaccusatives have either v_{BE} or v_{BECOME}, depending on the type of predicate. I do not distinguish between the two since I am not interested in the specifics of verbal semantics here, and simply use the cover term v_{B} moving forward. Unergatives have v_{DO}. To form causatives, v_{CAUS} attaches on top of these vPs.[3, 4]

[3]Some works have argued that there is a single v slot which is occupied interchangeably by different variants of v (Folli & Harley, 2005, 2007; Harley, 2008, 2009). Others argue that v heads may stack (Miyagawa, 1998; Cuervo, 2003, 2020; Schäfer, 2009a). It is worth noting that even in the former camp, v_{CAUS} is usually treated differently from other v heads. For example, Harley (2017) argues for a CausP between vP and VoiceP. This Caus head amounts to what I am calling v_{CAUS}. I remain neutral regarding the possibility of other v heads stacking.

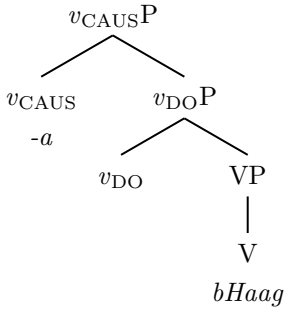
[4]Causatives of unergatives may in fact have a more complex structure than the one shown in

As stated earlier, v_{CAUS} is spelled out as *-a*.

(10) a. *gir-a* 'make fall'



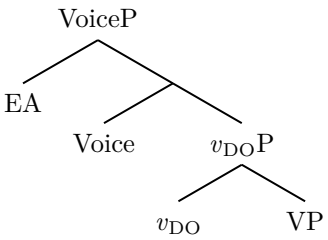
b. *bHag-a* 'make run'



In light of the distinction between different flavours of v, we must also adopt a more fine-grained understanding of Pylkkänen's (2002, 2008) Voice-bundling parameter. The functional sequence we have established is $v_{\text{B/GO}} > v_{\text{CAUS}} >$ Voice. This gives us more bundling options. Harley (2017) presents a similar sequence, $v >$ Caus > Voice, and argues that languages may either bundle v+Caus, Caus+Voice, or all three heads. Here, I show that although none of these heads bundle in Urdu in the sense of Pylkkänen, there is a one-way dependency between v_{CAUS} and Voice.

Voice may occur without v_{CAUS}. For example, unergatives do not have v_{CAUS} but have VoiceP to introduce an EA (11).

(11)



However, v_{CAUS} is never found without Voice in Urdu (Srishti, 2011: Ch.7; Bhatt & Embick, 2017: pp.97–100). Pylkkänen (2002, 2008: Ch.3) shows that Voice-splitting languages, like Finnish and Japanese, have causer-less causatives. For example, in Japanese, some causatives may have an adversity reading (12b), under which the nominative argument is not interpreted as a causer but as an experiencer or affected argument. This is in contrast to the causative reading (12a), where the nominative argument is interpreted as having caused the event.

(12) Japanese:

Taroo-ga musuko-o sin-ase-ta.
Taro-NOM son-ACC die-CAUS-PST

(10b). I do not delve into this here, but the reader is directed to Kulikov (2001) and Song (2006), for overviews of this topic. Bhatt & Embick (2017) discuss causatives of unergatives in Hindi-Urdu specifically, as does Neu (2023). The former propose a recursive event structure for causatives of unergatives, while the latter proposes a structure like (10b).

a. 'Taro caused his son to die.' (causative reading)

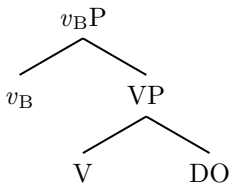
b. 'Taro's son died on him.' (adversity reading)

(Pylkkänen, 2002: p.81)

Pylkkänen shows that despite lacking a causer, Japanese adversity causatives do have causative semantics and v_{CAUS}. No such constructions are found in Urdu. Bhatt & Embick (2017) also give detailed arguments from semantic derivations to show that Voice (which they call v_{AG}) is necessary for the semantic computation of v_{CAUS} in Urdu.

On the other hand, v_{B} behaves differently from v_{CAUS}. It is not dependent on Voice and can occur without it, as in unaccusatives and dative predicates (see section 5.3.2 for discussion on the latter).

(13)



Moreover, Voice cannot attach to v_{B}P at all without an intervening v_{CAUS}P. As a result, unaccusatives must be causativised before they can be passivised (14). This is in contrast to unergatives, which can be passivised without causativisation, resulting in impersonal passives (15a). This shows that v_{DO}P can merge directly with Voice.

(14) a. * *baraf* ***pigl-i*** *gai.*
ice.NOM ice-PFV.F.SG PASS.PFV.F.SG

b. *baraf* ***pigl-a-i*** *gai.*
ice.NOM ice-CAUS-PFV.F.SG PASS.PFV.F.SG

'The ice was melted.'

(15) a. *shaadi=mein* ***naach-a*** *gya.*
wedding=LOC dance-PFV.M.SG PASS.M.SG

'It was danced at the wedding.'

b. *bandar* ***naach-a-ey*** *gaey.*
monkeys.NOM dance-CAUS-PFV.M.PL PASS.M.PL

'Monkeys were made to dance.'

To summarise, Voice and v are distinct functional heads.[5] Voice introduces the EA and assigns accusative case. There are multiple v heads, which introduce different event semantics. v_{CAUS} introduces causative semantics, and requires Voice to also Merge in the structure. v_{B}P cannot Merge directly with Voice, hence, there must always be an intervening v_{CAUS}P. Crucially, v is not an argument licensor – it does not introduce any arguments, nor does it assign case. Moving forward, I will generally leave v off tree diagrams, unless necessary to the exposition.

2.3 Case

Chomsky (1981: p.49) advocated for a distinction between *abstract case* and *morphological case*.[6] Abstract case refers to a formal syntactic feature and morphological case is the spell-out of that feature. Following Vergnaud (1977/2008), Chomsky argued that abstract case is responsible for nominal licensing, and based on this, he proposed the *Case Filter*, stating that all overt nominals must receive abstract case in the syntax. Thus, abstract case was taken to govern the distribution of nominals. In this view, abstract case can also motivate movement: a nominal unable to receive case in its base position is forced to move in order to receive case elsewhere. This explains movement in structures such as unaccusatives, passives and raising constructions. However, many works have since have challenged the idea of abstract case and case-licensing (Zaenen, Maling & Thráinsson, 1985; Marantz, 2000; McFadden, 2004; Preminger, 2011, 2014), while others have shown that there are other licensing mechanisms available in addition to case assignment, such as noun incorporation and thematic licensing (Massam, 2001; Danon, 2006; Wiltschko, 2014: Ch.6; Levin, 2015; Sheehan & van der Wal, 2018).

In this dissertation, I take the view that morphological case is a spell-out of syntactic case-features. These case-features are valued in syntax and receive the appropriate morphological exponents at PF. Some reasons against opting for a purely morphological view of case, as proposed by mainstream implementations of dependent case theory (Marantz, 2000; McFadden, 2004; Baker, 2015), are given in section 2.3.4. Moreover, I take case assignment to be only one of the ways in which nominals can be licensed. The dissertation largely focuses on the distribution of morphological case, and as such, only engages in discussions of licensing as far as they explain patterns of case-marking.

In the rest of this section, I set out the case assignment mechanisms that will be

[5] More accurately, Voice and v are cover terms for distinct classes of functional heads: v, as discussed, refers to an array of flavours of v, and Voice, as we shall see in Chapter 4, also has several variants with differing argument-introducing and case-assigning properties.

[6] See Bobaljik & Wurmbrand (2012) and Pesetsky & Torrego (2012) for an overview of case in Minimalism.

employed in this dissertation, and the structural representation of case that I adopt.

2.3.1 Case assignment

There are three types of cases: lexical, inherent, and structural (Woolford, 1997; Legate, 2008). *Lexical case* is idiosyncratic, and, as the name suggests, is assigned by specific lexical heads (verbs and prepositions) to their complement. *Inherent case* is found on arguments First-Merged in θ-positions, and is assigned by functional heads to their specifiers. *Structural case* assignment depends on the c-command relations in the structural configuration the noun is found in. In dependent case approaches, structural case is assigned relative to the case of another nominal within a specified domain (Marantz, 2000; McFadden, 2004; Baker, 2015). In the approach followed in this dissertation, structural case is assigned by functional heads via Agree (see below).

Following proposals by Lamontagne & Travis (1987), Travis & Lamontagne (1992), Bittner & Hale (1996), and many others, I assume that valued case-features are situated in a functional head, K, which projects KaseP/KP. KP is the highest projection in the nominal domain, and case-marking is the spell-out of K.

In Urdu, KP is head-final, in line with the predominant head-direction of the language, seen in the fact that case-marking always follows nominals. Moreover, as shown by Butt & King (2004: pp.169–71), the Urdu case markers attach to phrases, not simply heads (see also Mohanan, 1994: pp.59–61). For example, coordinated phrases have a single case marker at the end (16). The conjuncts may also include modifiers (17), further highlighting that the case-marker attaches at phrasal level. Additionally, the focus marker can intervene between the case-marker and the remaining nominal (18).

(16) a. *Yaseen=ne* [*kutte aur gHoRe*]***=ko*** *dekH-a* *he.*
Yaseen=ERG [dog and horse]=ACC see-PFV.M.SG be.PRS.3SG

'Yaseen saw the dog and the horse.'

b. *Nadya* [*Lahore aur Karachi*]***=se*** *he.*
Nadya [Lahore and Karachi]=INS be.PRS.3SG

'Nadya is from Lahore and Karachi.' (Butt & King, 2004: p.170)

(17) [*ek kaale kutte aur do safeid gHoRon*]***=ko***
[one black dog and two white horses]=ACC

'a black dog and two white horses'

(18) a. *us=**hii**=ne* *kaam* *ki-ya.*
3SG=FOC=ERG work do-PFV.M.SG

'HE/[Only] he did (the) work.'

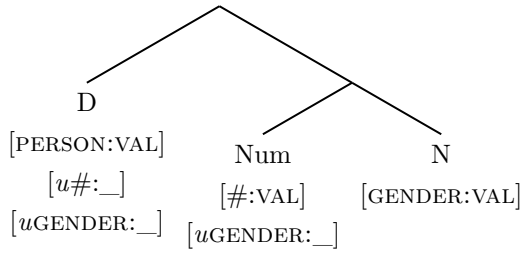
b. *mein* *vahaan* *cycle=**hii**=se* *pahunch* *sak-ti* *huun.*
1SG there bicycle=FOC=INS reach can-IPFV.F.SG be.PRS.3PL

'I can reach there with a BIKE/[just] a bike.'

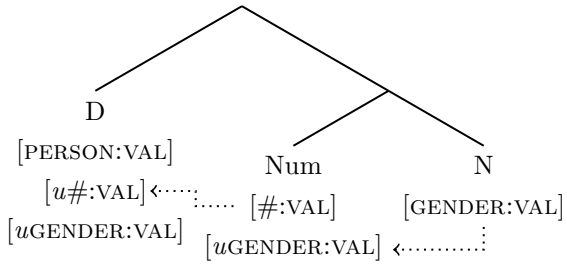
(Butt & King, 2004: p.170)

I adopt the view that nominal features are spread across the extended nominal projection, as in (19a). Each head introduces a valued feature, and may also have additional unvalued features. Following Pesetsky & Torrego (2007), Feature-Sharing allows unvalued occurrences of a particular feature to share values with valued occurrences of that feature within the extended projection. As a result, all features are valued within the nominal projection (19b). Note that, following Pesetsky & Torrego, I distinguish the interpretability and valuation of features, making four types of features possible (see section 3.2).

(19) a.



b.

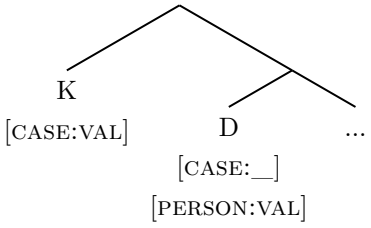


(Kalin, 2014: p.146)

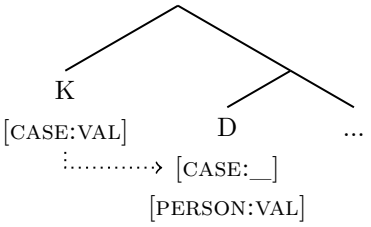
I take it that case-features are introduced in the nominal projection in a similar way to the ϕ-features above. K introduces a valued case-feature, while all other heads may introduce unvalued case-features only. K does not have any unvalued ϕ-features, however, meaning KPs have only case-features and no ϕ-features. This is supported by agreement facts. In section 3.6.4, we will see that there are two agreement processes in Urdu: syntactic Agree and post-syntactic Feature-Copying. Neither of these processes is able to target KPs. If KPs had any ϕ-features, we would expect them to be able to at least trigger agreement via Feature-Copying. The fact that they do not do so shows that they do not have any ϕ-features.

Lexical and inherent case-assigning heads c-select KPs with specific values of K (Bittner & Hale, 1996; Bayer, Bader & Meng, 2001, Řezáč, 2003, 2004; Sigurðsson, 2017; McFadden, 2018). This means that there is a valued case-feature in the nominal (20a), and so all case-features within the nominal projection can be valued via Feature-Sharing (20b). Since lexical and inherent cases are assigned by virtue of c-selection, they cannot be assigned as a result of movement.

(20) a.



b.



Conversely, nominals that receive structural case are not selected as KPs with valued case-features, but rather as DPs (or smaller) (Bittner & Hale, 1996; Bayer et al., 2001; Řezáč, 2003, 2004; Sigurðsson, 2017; McFadden, 2018).[7] These nominals can, however, have unvalued case-features, introduced on lower nominal heads. Since there is no valued case-feature in the nominal chain, Feature-Sharing cannot take place, and such a nominal must have its case-feature valued by a functional head via Agree.

Agree establishes a relation between a *probe* and a *goal* (Chomsky, 1999, 2000, 2001). Agree is subject to the *Activity Condition*: to enter into Agree, the probe and goal must both be active and have unvalued features. Functional heads in the clausal/verbal spine have unvalued ϕ-features, which causes them to probe within their c-command domain to find a suitable goal with a valued instance of the same feature. Arguments have valued ϕ-features, but have unvalued case-features, which makes them active for Agree. When these functional heads and arguments enter into Agree, the functional head's ϕ-features and the argument's case-feature are valued. The former results in agreement, and the latter in case assignment. On the surface, this implies that agreement and case assignment are two sides of the

[7]Some proponents of KP take all nominals (with structural and non-structural case) to be introduced as KPs (Neeleman & Weerman, 1999; Caha, 2009; Witkoś & Dziubała-Szrejbrowska, 2016). Such proposals typically employ a case-checking approach, so that KPs always have valued case-features, but these features are checked (and deleted) through different mechanisms, depending on structural or non-structural case assignment.

same coin, and always co-occur. This is not always so, as argued by Bobaljik (2008, and subsequent; see Baker, 2013, and Baker, 2015: Ch.2, for a nice overview of the extent to which case and agreement pattern together), and as shown for Hindi-Urdu by Bhatt (2005). We shall also see evidence for this in several places in this dissertation, most prominently in sections 3.6.4 and 5.2.2.

In the traditional view of Agree, Agree is successful when it values both the probe and goal's unvalued features. However, I take Agree to be successful even when only one of the probe or goal's features are valued. Moreover, once a probe or goal has taken part in successful Agree, it may not Agree again even if its own features are unvalued. To give an example, T Agrees with the external argument and values its case-feature as part of the ergative case assignment process (see section 5.2.2). However, at the point when T probes, the external argument's ϕ-features are inside a partially valued KP (see section 2.3.3 on partial valuation of case-features), and so T cannot access these features to value its own unvalued ϕ-features. Despite T's ϕ-features being unvalued, it does not subsequently Agree with the object (see section 3.6.4), as seen through agreement facts (Bhatt & Walkow, 2013). This shows that one-sided valuation is enough for Agree to be considered successful and prevent further instances of Agree.[8] Successful Agree is defined in (21).

(21) Agree is successful if the probe finds the goal, and at least one of the probe or goal's features are valued by the other.

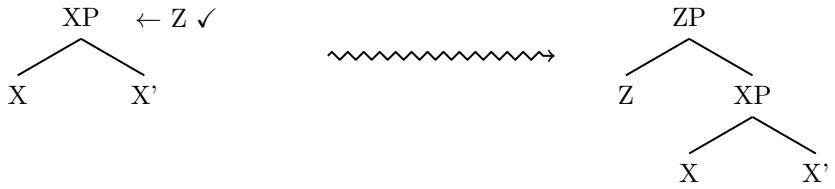
Returning to structural case assignment, I propose that valuation of a nominal's case-feature via Agree results in the insertion of K, and subsequent projection of KP.[9] This is similar to counter-cyclic insertion of KP proposed by Řezáč (2003, 2004: pp.283–87), although my implementation of the counter-cyclicity is different from Řezáč's, in that I take counter-cyclic insertion to be an output of Move triggered by Agree, while he simply takes it to be an output of Agree itself.

Counter-cyclic Merge violates the *Extension Condition* (re-formulated as the *No Tampering Condition* in Chomsky, 2008) which states that Merge can only extend structure, meaning nodes cannot be inserted into phrases that have already been built (Chomsky, 1995: pp.174–75). To illustrate, Merge can introduce an element, Z, to the maximal projection of a phrase, XP, to produce {Z, XP} (22a), but cannot insert Z into XP to produce for example {X, {Z, X'}} (22b).

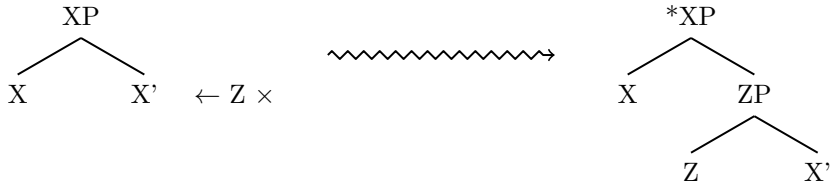
[8]Features which are not valued via Agree may be valued via rescue mechanisms at PF (see section 3.6.4), as seen in default agreement, for example. One may wish to think of one-sided valuation as a type of defective or partial Agree (Preminger, 2011, 2014), although I do not pursue this line of thinking.

[9]The following discussion of counter-cyclicity has greatly benefited from conversations with Rajesh Bhatt.

(22) a.

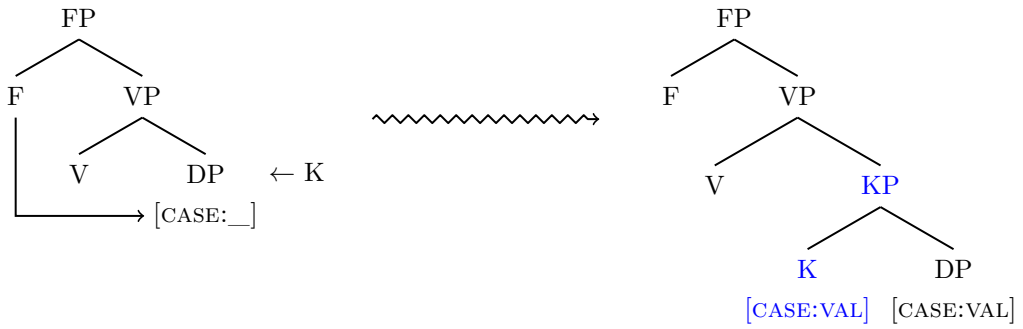


b.



A derivational view of KPs with structural case violates the Extension Condition because it essentially posits that KP be inserted *into* a structure, rather than *extend* it. In the minimal example below (23), F represents a functional head which Agrees with the DP to value its case-feature. Upon valuation of the case-feature, K is inserted counter-cyclically into the structure. Inserted structure is shown in blue, here and elsewhere.

(23)



Řezáč (2004: pp.283–87) proposes K-insertion of the type above.[10] He engages in the counter-cyclicity debate in some detail, and puts forward two points in potential defense of K-insertion. First, he argues that the Extension Condition is not a primitive of syntactic derivation, but rather only necessary to derive the correct bleeding/feeding relations of syntactic operations. More specifically, the Extension Condition ensures that probes only ever Merge at the top-most edge of the construction, and therefore, only probe existing structure. To achieve the correct order of operations without the Extension Condition, Řezáč, building on work by Collins (2002), proposes that the Locus Principle is the main driving force of the derivation. The Locus Principle identifies the label of the tree as the locus for syntactic operations. Since KP is not the label of the tree at the point when K is inserted (e.g. in ex.23, the label is FP), KP will never be the locus of operations, and thus,

[10]K-insertion is also proposed by McFadden (2004: pp.236–39) and Levin (2015: §5.1). Both these works are situated in dependent case theory, and propose that KP is inserted post-syntactically, thus, circumventing violations of counter-cyclicity altogether.

K cannot be a probe. This has the same effect as the Extension Condition, but allows insertion into existing structure, rather than only at the top-most edge. This leads to the second point: for Řezáč, there is a clear difference between elements that are Merged versus those that are inserted as a result of Agree, in particular, with respect to the operations these elements can engage in. Concluding his discussion of counter-cyclicity, Řezáč acknowledges that none of these points are a perfect justification, but that they may provide some headway in ameliorating the problem.

Assuming counter-cyclic insertion of material is allowed, a major challenge is also constraining the process by which such insertion occurs to prevent it from happening more generally. Řezáč (2003, 2004: pp.283–87) treats KPs as a product of Agree, which he defines as a function which takes two arguments, probe and goal, and outputs a set of sisters containing probe' and the goal (24). Probe' is a copy of the probe with all its features at the point at which it enters into Agree, that is, before valuation of relevant features has taken place.

(24) Agree(probe, goal): goal → {probe', goal} (Řezáč, 2004: p.284)

Řezáč takes K to be probe'.[11] The goal is DP, and the set {probe', goal} is KP. The above function restricts K-insertion only to when Agree (i.e. case assignment) takes place. Adopting this function also means that KP is *always* projected when Agree takes place between a case-assigning head and a goal with an unvalued case-feature. However, as per our definition of successful Agree in (21), there may be instances of Agree in which the goal's case-feature has not been valued. This is what I propose occurs in differential object marking in section 3.4. As we shall see in sections 3.1.1 and 3.3, nominals with unvalued case-features do not behave like KPs. Therefore, for our purposes, K-insertion should not be tied to Agree more generally, but specifically to valuation of case-features.

Instead, I propose that K-insertion is constrained by Safir's (2019) Peak Novelty Condition (PNC), given in (25).

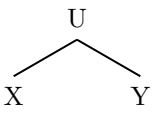
(25) *Peak Novelty Condition:*
After every instance of Merge, M_i, the undominated node U of the resulting structure immediately dominates a node that U did not immediately dominate before M_i. (Safir, 2019: p.292)

The PNC allows two types of outputs of Merge. The first is the conventional case of Merge: a new node, X, is Merged; in the resulting structure, U dominates a node, X, which it did not immediately dominate prior to Merge (26a). The second is the

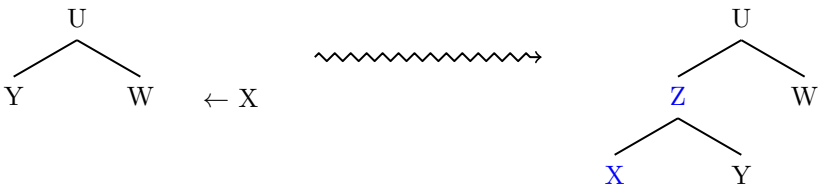
[11] For details on exactly how the features on probe'/K play out, the reader is directed to Řezáč (2004: pp.283–87).

result of, what Safir calls, *penultimate Merge*, which essentially allows a new node, X, to be inserted one level below the undominated node, U (26b). Merging X with Y results in a new node, Z, and so in the resulting structure, U dominates a node which it did not immediately dominate before Merge, in this case, Z, thus satisfying the PNC. In other words, the PNC restricts how deep counter-cyclic Merge can occur.

(26) a.



b.



As we shall see in the course of this dissertation, structural case assignment which requires K-insertion also requires movement.[12] More specifically, accusative objects undergo object shift, and ergative subjects move to Spec-TP. I propose that K is inserted through Merge with the moved argument, creating a new node KP. K is X, the moved argument is Y, and KP is Z, in terms of (26b). This restricts how deep counter-cyclic insertion of KP can occur, in the same way as has been proposed for other instances of counter-cyclic Merge by Safir (2019) and others.

2.3.2 KPs of different sizes

Having addressed the main weakness of the proposed system, namely, counter-cyclicity, I now turn to some of its theoretical advantages.[13] A key outcome of formalising case as a projection is that we can be more fine-grained in our thinking of case and case-features, and split KP into smaller projections, similar to cartographic approaches to CP and DP. One way of doing this is by decomposing case-features into sub-features, and positing that each sub-feature projects a KP layer. In this way, nominals with different cases can have structures of different sizes, with more or less KP layers. Without KP, case-features may still be decomposed into sub-features, but this will only allow for variation in the size of the feature inventory, and not the structure of the element on which the feature inventory is found. Case

[12] The exception to structural case assignment causing movement is nominative case assignment, which is attributed to lack of K-insertion, as discussed in sections 2.3.2 and 5.3.2.

[13] For arguments in favour of KP more generally, the reader is directed to Lamontagne & Travis (1987); Travis & Lamontagne (1992); Bittner & Hale (1996); Neeleman & Weerman (1999); Bayer et al. (2001); Řezáč (2003, 2004); McFadden (2004, 2018); Caha (2009); Levin (2015); Sigurðsson (2017).

sub-features are discussed further in section 2.3.3, but first let us discuss differences in case sizes further.

The idea that cases differ in size is especially common in distinguishing structural and inherent case (Bittner & Hale, 1996; Neeleman & Weerman, 1999; Bayer et al., 2001; Řezáč, 2008; Baker, 2015; Levin, 2015; McFadden, 2018). In many languages, inherent case assignment prevents agreement (Bobaljik, 2008). For example, in Spanish, agreement is usually with the highest argument, the subject (27a). However, in a passive of a ditransitive (27b), agreement is not with the highest argument, the indirect object, but rather with the lower direct object. This is because the indirect object has inherent dative case.

(27) Spanish:

a. *Los niños$_j$* ***le$_i$*** *entregaron$_j$ los libros.* (active)
the children her.DAT gave.PL the books

'The children gave her the books.'

b. *Los libros$_j$* ***le$_i$*** *fueron$_j$ entregado.* (passive)
the books her.DAT were.PL given

'She was given the books.' (Řezáč, 2008: pp.85–86)

It has been suggested in the literature that inherent case is in fact situated in P (Kayne, 1984; Emonds, 1985; Bayer et al., 2001; McFadden, 2004: Ch.3; Asbury, 2008: Ch.2; Řezáč, 2008; Baker, 2015: Ch.5). In light of work showing that P is a phasal head (Baltin, 1978; van Riemsdijk, 1978; Abels, 2003, 2012), lack of agreement with inherent case nominals can be explained as higher heads being unable to probe inside the PP phase. In KP terms, this would mean that the KP layer in inherent case acts as a phase boundary, hence, preventing probes from accessing the ϕ-features of the DP within. Conversely, structural case may either lack a phasal KP, or lack a KP layer altogether, leaving the DP accessible for probing. Thus, inherent case is larger than structural case, as shown on the hierarchy in (28).

(28) Case size hierarchy (to be revised):
$\text{KP}_{\text{inherent}} > \text{KP}_{\text{structural}}$

Distinctions can also be drawn within inherent cases. In some languages, some but not all inherent cases prevent agreement. For example, in Nepali (Indo-Aryan), agreement is possible with ergative case (29b) but not dative (29c).[14, 15]

[14] HON = honorific (ex.29c); NPST = non-past (ex.29a, c).

[15] Agreement with ergative nominals has led to some to take ergative case to be structural in Nepali (Bobaljik, 2008). See Butt & Poudel (2007) for arguments in favour of an inherent analysis of ergative case in Nepali.

(29) Nepali:

a. ***ma*** *yas pasal-mā patrikā* *kin-ch-u.*
1SG.NOM this store-LOC newspaper.NOM buy-NPST-1SG

'I buy the newspaper in this store.'

b. ***maile*** *yas pasal-mā patrikā* ***kin-ch-ẽ*** / **kin-yo.*
1SG.ERG this store-LOC newspaper.NOM buy-PST-1SG / *buy-PST.3M.SG

'I bought the newspaper in this store.'

c. ***malāī*** *timī* *man* *par-ch-au* / ****par-ch-u.***
1SG.DAT 2M.HON.NOM liking occur-NPST-2M.HON / *occur-NPST-1SG

'I like you.' (Bickel & Yādava, 2000: p.348)

Taking inherent case to be situated in P, Řezáč (2008) proposes that the properties of different P heads may render some PPs transparent to probing, while other PPs may remain as phases. In this way, some inherent cases (within or across languages) may block agreement but not others. Řezáč's analysis can be translated in terms of KP layers: some K heads but not others may be phasal.

Another example of differences within inherent cases comes from comparison of the Urdu locative to other inherent cases in the language (e.g. dative, instrumental). S. Kidwai (2019: pp.11–13) provides evidence from the phonological and syntactic properties of case markers and postpositions to show that, while the Urdu case markers are not postpositions generally, locative case markers show intermediate behaviour with regards to some properties (see also Butt & King, 2004: pp.171–72). Firstly, case markers trigger allomorphy on the nouns they occur with through selection of direct and oblique forms (see section 1.2.3). Postpositions do not trigger allomorphy; in fact, they assign genitive case to the nominal they appear with (31b, below). Secondly, the case markers are syntactically dependent on the nominal they are found on, and never occur on their own. This is unlike postpositions, some of which (specifically spatio-temporal postpositions) can appear without nominals, as in imperatives (Butt & King, 2004: p.171).

(30) ***upar*** *ao!*
up come.IMP

'Come up!' (Butt & King, 2004: p.171)

Locative case markers pattern with the other cases with respect to the above properties. However, they differ in prosodic size and case-stacking possibilities. Case markers are prosodically smaller than postpositions in the language. Barring

locative case, all case markers consist of a single light syllable, while postpositions are either disyllabic (Masica, 1991: p.235) or have a single super heavy syllable (Table 2.1).[16] Locative case markers are in-between: they consist of a single heavy syllable (with the exception of the null locative marker).

Case markers		**Locative case**		**Postpositions**	
[ne]	CV	[mẽː]	CVV	[up.ər]	VC.VC
[ko]	CV	[pər]	CVC	[ni.ʧe]	CV.CV
[se]	CV	[t̪ək]	CVC	[saːt̪^{h}]	CVVC
[ka/i/e]	CV			[paːs]	CVVC

Table 2.1: Phonological weight of case markers and postpositions.

The case markers generally resist case-stacking, however, stacking of instrumental case on top of locative case is possible (31a). As Butt & King (2004: p.172) note, this is similar to instrumental case on PPs (31b): in both cases, the locative or PP receives instrumental case to become a source expression. Case-stacking is discussed further in section 3.7.3.2.

(31) a. *un* *logon**=mein=se*** *tiin*
those people=LOC=INS three

'three from among those people'

b. *almari=ke* ***peechHay=se***
cupboard=GEN behind=INS

'from behind the cupboard' (Butt & King, 2004: p.172)

We can also add two further arguments to S. Kidwai's (2019) diagnostics. Postpositions are lexical in nature, in that they have concrete semantic meanings. While case markers may be associated with certain semantic effects (e.g. volitionality, specificity), as is especially common for Urdu (Saksena, 1980, 1982; Butt & King, 1993, 2003, 2004; Ahmed, 2006), they remain functional in nature, and cannot be attributed a fixed meaning. The exception to this is locative case: each of the locative case markers has an individual meaning, as is seen most easily through their direct correspondence to different English prepositions.

(32) a. *mein* 'in'
b. *par* 'on'
c. *tak* 'until/till'
d. Ø 'to'

[16] Onset aside, light syllables have a short vowel and no coda consonant (V); heavy syllables either have a short vowel with a coda (VC) or a long vowel with no coda (VV); and super heavy syllables have a short vowel with a coda consonant cluster (VCC) or a long vowel with a coda (VVC).

Therefore, descriptively speaking, locative case markers are intermediate elements, in between case markers and postpositions. The case-stacking facts in particular, suggest that KP_{LOC} is larger than other inherent KPs, large enough to receive case itself in the same way as PPs. However, KP_{LOC} is not as large as PP, and cannot act as an independent syntactic domain. This is highlighted by the fact that the locative case markers do not assign genitive case to the nominal they appear with, unlike postpositions (31a vs. b).

We can flesh out our size hierarchy further, as in (33). KPs higher on the spectrum show increasing likeness to PPs, hence PP is placed on one end of the spectrum. KP_{LOC} is separated from other inherent KPs in Urdu, as it shows more postposition-like behaviour.[17]

(33) Case size hierarchy (to be revised):
$PP > KP_{LOC} > KP_{inherent} > KP_{structural}$

Size distinctions have also been drawn within structural cases. Many authors have suggested that nominative case is smaller than other structural cases (Bittner & Hale, 1996; Neeleman & Weerman, 1999; Butt & King, 2004; Caha, 2009).[18] Neeleman & Weerman (1999: pp.62–69) give evidence from agreement, case morphology, selection, case attraction,[19] and acquisition, showing that nominative case behaves differently from all other cases, including accusative case. I do not discuss all their evidence here, and only point out the agreement and case morphology facts as seen in Urdu. Nominative case triggers agreement, as described in section 1.2.4, but not accusative or any other structural case. Nominative case is also unique in that it does not have a morphological spell-out, while all other cases do.[20]

The similarity between nominals with nominative case and those without any case-valuation have led some previous accounts to propose that nominative case lacks KP. For example, Bittner & Hale (1996) and Neeleman & Weerman (1999: Ch.3) argue that nominative case does not have a KP layer, and Butt & King (2004: p.174)

[17] Caha (2009: Ch.3) suggests that there may be multiple locative layers at different positions on a case hierarchy. It may be that the null locative marker in Urdu occupies a lower locative layer than other locatives in the language. In particular, in Caha's analysis, KPs which are adjacent to each other are predicted to show syncretism, according to which the null locative should be adjacent to nominative case. However, the null locative still shows some postposition-like behaviour, namely concrete semantic meaning (32d), and case-stacking (see section 3.7), which makes its analysis less straightforward.

[18] Alternatively, Pesetsky (2013) suggests that nouns are 'born' as genitive, making genitive the smallest or default case.

[19] Case attraction occurs when a matrix and relative clause have conflicting case requirements for the head noun and relative pronoun respectively, but due to co-indexation of the head noun and relative pronoun, one case requirement wins over the other (Neeleman & Weerman, 1999: p.68–69).

[20] The exception is the null locative marker, however, this is set apart from nominative case by the fact that the former patterns with overt case markers in selecting oblique forms while nominative case selects direct forms (section 1.2.3).

propose that nominative case is a KP without a K head.[21] The lack of KP explains the lack of morphological exponent (assuming case-markers are the spell out of K), and can also explain the agreement facts, if we take KP to be phasal. Agreement with nominative arguments is possible because there is no KP preventing probing of the DP inside. We will also see that unlike other arguments with structural case (accusative, ergative), nominative arguments, specifically objects, do not always undergo movement. Assuming K-insertion takes place in the landing site due to restrictions on how deep counter-cyclic Merge can occur (section 2.3.1), lack of movement further suggests that nominative case lacks KP.

This allows us to update our hierarchy as below (34)

(34) Case size hierarchy (final):
$PP > KP_{LOC} > KP_{inherent} > KP_{structural} > DP/NOM$

As mentioned earlier, it has also been noted that use of certain case markers in Urdu is sometimes tied to semantics or discourse information. This is particularly so in contexts where one of two cases may be selected to convey different information from the default meaning. Butt & King (2004: p.172–73) propose that KP may perform more functions than simply hosting case in Hindi-Urdu, and that it may even have discourse-related projections, similar to CP. As the outermost layer of the nominal projection, KP is a natural choice for encoding or interacting with discourse content. I do not pursue this idea further, but it is certainly interesting to consider the range of implications adopting KPs may have for richer case systems.

Thus, variation in the size of individual cases allows us to capture differences in their behaviour in a more nuanced way. The question then is how can we capture these size differences formally, and what are the implications? The answer is by decomposing case-features into sub-features, which as we shall see, creates new possibilities for case assignment.

2.3.3 Decomposing KP

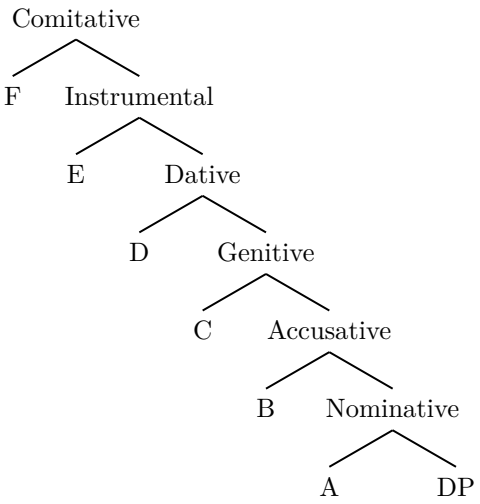
The idea of case hierarchies has been pursued most robustly by Caha (2009), who proposes a split-KP, similar to cartographic proposals of split-CP or split-DP. Caha works in a nanosyntax framework (Starke, 2009; Baunaz & Lander, 2018), according to which individual features are Merged at the terminal nodes to build the more familiar functional heads (T, D, etc.).[22] Caha proposes that individual cases are

[21] Butt & King (2004) work in a Lexical Functional Grammar in which head-less projections are acceptable.

[22] One of the differences between DM and nanosyntax is that the former allows features to bundle on terminal nodes, while the latter takes terminal nodes to consist of maximally one feature.

bundles of atomic features, [A], [B], [C], put together by Merge.[23] These features are ordered in a universal hierarchy (35), which he determines based on patterns of case syncretism found cross-linguistically. Nominative case consists of only [A], accusative consists of [A, B], genitive of [A, B, C], and so on. Although Caha does not place ergative case on his hierarchy, he suggests that it would be above absolutive/nominative but below oblique cases (p.297), based on patterns of relativisation, syncretism and agreement reported in various works (Keenan & Comrie, 1977; Baerman, Brown & Corbett, 2005: pp.40–55; Bobaljik, 2008; respectively). This would place ergative somewhere near accusative case on the hierarchy.[24] Some challenges for placing ergative case on such a hierarchy are discussed in section 5.2.2.

(35)



(Caha, 2009: p.24)

Before looking at the advantages of decomposing case-features, let us briefly consider what these sub-features might be. A major approach has been to define sub-features in terms of the position in which the case is assigned. For example, Müller (2004) breaks down Russian cases into [±subj], [±gov], and [±obl], where [+subj] is typically found on arguments which Merge last, [+gov] is found on arguments governed by V, and [+obl] is found on 'non-core' arguments (i.e. arguments other than the subject and object). Similar featural representations have been proposed by Halle & Vaux (1998), Müller (2002) and McFadden (2004: pp.210–27), amongst others. The key question in adopting such an approach is the extent to which structural properties, such as last-Merged, are represented featurally.

A different approach to defining case-features has been put forward by Pesetsky & Torrego (2001, 2004). They observe that features always come in interpretable

[23] For decomposition of case-features see also Jakobson (1984); Johnston (1996: Ch.3); Halle & Vaux (1998); Kiparsky (2001); Müller (2002, 2004); McFadden (2004: pp.210–27); Keine & Müller (2008); Keine (2010: p.14); Caha (2013); Harðarson (2016); amongst others.

[24] Smith, Moskal, Xu, Kang & Bobaljik (2019) show that oblique pronominal forms are internally complex in many languages, and are built on either ergative or accusative forms. Based on this, they also place ergative and accusative case together below oblique cases on a Caha-style hierarchy.

and uninterpretable pairs, with the sole exception seeming to be case-features, which do not have an interpretable counterpart in the mainstream view of case (2001: pp.363–67, 2004: pp.2–3). To place case in the general framework of feature pairs, Pesetsky & Torrego propose that case-features are the counterpart of interpretable valued features on functional heads, specifically Tense on T (see also Svenonius, 2002a). More specifically, they claim that case is *uninterpretable* Tense, although they update this to *unvalued* Tense in Pesetsky & Torrego (2007: pp.264–65), in light of their proposed distinction between the interpretability and valuation of features. This allows case to be interpretable on some nominals. The same possibility is noted in Pesetsky & Torrego (2012: p.70), with Halkomelem (Salish) given as a possible example of a language where this may be attested. Pesetsky & Torrego do not discuss potential decomposition of case-features, but one can imagine this would mirror decomposition of counterpart features on functional heads.

It remains to be seen how the two approaches to defining case-features can be integrated. Like Caha (2009), I remain neutral with regards to the identity of case sub-features. For ease of exposition, I will represent case-features using the common labels, NOM, ACC, ERG, on tree diagrams, or neutral sub-feature [A], [B], [C], where needed.

Turning to the advantages of case decomposition, Caha's (2009) system gives us a formal way of capturing multiple KP layers. Individual cases are built on top of other cases – for example, inherent cases have more KP layers than structural cases, thus capturing the size distinctions formally.

Conceptualising KP layers as sub-features also allows for more nuanced case assignment processes. Recall that Agree requires probes and goals to be active, that is, to have an unvalued feature. Thinking of case-features as undividable wholes means that a case-feature can only be valued or unvalued. However, if case-features are bundles of sub-features, then there may be circumstances in which a probe is only able to value some sub-features but not others, leaving the case-feature *partially unvalued*. The unvalued sub-features will be active for further instances of Agree. The result is that a given case-feature may be valued in conjunction by multiple heads without violating the Activity Condition. Analyses along these lines have been proposed for ergative case assignment in Basque by Řezáč (2004: Ch.2, 5) and Amahuaca (Panoan) by Clem (2019), and for differential argument marking in various languages by Keine & Müller (2008) and Keine (2010). My analysis of ergative case assignment in section 5.2.2 will also employ such mechanisms.

Thus, KPs allow us to conceptualise individual cases as dividable entities, which in turn allows for formal size distinctions and additional case valuation possibilities. In light of this discussion, let us take a step back and consider an alternative to the derivational view of structural KPs. I proposed that KP is inserted counter-

cyclically into the structure upon valuation of the case-feature. The alternative proposed in several works is that all nominals enter the derivation as KPs; some with valued Ks (i.e. inherent case assignment), and others with unvalued Ks, to be valued via Agree (i.e. structural case assignment) (Neeleman & Weerman, 1999: Ch.3; Caha, 2009; Witkoś & Dziubała-Szrejbrowska, 2016). This avoids issues of counter-cyclicity. Those who adopt split-KP, such as Caha (2009) and Witkoś & Dziubała-Szrejbrowska (2016), assume that nominals enter with all KP layers (i.e. with the structure in ex.35), of which only some KPs may participate in Agree, thus determining the case of the nominal. The challenge for such approaches is explaining what happens to KP layers that do *not* participate in Agree. Caha proposes an analysis in terms of Peeling, under which the case-assigned nominal moves out of the split-KP, leaving inactive KP shells behind. Caha presents some evidence that remnant KP shells may be spelled out as verbal morphology in Chichewa (Bantu) and Czech (Slavic), but it is uncertain as to what extent such (or other) evidence can be found for remnant KP-shells in other languages. Alternatively, Witkoś & Dziubała-Szrejbrowska propose that empty KP layers are elided at PF. This means that all nominals are essentially of the same size in syntax, taking away many of the theoretical advantages of having multiple KP layers.[25]

2.3.4 Agree versus dependent case

To end this section, I would like to address the Agree versus dependent case theory (DCT) debate. The crucial difference between the two theories is that in the former, case-features are valued in syntax, and therefore, are predicted to be able to affect syntactic processes, while in the latter, case-features are not valued in syntax, and hence, should not affect syntactic processes. We will see two pieces of evidence in favour of case-features being valued in the syntax.

Firstly, case assignment triggers movement. Accusative objects move out of VP to the specifier of a high applicative, Spec-HApplP (see section 3.3). I argue that this is because valued case-features cannot remain inside VP. When object shift out of VP is blocked, accusative case assignment is not possible, as seen through dative intervention (see section 3.7). The impossibility of accusative case assignment is confirmed by the fact that direct objects which require case-licensing, namely human objects, cannot occur in ditransitives without noun-incorporation. In a DCT analysis of object shift and differential object marking, the object is taken to move out of VP for interpretive reasons. For example, following Diesing (1992) and others, Baker (2015: Ch.4) takes it that objects must move out of VP to be interpreted as

[25]The effects of size may be captured instead by listing which values of K can participate in a given operation or appear in a given structural position. However, disjunctive lists have little predictive power, making them descriptive rather than explanatory.

specific. Additionally, he takes VP to be a phasal complement (sister to phasal head, v) and a domain for dependent case assignment. When the object remains inside VP, it is interpreted as non-specific, and as the only nominal in the domain, it does not meet the conditions for accusative case assignment (assign accusative case to the lower of two nominals in a given domain). Conversely, when the object moves out of VP, it is interpreted as specific, and is now in the same spell-out domain as the subject, hence, it receives accusative case. Thus, movement or lack thereof determines whether or not the object is in the same domain as the subject for case assignment, and hence, whether or not the dependent case rule for accusative case assignment applies. However, this makes incorrect predictions for Urdu: since the movement takes place for interpretive reasons, and not due to case valuation, the DCT analysis predicts that all specific nominals should move out of VP, and therefore, receive accusative case. This is not so in Urdu, as unmarked nominals can also receive specific interpretations (see section 3.1).

Similarly, case assignment also affects movement to Spec-TP (see also Preminger, 2014: Ch.9), which in Urdu, feeds further syntactic phenomena, namely pronoun binding and being replaced by PRO. In Chapter 5, I show that while nominative and ergative subjects move to Spec-TP, inherent case-marked nominals do not. I argue this is so because Agree with T is a necessary prerequisite for movement to Spec-TP. In a DCT approach, one may suggest that T's EPP feature can only be satisfied by nominals with structural case. McFadden (2018: p.10) suggests this may be formalised as a [D] feature, found on nominals with structural case but not nominals with non-structural case, which he takes to be KPs with a more general feature. In other languages, EPP may be satisfied by the general feature, thus allowing both DPs and KPs to move to Spec-TP. However, as we shall see in section 5.2.2, ergative case-marked nominals are KPs at the point when T Agrees with them, yet they are able to move to Spec-TP, making an explanation in terms of relativised EPP-features unviable.

The second piece of evidence comes from agreement processes. As in many other languages, agreement is case-sensitive in Urdu. Proponents of dependent case theory argue that since case is post-syntactic, agreement must be too, otherwise it would not be sensitive to case (Bobaljik, 2008). However, some works have argued that both syntactic and post-syntactic agreement processes are available in some languages (Arregi & Nevins, 2012: Ch.2; Landau, 2016; Atlamaz & Baker, 2018). Benmamoun, Bhatia & Polinsky (2009) and Bhatt & Walkow (2013) show this for Hindi-Urdu as well. Importantly, both syntactic and post-syntactic agreement processes are sensitive to case in Urdu. If case were purely morphological, then we would only expect post-syntactic agreement to be case-sensitive. Only if case is syntactic can we explain the case-sensitivity of both syntactic and post-syntactic

agreement.

On the theoretical side, DCT cannot capture all the size distinctions we discussed earlier in this section. Many DCT accounts do make a size distinction between structural and inherent case, as DPs versus PP, for example (McFadden, 2004: Ch.3; Baker, 2015: Ch.5), but distinctions within each type of case cannot be accounted for, since case-features are not represented in syntax, and hence, cannot be broken down further into sub-features. Some DCT analyses do incorporate sub-features (e.g. McFadden, 2004: pp.210–27), but these are only used to condition spell-out, and are not a representation of case itself, nor do these sub-features project layers, leading to any structural size distinctions. Hence, sub-features in DCT do not have any affect on the size of the nominal.

Finally, I would like to acknowledge that solutions to all of these problems may be possible in a DCT framework, and that the empirical gains of either Agree or DCT over the other are often negligible. Indeed, some works have proposed hybrid systems, incorporating both Agree-based case assignment and dependent case rules (Baker & Vinokurova, 2010; Baker, 2012, 2015: Ch.2), to account for the fact that one process might work better in some places, while the other performs better in others.

2.3.5 Summary

In this section, I have set out my main assumptions regarding case assignment. Case-features originate inside DP. Nominals with valued case-features are KPs, with case-marking being the spell-out of K. Nominals with non-structural cases are selected with valued case-features, that is, as KPs. Nominals with structural cases are selected with unvalued case-features, as DPs, and receive case valuation via Agree with functional heads. Table 2.2 provides a summary.

	Lexical case	**Inherent case**	**Structural case**
Determined by	Selection	Selection	Agree
Selected as	KP (valued case-feature)	KP (valued case-feature)	DP (unvalued case-feature)

Table 2.2: Lexical, inherent and structural case assignment.

KP can be split into a more fine-grained structural hierarchy. Case-features are bundles of sub-features. Each sub-feature projects a KP layer, meaning individual cases can vary in size. I proposed that there is a size hierarchy (ex.34, repeated), with the largest KPs being similar to PPs, and the smallest KPs being similar to DPs.

(34) Case size hierarchy:
$PP > KP_{LOC} > KP_{inherent} > KP_{structural} > DP/NOM$

A point of clarification regarding terminology: I have used the term 'case assignment' throughout this section, and continue to use it in the rest of the dissertation. This is not strictly speaking correct, because case-features originate on nominals and are only valued, not assigned in the sense of given. I use the term case assignment loosely to mean case valuation either via Agree (structural cases) or via c-selection (lexical and inherent cases).

Having set the main machinery of this dissertation in place, I now turn to the first core chapter of the dissertation, which explores accusative case assignment in active contexts.

Chapter 3

Accusative Case in Actives

This chapter presents a detailed account of accusative case assignment in active contexts. I tackle three issues related to accusative case assignment: differential object marking, object shift, and dative intervention.

Urdu exhibits differential object marking (DOM), as a result of which some but not all direct objects have accusative case. In section 3.1, I introduce the patterns of marking. I show that definite interpretations associated with marking of non-human objects are an effect of DOM rather than a cause – in other words, marking results in definiteness but definiteness does not result in marking. Instead, the primary factor conditioning DOM is animacy, specifically, humanness. In section 3.2, I propose a feature-licensing account of DOM along the lines of Kalin (2014: Ch.4). Human objects have an uninterpretable case-feature that requires valuation while non-human objects do not.

The second issue related to accusative case-marking is object shift. In section 3.3, I summarise evidence from the literature showing that accusative objects move out of VP. I propose this is so because valued case-features cannot remain inside VP, and forcing nominals with case-valued features to move out. Following López (2012: Ch.2) and Kalin (2014: pp.173–78) amongst others, I take the landing site of this movement to be the specifier of a non-thematic high applicative head. In this position, marked direct objects c-command indirect objects but do not c-command the external argument. Detailed derivations of accusative case assignment are given in section 3.4.

In section 3.6, I discuss a remaining thread of DOM: unmarked objects. I argue that these objects are caseless, in the sense of having an unvalued case-feature, as opposed to being nominative or (null) accusative. I adopt a modified version of Bhatt & Walkow's (2013) analysis to account for object agreement, in particular, the asymmetries between subject and object agreement. Subject agreement is the result of Agree in the syntax, while object agreement is the result of post-syntactic Feature-Copying.

Finally, in section 3.7, I turn to the last issue related to accusative case assignment: dative intervention. Direct objects do not receive accusative case in the presence of dative indirect objects. I propose that dative intervention arises in two contexts. The first is with experiencer arguments, which are introduced by a thematic high applicative head. Selection of the thematic high applicative means that the non-thematic one is not selected, and therefore, the landing site for object shift is not projected. The direct object does not receive accusative case because it cannot subsequently move out of VP due to lack of an available landing site. The second context for dative intervention is with recipients, which are introduced in a low applicative phrase inside VP. The recipient has a valued case-feature and is in competition for movement with accusative direct objects. Since the recipient is higher and closer to the landing site, locality demands that it move instead of the direct object. Once again, the direct object cannot move out of VP, and hence, cannot receive accusative case to prevent it from remaining inside VP. At the end of this section, I look at new data from instrumental indirect objects (sources), which do not intervene in accusative case assignment. I propose that this is because they are PPs, in contrast to dative indirect objects, and can remain inside VP, thus allowing accusative direct objects to move out of VP, as needed.

The goal of this chapter is not only to provide insight into the nuances of accusative case assignment, but also to set accusative case assignment in active contexts as a baseline against which we can compare unexpected instances of accusative case in seemingly non-active contexts. This will be the focus of Chapter 4.

3.1 Differential Object Marking

Differential object marking (DOM) refers to the marking of some but not all direct objects (DOs), often involving a contrast between accusative case and a null exponent. DOM is frequently syncretic with dative case (Bossong, 1991), as is also seen in Urdu. Both accusative and dative case are realised as *-ko*, or with identical pronominal forms (1). Despite the syncretism, the two are distinct cases with the main difference being that accusative case behaves like a structural case while dative case behaves like a non-structural inherent case (see section 3.7.1).

(1) a. *Rami=ne* ***Omar=ko*** / ***mujHe*** *dekH-a.*
Rami=ERG Omar=ACC / 1SG.ACC see-PFV.M.SG

'Rami saw Omar/me.'

b. *Rami=ne* ***Omar=ko*** / ***mujHe*** *kitaab di.*
Rami=ERG Omar=DAT / 1SG.DAT book give.PFV.F.SG

'Rami gave Omar/me a book.'

DOM marks DOs that are high in prominence (Silverstein, 1976, 1981; Moravcsik, 1978; Comrie, 1979; Croft, 1988; Aissen, 2003). Prominence is most commonly determined by animacy and definiteness, and these are also the two factors that will be most relevant for us. Aissen (2003) provides the prominence scales in (2). Objects towards the left of the scales are more likely to be marked than objects towards the right.

(2) a. Animacy scale:
Human > Animate > Inanimate

b. Definiteness scale:
Personal Pronoun > Proper Name > Definite NP > Indefinite specific NP > Non-specific NP

(Aissen, 2003: p.437)

Other common factors influencing DOM include person and topicality. For example, first person objects may be marked differently from second and third person ones, or topicalised objects may be marked while non-topicalised objects are not.

The scales in (2) not only show which types of nouns are more likely to be marked than others, but also make the prediction that if nouns on the lower end of the scale are marked then nouns on the higher end will also be marked. For example, if a language marks proper names, then it will also mark personal pronouns which are higher than proper names on the definiteness scale (2b). Depending on the language, DOM may track one or both of the above scales, and have different cut-off points for marking.

DOM in Hindi-Urdu has been discussed in extensive detail in the literature (Butt, 1993; Mohanan, 1994: pp.79–90; de Hoop & Narasimhan, 2001; Aissen, 2003; Bhatt, 2007; Montaut, 2018). The two primary factors reported as corresponding to DOM are animacy and definiteness. In terms of animacy, Urdu makes a distinction between human and non-human animates. Human animates are obligatorily marked (3a), while non-human animates and inanimates are optionally marked (3b, c). Thus, the cut-off point for DOM is between Human and Animate on the animacy scale in (2a).

(3) a. *Rami=ne* ***aadmi*(=ko)*** *dekH-a.*
Rami=ERG aadmi*(=ACC) see-PFV.M.SG

'Rami saw the man.'

b. *Rami=ne* ***kutte(=ko)*** *dekH-a.*
Rami=ERG dog(=ACC) see-PFV.M.SG

'Rami saw a/the dog.'

c. *Rami=ne* ***TV(=ko)*** *dekH-a.*
Rami=ERG TV(=ACC) see-PFV.M.SG

'Rami saw (a/the) TV.'

Marking on non-human animates (3b) and inanimates (3c) correlates with definiteness and specificity. Marked objects are interpreted as being familiar, contextually salient or unique, in other words, as definite (Enç, 1991; Butt, 1993; Mohanan, 1994: Ch.5; Lyons, 1999: pp.199–207; Dayal, 2011). Butt (1993) gives the example below to illustrate. The context in (4) requires a non-specific, generic interpretation of *chicken*. (4b) is infelicitous because accusative case-marking on the object, *murghi* 'chicken', forces a definite interpretation. The object must be unmarked to be felicitous in this context, as in (4a).

(4) Context: Adnan wants chicken for tonight's curry.

a. *us=ke* *khaansaame=ne* *bazaaar=se* ***murghi*** *kharid-i.*
3SG=GEN cook=ERG market=INS chicken buy-PFV.F.SG

'His cook bought a chicken from the market.'

b. # *us=ke* *khaansaame=ne* *bazaaar=se* ***murghi=ko*** *kharid-a.*
3SG=GEN cook=ERG market=INS chicken=ACC buy-PFV.M.SG

'His cook bought a particular chicken from the market.'
(adapted from Butt, 1993: p.97)

It should be pointed out that definiteness is not a general result of case-marking but specifically the result of accusative case-marking. Dayal (2011: p.132) shows that DOs with instrumental case, such as complements of verbs-of-saying (5a) and comitatives (5b), do not trigger definite interpretations in the same way as accusative objects do.

(5) a. *Anu* ***Doctor=se*** *baat kar-na chah-ti* *he.*
Anu.NOM doctor=INS talk do-INF want-IPFV.F.SG be.PRS.3SG

'Anu wants to talk to a/the doctor.'

b. *Anu* ***Doctor=se*** *shaadi kar-na chah-ti* *he.*
Anu.NOM doctor=INS marriage do-INF want-IPFV.F.SG be.PRS.3SG

'Anu wants to marry a/the doctor.' (Dayal, 2011: p.132)

In contrast to accusative objects, unmarked objects can be interpreted as definite, indefinite or generic (Mohanan, 1994: pp.79–90; Dayal, 2004, 2011). The version of (3c) with no marking has three readings: (i) *Rami saw a particular TV* (definite reading), (ii) *Rami saw any (non-particular) TV* (indefinite reading), or (iii) *Rami was watching TV* (generic reading). The latter interpretation involves noun incorporation, which is discussed in section 3.1.1. The possibility of definite readings of unmarked objects suggests that definiteness is not the root of DOM; if that were so, definite objects would always be marked and never unmarked.

Instead, it is the animacy scale which determines DOM in Urdu (Mohanan, 1994: pp.79–90; Aissen, 2003; Davison, 2015: p.1487; Montaut, 2018).[1] This can also be illustrated through the contrast between marking of human proper names and inanimate proper names, such as locations, as shown by Montaut (2018: p.283). Human proper names are always marked while inanimate proper names are optionally so (6).

(6) *mein=ne* ***Rami*(=ko)*** / ***Karachi(=ko)*** *dekH-a.*
1SG=ERG Rami*(=ACC) / Karachi(=ACC) see-PFV.M.SG

'I saw Rami/Karachi.'

Both types of proper names have the same position on the definiteness scale but different positions on the animacy scale. Thus, the contrast in (6) can only be explained if the animacy of the nominal is more important in determining marking than its definiteness.

To summarise, human objects are always marked while non-human objects are sometimes marked. Marking on non-human objects has definiteness effects. I propose that human objects have a case-feature which must be valued, hence, these objects are always marked. Alternatively, human objects may undergo pseudo-noun-incorporation, in which case, they lack the extended functional projection which introduces the case-feature. On the other hand, the case-feature on non-human objects can remain unvalued, thus, allowing non-human objects to be either marked or unmarked when unincorporated. To this end, I now turn to the incorporation facts. The proposal itself is presented in detail in section 3.2.

3.1.1 Pseudo-noun-incorporation

Urdu has two types of noun incorporation. The first involves an eventive noun and the light verb, *kar* 'do', to form a complex predicate. For example, the noun *safai* 'cleaning' combines with *kar* to form the predicate *safai kar-na* 'to do cleaning'.

[1] Some of the authors cited take definiteness to be a cause of DOM in addition to animacy, but still take the latter to be the more dominant factor.

The same strategy can also be used with adjectives. For example, the adjective *saaf* 'clean' combines with *kar* to form *saaf kar-na* 'to clean'. The second type of noun incorporation consists of a lexical verb and its object, and crucially, this object is interpreted as non-referential. For example, *kitaab* 'book' and *paRh-na* 'to read' are interpreted as 'book-reading' (as a generic activity) under incorporation, as opposed to 'reading a/the book', when no incorporation takes place. It is the latter kind of noun incorporation that I look at here.[2]

Noun incorporation in Hindi-Urdu has been discussed in various works, in particular, Mohanan (1994: §5.2) and Dayal (1999, 2003, 2011). Although Hindi-Urdu exhibits some of the cross-linguistic characteristics of incorporation, it also shows far greater freedom than canonical cases of incorporation (see Baker, 1988, and Massam, 2017, for a cross-linguistic overview of noun incorporation). For this reason, Dayal labels noun incorporation in Hindi-Urdu as *pseudo-noun-incorporation*, and argues that it involves NumPs rather than NPs (see also Massam, 2001, for a similar analysis of noun-incorporation in Niuean [Oceanic]). The following exposition summarises the discussion in Dayal (2011).

Looking first at semantic properties, incorporated nouns are interpreted as generic and lacking individual salience. This interpretation arises specifically from incorporation and not the absence of case-marking, as shown by the contrast in (7a) and (7b). In (7a), *chuuha* 'mouse' is a nominative subject and is not incorporated. This sentence only has the interpretation of a single mouse repeatedly entering the room. Conversely, in (7b), *chuuha* is an object and can be incorporated. This allows for a generic reading, which leads to the interpretation of different mice being caught.

(7) a. *puure din kamre=mein* ***chuuha*** *gHus-ta rah-a.*
whole day room=LOC mouse.NOM enter-IPFV.M.SG PROG-M.SG

'The whole day, a/the [same] mouse kept entering the room.'

b. *Anu puure din* ***chuuha*** *pakaR-ti rah-i.*
Anu.NOM whole day mouse catch-IPFV.F.SG PROG-F.SG

'Anu kept catching [different] mice the whole day.' (Dayal, 2011: p.131)

Similarly, in (8), the object, *bachcha* 'child', is incorporated, hence, allowing it to be interpreted as different children. Note that this example also shows that incorporation of human objects is possible, as do the examples in (11b) and (14), below. Incorporation of human objects is discussed in more detail in section 3.1.2.

[2]See Mohanan (1994: Ch.8) and Butt, King & Ramchand (2008) for discussion on complex predication involving *kar* 'do'.

(8) *har aurat* ***bachcha*** *sambHaal rah-i he.*
every woman.NOM child look.after PROG-F.SG be.PRS.3SG

'Every woman is looking after a child/children.' (Dayal, 2011: p.128)

The examples in (7b) and (8) also illustrates the number neutrality of incorporated nominals. The singular, *chuuha* 'mouse', can refer to multiple mice when incorporated, and the singular, *bachcha* 'child', can refer to multiple children. Similarly, the sentence in (9a) has a singular noun, *kitaab* 'book', which may refer to one or more books. This is indicated by the answer in (9c) which may also refer to a single book or two different books.

(9) a. *Rami* ***kitaab*** *DhoonD rah-a he.*
Rami.NOM book search PROG-M.SG be.PRS.3SG

'Rami is book-searching.'

b. *kaunsi kitaab?*
which book

'For which book?'

c. *maths aur physics =ki.*
maths and physics =GEN

'For the maths and physics one.' / 'For the maths one and the physics one.'

Conversely, if the object is not incorporated, as in (10), the answer in (9c) can only refer to a single book.

(10) *Rami* ***Omar=ki*** ***kitaab*** *DhoonD rah-a he.*
Rami.NOM Omar=GEN book search PROG-M.SG be.PRS.3SG

'Rami is searching for Omar's book.'

Incorporated nouns have obligatory narrow scope. (11a) is ambiguous between the wide scope reading ($\forall > \exists$: each woman was looking after a different child) and the inverse scope readng ($\exists > \forall$: each woman was looking after the same child). However, (11b) only has the wide scope reading as the incorporated object has obligatory narrow scope and cannot take scope over the quantifier in the subject to produce the inverse scope reading.

(11) a. *har aurat eik* ***bachche=ko*** *sambHaal rah-i tHi.*
every woman.NOM one child=ACC look.after PROG-F.SG be.PST.F.SG
'Every woman was looking after a particular child.' ($\forall > \exists$, $\exists > \forall$)

b. *har aurat (eik)* ***bachcha*** *sambHaal rah-i tHi.*
every woman.NOM (one) child look.after PROG-F.SG be.PST.F.SG
'Every woman was looking after a child / children.' ($\forall > \exists$, *$\exists > \forall$)
(adapted from Dayal, 2011: p.128)

In addition, incorporated objects are unable to support discourse anaphora.[3] In (12a), the incorporated noun cannot act as an antecedent for a pronoun in the following sentence. This is in contrast to accusative objects, which are not incorporated and can support discourse anaphora (12b).

(12) a. *Anu=ne* ***kitaab$_i$*** *paRh-i.* *#vo$_i$* *bohat achHi*
Anu=ERG book$_i$ read-PFV.F.SG #3SG.NOM$_i$ very good.F.SG
tHi.
be.PST.F.SG
'Anu book-read (≠ read a book). #It was very good.'
(adapted from Dayal, 2011: p.134)

b. *Anu=ne* ***kitaab$_i$=ko*** *paRh-a.* *vo$_i$* *bohat achHi*
Anu=ERG book$_i$=ACC read-PFV.M.SG 3SG.NOM$_i$ very good.F.SG
tHi.
be.PST.F.SG
'Anu read the book. It was very good.'

Although noun incorporation in Urdu shows many semantic properties of canonical incorporation, it shows no syntactic or morphological ones beyond lack of case-marking. Firstly, incorporated objects retain their syntactic independence as arguments. In Urdu, ergative case is found on subjects of perfective transitive clauses but rarely on subjects of intransitive clauses (sections 1.2.3, 5.2.2). If incorporation resulted in the object no longer being a syntactic argument of the verb, we would expect the intransitive case pattern in sentences with incorporation, as opposed to the transitive one. This does not hold – in (13), the same case pattern holds regardless of incorporation.

[3] Dayal (2011: p.126) notes that although this is not a reliable test cross-linguistically, it is still relevant for some languages with noun incorporation.

(13) a. ***Rami=ne*** / ****Rami*** *TV dekH-a.* (incorporated)
Rami=ERG / *Rami.NOM TV see-PFV.M.SG

'Rami watched TV.'

b. ***Rami=ne*** / ****Rami*** *Omar=ka TV dekH-a.* (unincorporated)
Rami=ERG / *Rami.NOM Omar=GEN TV see-PFV.M.SG

'Rami saw Omar's TV.'

Incorporated objects also trigger verb agreement, again showing that they retain their argument status. The verb agrees with the highest nominative or unmarked argument in the clause (section 1.2.4). In (14a), this is the subject, and in (14b), it is the object. Generic readings of the object are possible in both sentences showing that incorporation is available regardless of agreement.

(14) a. ***mein*** *bachchay sambHaal-oun ga.*
1SG.NOM children.M.PL look.after-FUT.1SG FUT.M.SG

'I will look after children.' / 'I will do child-minding.'

b. *mein=ne* ***bachchay*** *sambHaal-ay.*
1SG=ERG children.M.PL look.after-PFV.M.PL

'I looked after children.' / 'I did child-minding.'

Secondly, there is no requirement that incorporated nouns be strictly adjacent to the predicate. Dayal (2011: pp.137–38) shows that the object and predicate can be separated by negation (15a) and scrambling (15b) while still retaining their incorporated interpretation (contra Mohanan, 1994: p.107). Both examples below refer to a generic future activity. Separating the object and predicate, as in (15a), is the only way of negating the incorporated reading. Although discourse requirements on scrambling usually prevent non-specific nominals, such as incorporated objects, from moving, Dayal (2003) shows that scrambling incorporated objects is possible under the right conditions. (15b) is an example of scrambling the incorporated object to produce contrastive focus. Uppercase is used to indicate contrastive stress.

(15) a. *(baRi ho kar) Anu* ***machHli*** *nahi* ***bech-ay*** *gi.*
(big be do) Anu.NOM fish not sell-FUT.3SG FUT.F.SG

'Anu will not sell fish (when she grows up).'

b. ***KITAAB*** *Anu* ***bech-ay*** *gi,* ***AKHBAAR*** *nahi.*
book Anu sell-FUT.3SG FUT.F.SG newspaper not

'Anu will sell BOOKS, not NEWSPAPERS.' (Dayal, 2011: p.137)

Finally, incorporated nouns can be modified (16a) and even coordinated (16b) (contra Mohanan, 1994: pp.107–08).

(16) a. *Anu* *apne* *beTay=ke* *liye* ***paRhi-likHi*** ***laRki*** *DhoonD*
Anu.NOM SELF.GEN son=GEN for read-written girl search
rah-i *he.*
PROG-F.SG be.PRS.3SG

'Anu is looking for an educated girl/bridge for her son.'

b. *Anu* ***kutte aur billiyan*** *paal-ti* *he.*
Anu.NOM dogs and cats take-care-IPFV.F.SG be.PRS.3SG

'Anu takes care of dogs and cats.'

(adapted from Dayal, 2011: pp.136–37)

The above, in conjunction with the number neutrality of incorporated objects, leads Dayal (2011) to propose that Urdu does not incorporate bare Ns like canonical noun incorporation but rather incorporates phrases, specifically NumPs, instead. She gives several more arguments from the semantic interpretation of incorporated nominals to support this. I do not discuss these here, but some additional syntactic reasons for analysing incorporated objects as NumPs are given in section 3.4.3.

Let us now see how the properties of pseudo-noun-incorporation relate to DOM.

3.1.2 Animacy, pseudo-noun-incorporation and DOM

As mentioned earlier, human objects generally require DOM (ex.3a, repeated). This is in contrast to non-humans (ex.3b, repeated) and inanimates (ex.3c, repeated) for which DOM is optional.

(3) a. *Rami=ne* ***aadmi*(=ko)*** *dekH-a.*
Rami=ERG aadmi*(=ACC) see-PFV.M.SG

'Rami saw the man.'

b. *Rami=ne* ***kuthe(=ko)*** *dekH-a.*
Rami=ERG dog(=ACC) see-PFV.M.SG

'Rami saw a/the dog.'

c. *Rami=ne* ***TV(=ko)*** *dekH-a.*
Rami=ERG TV(=ACC) see-PFV.M.SG

'Rami saw (a/the) TV.'

There are some exceptions to obligatory marking on human objects. Functional or collective references are not marked. For example, *laRka* 'boy' in (17a) only refers to the function of a boy as a groom, and can remain unmarked. Likewise, *log* 'people' in (17b) refers to the collective group, and does not require marking.

(17) a. *vo* ***laRka*** *dekH rah-e* *hein.*
3PL.NOM boy look PROG-M.PL be.PRS.3PL

'They are looking at a boy (a suitable groom).'

b. *mein=ne* *bohat* ***log*** *dekH-ay.*
1SG=ERG many people see-PFV.M.PL

'I saw many people.' (adapted from Montaut, 2018: pp.284–85)

In such cases, the object has no individual salience, is not a unique referent, and is interpreted as generic. Additionally, some cases of unmarked human objects have idiomatic meanings. For example, (17a) does not literally mean 'looking at a boy' but rather 'searching for a potential groom'.[4] These interpretive facts are suggestive of incorporation.

Based on interpretation, Mohanan (1994: §5.2) and Dayal (1999, 2011) argue that all unmarked human objects are in fact incorporated. Dayal (2011: p.127) gives additional evidence from the difference in behaviour of human and non-human objects with determiners. DPs[5] with humans must be case-marked (18a), while DPs with non-humans can be either marked or unmarked (18b).

(18) a. *Anu* ****har bachcha*** / ***har bachche=ko*** *sambHaal-ti*
Anu.NOM *every child / every child=ACC look.after-IPFV.F.SG
he.
be.PRS.3SG

'Any looks after every child.'

b. *Anu* ***har kitaab*** / ***har kitaab=ko*** *paRh-ay* *gi.*
Anu.NOM every book / every book=ACC read-FUT.3SG FUT.F.SG

'Anu will read every book.' (Dayal, 2011: p.127)

[4] Dayal (2011: pp.133–34) points out that pseudo-noun-incorporation in Hindi results in varying degrees of transparency with respect to meaning. For example, *gHaans kaaT-na* 'to cut grass' is fully transparent, *laRka/laRki dekH-na* 'to see (a) boy/girl' less so, as it means 'to search for a potential groom/bride', while *makHi maar-na* 'to hit (a) fly' is completely opaque and means 'to waste time'.

[5] DP is used loosely to refer to nominals with determiner-type elements (e.g. demonstratives, quantifiers, possessors, etc.). I am not claiming that these elements necessarily instantiate D.

DPs cannot be incorporated (Massam, 2001; Chung & Ladusaw, 2004: Ch.3; Coon, 2010). If it were possible for human objects to be unmarked when unincorporated, we would expect unmarked human DPs to be possible. This is not the case, showing that human objects are always marked or incorporated, but never unmarked and unincorporated. Non-human objects, on the other hand, may be either marked, incorporated, or unmarked and unincorporated. The latter possibility is illustrated by the acceptability of unmarked non-human DPs in (18b). Similarly, proper names cannot be incorporated either. As mentioned earlier, proper names of inanimates can be unmarked (ex.6, repeated), once again showing that unmarked inanimates can remain unincorporated.

(6) *mein=ne* ***Karachi(=ko)*** *dekH-a.*
1SG=ERG Karachi(=ACC) see-PFV.M.SG
'I saw Karachi.'

Table 3.1 summarises the patterns. Human objects are either incorporated, in which case they have no case-marking, or unincorporated, in which case they are obligatorily marked. Non-human objects are either incorporated and unmarked, or unincorporated, in which case they may or may not have case-marking. Incorporation leads to generic readings. Marking on human objects has no special interpretive effects while marking on non-human objects leads to definite interpretations. I attribute this to the optionality of marking on non-human objects. Several works have argued that optional operations must have interpretive effects in order to be selected over the more 'economical' derivation, that is, without the operation (Reinhart, 1995; Fox, 2000). Chomsky (2001: p.34) states that 'an optional rule can apply only when necessary to yield a new outcome'; such an outcome may be a new interpretation that is not otherwise available. Finally, unincorporated and unmarked (non-human) nominals may be interpreted as either definite or indefinite.

Object	Incorporation	DOM	Interpretation
Human	✓	×	Generic
	×	✓ (obligatory)	–
Non-human	✓	×	Generic
	×	✓	Definite
	×	×	Definite or indefinite

Table 3.1: Summary of DOM and noun incorporation.

3.2 DOM as Feature-Licensing

In this section, I present a feature-licensing model of DOM, along the lines of Kalin (2014: Ch.4). Following Kalin, I propose that while all nominals have an interpretable case-feature, only some nominals have an *uninterpretable* case-feature. Unvalued uninterpretable features cause the derivation to crash, so uninterpretable case-features must be valued, and nominals with uninterpretable case-features will always have morphological case. On the other hand, unvalued *interpretable* features do not cause a derivational crash, and may or may not be valued. As a result, nominals with interpretable case-features only have morphological case sometimes. I propose that uninterpretable case is found only on human objects in Urdu.

A question that immediately arises is what does it mean for case to be interpretable? There have been some attempts at determining the interpretability of case (Jakobson, 1984; and following), but these have had little success for structural cases in particular, which do not seem to have any consistent semantics. Pesetsky & Torrego (2001, 2004) argue that case is the counterpart of interpretable features on case-assigning heads (specifically, Tense features on T), but even in their formalisation, case remains uninterpretable on nominals (see also Svenonius, 2002a). In later work, they draw a four-way distinction between features across interpretability and valuation (Pesetsky & Torrego, 2007; see section 3.2.1), in light of which, they suggest that case is the *unvalued* counterpart of Tense features on T. This means that case may be interpretable on some nominals. The same possibility is also noted in Pesetsky & Torrego (2012: p.70). In section 3.4, I suggest that an alternative explanation for the interpretive effects of DOM on non-human objects may be valuation of an interpretable case-feature, in contrast to valuation of an uninterpretable case-feature on human objects. I leave the question of interpretable case-features open, while acknowledging that positing interpretable case-features may be a weakness of the proposed analysis.

3.2.1 Kalin (2014)

Kalin (2014: Ch.4) proposes that DOM effects are seen when some but not all nominals need to be case-licensed in a given language. This idea is rooted in a long line of work showing that all nominals do not need (case-)licensing (Zaenen, Maling & Thráinsson, 1985; Marantz, 2000; Massam, 2001; Danon, 2006; McFadden, 2004; Preminger, 2011, 2014; Wiltschko, 2014: Ch.6; Levin, 2015; amongst others), contrary to the early *Case Filter* (Vergnaud, 1977/2008; Chomsky, 1981, 2000, 2001).

Kalin employs two pieces of machinery. Firstly, following Pesetsky & Torrego

(2007), she differentiates between the *interpretability* and *valuation* of features. Interpretability refers to whether or not a feature can make a semantic contribution to its containing structure, while valuation refers to whether or not the lexicon specifies a property for that feature. As a result, four types of features are possible (19). Kalin assumes that uninterpretablity and non-valuation on their own do not cause a derivational crash but that uninterpretable *and* unvalued features do cause a crash.

(19) a. [F:VALUE] (valued interpretable)

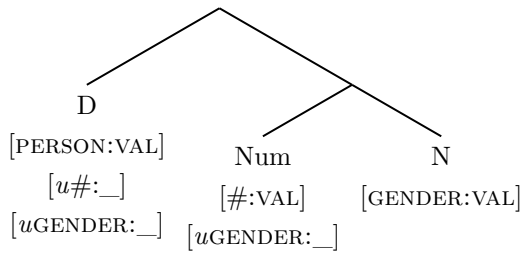
b. [F:_] (unvalued interpretable)

c. [*u*F:VALUE] (valued uninterpretable)

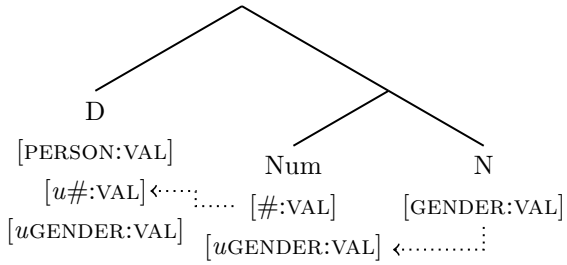
d. [*u*F:_] = CRASH (unvalued uninterpretable)

Secondly, Kalin assumes that nominal features are not all clustered on N but are distributed across the nominal projection. For example, in a basic nominal structure like (20a), person, number and gender features are distributed across D, Num and N heads. N is generated with a valued interpretable gender feature, [GENDER:VAL]. Num has an interpretable and valued number feature, [#:VAL], but an uninterpretable and unvalued gender feature, [*u*GENDER:_]. D has an interpretable and valued person feature, [PERSON:VAL], but uninterpretable and unvalued gender and number features.[6] Pesetsky & Torrego's (2007) Feature-Sharing allows unvalued occurrences of a particular feature to share values with valued occurrences of that feature in the same chain. This means that all the uninterpretable features in (20a) are valued within the nominal structure, leading to (20b).

(20) a.



b.

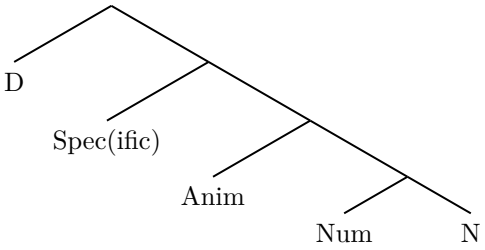


(Kalin, 2014: p.146)

[6] What Kalin (2014: Ch.4) calls D seems to be equivalent to Person since it introduces a person feature. This is in line with work by Longobardi (1994, 2001, 2005, 2008) and Richards (2004, 2008a,b).

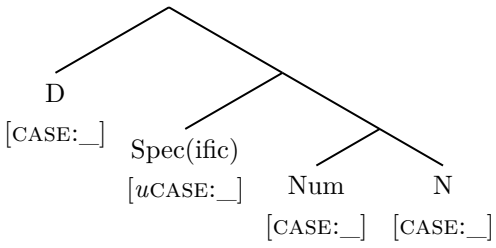
To account for DOM, Kalin adopts an extension of the structure in (20a), as proposed by Lidz (2006). In the extended structure, shown in (21), the nominal projection can have additional functional categories. These functional projections are optional, and may not be projected in all nominals. For example, specific nominals have the Spec(ific) projection, but non-specific nominals do not. Similarly, Anim is projected in animate nominals, but not inanimate ones.

(21)



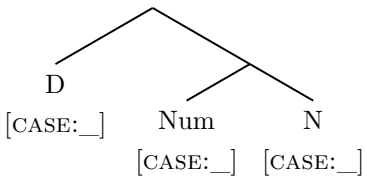
DOM effects are seen because the case-feature is uninterpretable on some but not all heads in the extended nominal projection (see also Danon, 2006). For example, for Senaya (Neo-Aramaic), where only specific objects are marked, Kalin proposes that only the Spec(ific) head bears an unvalued uninterpretable case-feature, [*u*CASE:_]; all other heads have unvalued interpretable case-features, [CASE:_]. Assuming unvalued uninterpretable features cause a derivational crash, specific nominals require case-licensing to value their uninterpetable case-feature (22a). Non-specific nominals do not project Spec(ific), and so do not have an uninterpretable case-feature (22b). This means that they do not require case-licensing to prevent a derivational crash, however, they may optionally receive case as their interpretable case-feature can be valued.[7]

(22) a. Specific nominals in Senaya:



b. Non-specific nominals in Senaya:

[7]There is of course the question whether nominals which do not require case-licensing still require licensing by other means, as discussed briefly in section 2.3. In Urdu, pseudo-noun-incorporation provides an alternative licensing mechanism, as has also been proposed for other languages (Baker, 1996: Ch.3, for Mohawk; Levin, 2015: Ch.3–4, for Balinese and Malagasy). However, it remains to be seen whether unmarked unincorporated nominals require licensing, and if so, what that licensing mechanism may be.



(Kalin, 2014: p.159)

3.2.2 Extending Kalin (2014) to Urdu

Kalin (2014: Ch.4) also extends her feature-licensing model of DOM to Hindi. She proposes that, as in Senaya, uninterpretable case is found on Spec(ific) in Hindi nominals. Bhatia & Bhatt (2023: pp.32–35) also apply Kalin's model to Hindi-Urdu. They state that uninterpretable case is found on animate[8] definites but do not specify on which nominal heads. If we assume that both Spec(ific) and Human have uninterpretable case-features in Urdu, we predict that nominals with only one of these projections, that is, specific non-humans or non-specific humans, should also be obligatorily marked. While the latter is true (barring instances of incorporation), we have seen that specific non-human objects may or may not be marked (section 3.1): unmarked objects can have definite or indefinite readings (section 3.1, ex.3c), and non-human proper names can remain unmarked (section 3.1, ex.6). This indicates that Spec(ific) does not bear an uninterpretable case-feature in Urdu.

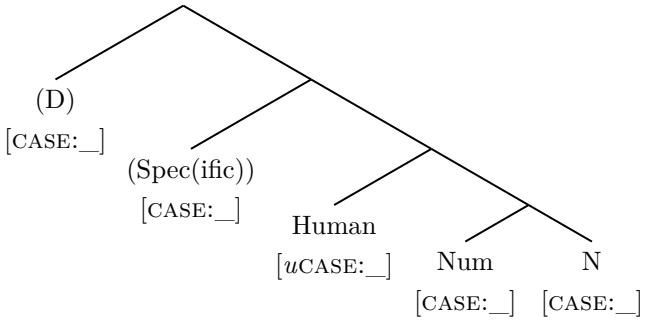
Instead, I propose that Kalin's model can be applied to Urdu in the following way. Kalin (2018) states that Spec(ific) and Anim on Lidz's (2006) extended nominal structure can be further expanded to roughly correspond to points along animacy and definiteness scales of the type proposed by Aissen (2003) (section 3.1, ex.2). For example, Anim can be expanded to Human (encoding humanness) and Anim (encoding animacy). Inanimates lack both these projections. There are also entailments between certain projections – for example, any nominal with Human will also have Anim.

I propose that uninterpretable case is found on Human in Urdu (23a). Following Kalin, I assume that unvalued uninterpretable features cause a derivational crash, hence, uninterpretable case-features must be valued. Non-human objects do not project Human, and therefore, do not have uninterpretable case, but do have interpretable case-features which can be valued (23b). Additional extended projections, such as D/Person[9] and Spec(ific), may or may not be projected depending on the nominal. All functional heads apart from Human, introduce interpretable case and do not require licensing.[10] Upon valuation of case-features, the nominal moves and

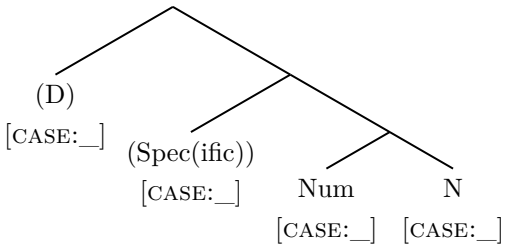
[8] Bhatia & Bhatt (2023: pp.32–35) do not distinguish between human and non-human animates.
[9] See footnote 6.
[10] Richards (2008b) proposes that case-features are associated with D/Person, which is found only on prominent nominals, such as animates and definites. I do not adopt an analysis along

K is inserted, projecting KP as the highest projection of the nominal domain (section 2.3). For simplicity, I only show case-features on the following tree diagrams, and no other features introduced by functional heads, such as gender and number.

(23) a. Human objects in Urdu:



b. Non-human objects in Urdu:



Before we can work out the derivations, there is one final piece of the accusative puzzle to look at: object shift.

3.3 Object Shift

It has been shown that marked objects move out of VP in Hindi-Urdu (Mahajan, 1990: pp.98–106; Butt, 1993; Bhatt & Anagnostopoulou, 1996; López, 2012: §4.3; Kalin, 2014: pp.173–78). Three types of arguments are given in the literature: dative intervention, higher position of marked objects relative to unmarked objects, and island effects. I summarise the evidence here, showing that object shift (OS) is necessary for accusative case-marked objects. I propose this is because of constraint on features inside VP: valued case-features cannot remain inside VP, hence, nominals with valued case-features are forced to move out.

Bhatt & Anagnostopoulou (1996) made the case for OS in Hindi on the basis of intervention effects by dative indirect objects (IOs). DOs with dative IOs cannot have accusative case (24a). Bhatt & Anagnostopoulou claim that accusative case is possible on the DO if it is scrambled over the IO (24b). They take this as evidence

these lines because definite objects are not always marked in Urdu – as discussed in section 3.1, unmarked objects may be interpreted as either definite or indefinite.

that DOs must move to receive accusative case, and that the landing site for this movement is higher than the position of the dative IO.

(24) a. *Ram=ne* *Anita=ko* ***chiTThi*** *bHej-i.*
Ram=ERG Anita=DAT letter send-PFV.F.SG

'Ram sent the letter to Anita.'

b. *Ram=ne* ***chiTThi=ko$_i$*** *Anita=ko* ***t_i*** *bHej-a.*
Ram=ERG letter=ACC$_i$ Anita=DAT t_i send-PFV.M.SG

'Ram sent the letter to Anita.'

(Bhatt & Anagnostopoulou, 1996: p.17)

While the minimal pair in (24) neatly illustrates the need for OS in Hindi, scrambling the DO over the dative IO, as in (24b), does not make accusative case acceptable in Urdu (see section 3.7 on dative intervention). The pattern in (24) can be reconstructed to some extent with source IOs to show OS in Urdu. Sources are introduced in a position higher than the base position of DOs (see section 3.7.3.2), and are followed by unmarked objects in default word order (25a). Conversely, marked objects precede sources (25b), showing that accusative objects move from their base position below the source to a position above it.

(25) a. *Rami=ne* ***library=se*** ***kitaab*** *lii.*
Rami=ERG library=INS book take.PFV.F.SG

'Rami took the book from the library.'

b. *Rami=ne* ***kitaab=ko*** ***library=se*** *li-ya.*
Rami=ERG book=ACC library=INS take-PFV.M.SG

'Rami took the book from the library.'

A different line of argumentation in favour of OS compares the behaviour of marked and unmarked objects to show that the former are structurally higher than the latter, and so must have moved from their base position.[11] Bhatt (2007: pp.17–18) reports that there is a difference in control possibilities by marked and unmarked objects. In (26a), the marked object can control the PRO subject of the adjunct, but the unmarked object in (26b) cannot.

[11] A common way of showing this is through adverb placement (Diesing, 1992: pp.104–26). This is not so straightforward for Urdu, however, as adverbs do not seem to have fixed positions (Bhatt & Anagnostopoulou, 1996: p.3; contra A. Bhatia, 2006; López, 2012: p.121). Moreover, it is generally accepted that all arguments escape out of the VP via scrambling in Urdu (Mahajan, 1990, 1994; Dayal, 1994; A. Kidwai, 2000), meaning that non-argument material, including adjuncts, will always be immediately pre-verbal in surface word order.

(26) a. *Mina=ne$_i$* *bazaar=mein* ***eik sailaani=ko$_j$*** [***PRO$_{i/j}$*** *naach-te*
Mina=ERG$_i$ market=LOC one tourist=ACC$_j$ [PRO$_{i/j}$ dance-IPFV
hue] *dekH-aa.*
be.PFV] see-PFV.M.SG

'In the market, Mina$_i$ saw a tourist$_j$ dancing$_{i/j}$.'

b. *Mina=ne$_i$* *bazaar=mein* ***eik sailaani$_j$*** [***PRO$_{i/???j}$*** *naach-te*
Mina=ERG$_i$ market=LOC one tourist$_j$ [PRO$_{i/???j}$ dance-IPFV.M.SG
hue] *dekH-aa.*
be.PFV.M.SG] see-PFV.M.SG

'In the market, Mina$_i$ saw a tourist$_j$ dancing$_{i/???j}$.' (Bhatt, 2007: p.17)

Note that Bhatt does not judge control by the object in (26b) as completely ungrammatical, but only as highly marked. Montaut (2018: pp.286–88) argues that the unacceptability of (26b) may arise simply from the lack of marking on a human object, which should only be unmarked in exceptional circumstances, as noted in section 3.1. She shows that an example with an unmarked inanimate object instead is grammatical, and control by the object is possible (27).

(27) ***gaRi$_i$*** [***PRO$_i$*** *vaapis aa-i* *hui*] *dekH kar mein=ne*
car$_i$ [PRO$_i$ return come-PFV.F.SG be.PFV.F.SG] see do 1SG=ERG
soch-a...
think-PFV.M.SG...

'I saw the car having come back and thought...'
(≠ 'Having come back/I came back and I saw the car...')
(Montaut, 2018: p.287)

Another factor contributing to the difference between human and non-human objects in control contexts may be incorporation. Recall that unmarked human objects like the one in (26b) are always incorporated (section 3.1). Incorporated objects lack individual salience and cannot support discourse anaphora, as shown in section 3.1.1. For the same reason, we may expect them not to be able to control PRO either. On the other hand, unmarked inanimate objects may or may not be incorporated. In (27), the object is interpreted as definite, not generic, indicating that it is unincorporated, which then allows it to control. Therefore, Bhatt's (2007) control facts may be because unmarked human objects must be incorporated, thus, precluding them from being controllers, and not because marked and unmarked objects occupy different positions.

A more compelling argument showing marked objects are structurally higher than unmarked ones comes from A. Kidwai (2022b: pp.9–10). She shows that while marked objects can bind pronouns in locative arguments (28a), unmarked objects cannot (28b). This contrast is not due to the presence versus absence of incorporation. The same pattern is seen with DPs, which, as we know, cannot be incorporated (29).

(28) a. *us=ne* ***chuuhon=ko$_i$*** ***un=ke$_{i/j}$*** *gHar=mein rakH-a.*
3SG=ERG mice=ACC$_i$ 3PL=GEN$_{I/J}$ house=LOC keep-PFV.M.SG

'He kept the mice$_i$ in their$_{i/j}$ house.'

b. *us=ne* ***chuuhe$_i$*** ***un=ke$_{*i/j}$*** *gHar=mein rakH-e.*
3SG=ERG mice$_i$ 3PL=GEN$_{*I/J}$ house=LOC keep-PFV.M.PL

'He kept the mice$_i$ in their$_{*i/j}$ house.' (A. Kidwai, 2022b: p.9)

(29) a. *us=ne* ***har chuuhe=ko$_i$*** ***us=ke$_{i/j}$*** *gHar=mein rakh-a.*
3SG=ERG every mouse=ACC$_i$ 3SG=GEN$_{I/J}$ house=LOC keep-PFV.M.SG

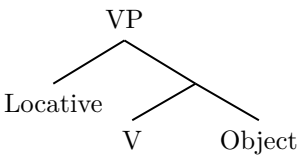
'He kept every mouse$_i$ in its$_{i/j}$ house.'

b. *us=ne* ***har chuuha$_i$*** ***us=ke$_{*i/j}$*** *gHar=mein rakH-a.*
3SG=ERG every mouse$_i$ 3PL=GEN$_{*I/J}$ house=LOC keep-PFV.M.SG

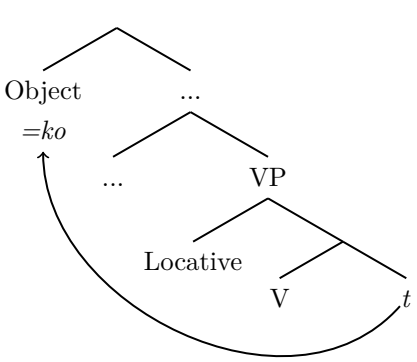
'He kept every mouse$_i$ in its$_{*i/j}$/his$_j$ house.'

Locative arguments are found in Spec-VP (Malhotra, 2014). DOs in their base position (Comp-V) do not c-command locative arguments (30), and thus, cannot bind pronouns. The fact that marked objects can bind pronouns in Spec-VP indicates that they have moved to a position above locatives, outside VP (31).

(30)



(31)



Finally, we can test for movement itself by applying island effects. Islands are structures out of which movement is ungrammatical. Most islands consist of configurations that are too large to be of use in testing the proposed movement in DOM, but we can make use of the Coordinate Structure Constraint (CSC) (Ross, 1967: pp.158–96). According to the CSC, movement is prohibited from inside a coordinated structure. This is illustrated with *wh*-movement in English (32).

(32) a. [Rami and his wife] ate dinner.

b. Who$_i$ t_i ate dinner?

c. *Who$_i$ [Rami and t_i] ate dinner?

The CSC also holds in Urdu (33).[12]

(33) a. [*Rami aur us=ki biwi*]*=ne kHaana kHa-ya.*
[Rami and 3SG=GEN wife]=ERG food eat-PFV.M.SG

'Rami and his wife ate dinner.'

b. *kis=ne$_i$ t_i kHaana kHa-ya?*
who=ERG$_i$ t$_i$ food eat-PFV.M.SG

'Who ate dinner?'

c. **kis=ne$_i$ [Rami aur t_i](=ne) kHaana kHa-ya?*
who=ERG$_i$ [Rami and t$_i$](=ERG) food eat-PFV.M.SG

Kalin & Weisser (2019) apply the CSC to DOM in various languages to test claims of movement. If DOM in a given language requires movement, then it is

[12]Hindi-Urdu has traditionally been described as a *wh*-in-situ language (Mahajan, 1990: Ch.3), but various authors have shown that Hindi-Urdu exhibits behaviour associated with *wh*-movement (Simpson & Bhattacharya, 2003; Manetta, 2011: Ch.4, 2013; Bhattacharya & Simpson, 2012; Gribanova & Manetta, 2016). In particular, Manetta (2011: Ch.4, 2013) and Gribanova & Manetta (2016) show that *wh*-questions in Urdu show island effects, providing strong evidence in favour of a movement analysis. Manetta proposes that *wh*-questions in Hindi-Urdu involve pronunciation of a lower copy in Spec-*v*P instead of the top one in Spec-CP, thus obscuring movement. Simpson & Bhattacharya (2003) make a similar suggestion for Bangla.

predicted that asymmetric marking in coordinated constructions, that is, marking of one conjunct but not the other, will be impossible as this will require one conjunct to move out of the coordinated phrase, thus, incurring a violation of the CSC. If asymmetric marking is possible, then DOM does not involve movement. Kalin & Weisser test for asymmetric marking in 11 languages: Spanish, Southern Italian dialects, Romanian, Nepali, Hindi, Finnish, Turkish, Caucasian Urum, Hebrew, Amharic and Tamil. Most of these languages allow asymmetric marking, as shown for Spanish in (34) and for Nepali in (35). However, Hindi (and Urdu) does not (36).[13]

(34) Spanish:

Vi [*una mujer y* ***a*** ***María*** *junt=as*]
see.PST.1SG [a woman and DAT Maria together-F.PL]
en el parque.
in the park

'I saw a(some) woman and Maria together in the park.'
(Kalin & Weisser, 2019: p.5)

(35) Nepali:

Raam=le [***ma=laai*** *ra mero kitaab*] *Dekh=yo.*
Raam=ERG [1SG=DAT and 1SG.GEN book] see=PST.3SG

'Ram saw me and my book.' (Kalin & Weisser, 2019: p.7)

(36) Hindi/Urdu:

* *vo shikaari* [***sher=ko*** *aur hiran*] *maar de*
that hunter.NOM [tiger=ACC and deer] kill give.FUT.3SG
ga.
FUT.M.SG

Intended: 'That hunter will kill the tiger and a deer.'
(Kalin & Weisser, 2019: p.8)

[13] Kalin & Weisser (2019: p.267) point out that in languages where case-marking follows nominals, as in Nepali and Hindi, marking on the second conjunct is ambiguous between case on the full coordinated phrase and asymmetric marking on the second conjunct only, and therefore, uninformative. The same applies to marking on the first conjunct in languages where case marking precedes nominals, as in Spanish. Therefore, asymmetric marking should only be tested by marking the conjunct that will result in an unambiguous surface order.

We can show that Kalin & Weisser's findings are not simply due to the ungrammaticality of coordinating an unincorporated nominal with an incorporated one. In the examples below, the second conjunct is a DP (37) and proper name (38), respectively, ruling out the possibility of the unmarked conjunct being incorporated. Asymmetric marking is still ungrammatical.

(37) a. *vo shikaari [sher aur **har** **hiran**] =ko maar de*
that hunter.NOM [tiger and every deer] =ACC kill give.FUT.3SG
ga.
FUT.M.SG

'That hunter will kill a/the tiger and every deer.'

b. * *vo shikaari [**sher=ko** aur har hiran] maar de*
that hunter.NOM [tiger=ACC and every deer] kill give.FUT.3SG
ga.
FUT.M.SG

Intended: 'That hunter will kill the tiger and every deer.'

(38) a. *Rami=ne [Lahore aur **Karachi**] (=ko) dekH-a.*
Rami=ERG [Lahore and Karachi] (=ACC) see-PFV.M.SG

'Rami saw Lahore and Karachi.'

b. * *Rami=ne [**Lahore=ko** aur Karachi] dekH-a.*
Rami=ERG [Lahore=ACC and Karachi] see-PFV.M.SG

Intended: 'Rami saw Lahore and Karachi.'

Kalin & Weisser also speculate whether the ungrammaticality of asymmetric marking is due to mismatches in specificity (p.8, fn.4). Example (38) shows this is not the case: both the conjuncts are proper names and equally specific, yet asymmetric marking is not possible.

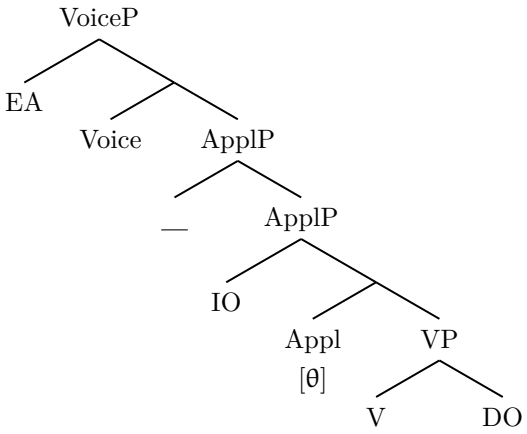
We have seen three pieces of evidence supporting OS. Firstly, marked DOs show different word order with respect to source IOs, as compared to unmarked DOs. This is similar to word order differences reported for accusative DOs with dative IOs in Hindi. Secondly, marked objects are structurally higher than unmarked objects, as seen through binding relations. Lastly, marking is subject to island effects, showing that there is movement involved. This leaves us with two questions: what is the trigger for movement, and what is the landing site?

It has been shown that objects with certain features must move out of VP. For example, Diesing (1992) argues that arguments which receive specific interpreta-

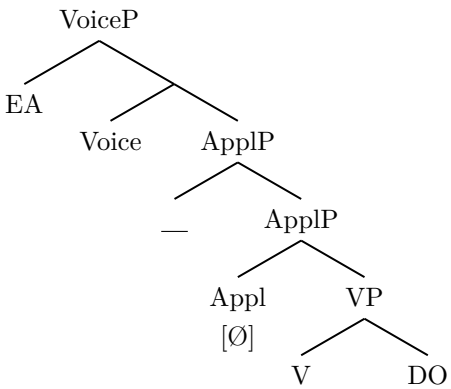
tions must be VP-external in English and German. Similarly, Woolford (1995/2000) makes a case for human and plural objects moving out of VP in Palauan (Malayo-Polynesian), and Woolford (1999) extends this to person features in Ruwund (Bantu), KiRimi (Bantu), Maasai (Eastern Nilotic), and Swahili (Bantu). We can extend this to case-features: some valued case-features must out of VP. More specifically, all valued case-features, including accusative case, must move out of VP, with the sole exception being nominative case. We shall see evidence of nominative case being able to remain within VP from dative predicates, discussed in section 5.3.2.

It is generally agreed that OS in Urdu targets a position above the IO but below the position where the EA is introduced (Mahajan, 1990: Ch.2, Bhatt & Anagnostopoulou, 1996; A. Kidwai, 2022b: pp.9–10), and more recently, López (2012: Ch.2) and Kalin (2014: pp.173–78) have proposed that this is the specifier of an applicative head. Lopez proposes that there are two variants of this applicative head, a thematic one which introduces an argument (the IO), and a non-thematic one which does not. The former is found in ditransitives, while the latter is found in transitives (39). I use Ø to indicate that a head, in this case, Appl, is non-thematic. __ is the target site for OS.

(39) a. Ditransitives:



b. Transitives:



In ditransitives, two specifiers of Appl must be projected to accommodate both

the IO and moved DO. As we shall see in section 3.7, multiple specifiers of ApplP are not possible in Urdu, as a result of which accusative case and dative IOs cannot occur together. On the other hand, one may assume that multiple specifiers of ApplP are possible in Hindi, hence, allowing accusative DOs with dative IOs, provided the DO moves over the IO (ex.24, above).

The main prediction of proposing movement to Spec-ApplP is that, in ditransitives, marked DOs c-command IOs but not external arguments.[14] C-command between the IO and DO are difficult to test (see section 3.7.1, footnote 33), but we can show that EAs c-command both marked and unmarked DOs in ditransitives through anaphor binding. In both (40a) and (40b), the EA is able to bind the anaphor in the DO, showing that it c-commands the DO regardless of marking. This means that the landing site for marked DOs must be below EAs.

(40) a. *Rami$_i$=ne* ***apni$_i$*** ***beTi=ko*** *school=se* *li-ya.*
Rami$_i$=ERG REFL$_i$ daughter=ACC school=INS take-PFV.M.SG

'Rami$_i$ took/picked up his$_i$ own daughter from school.'

b. *Rami$_i$=ne* *school=se* ***apni$_i$*** ***kitaab*** *li.*
Rami$_i$=ERG school=INS REFL$_i$ book take-PFV.M.SG

'Rami$_i$ took/picked up his$_i$ own book from school.'

Many accounts which take OS to target Spec-ApplP assume that Appl is responsible for assigning DOM (see Kalin, 2014: pp.173–78, for Hindi, in particular). I disagree with this analysis. DOM/accusative case and dative case cannot be conflated in Urdu, the main reason being that while accusative case shows properties of being a structural case, dative case behaves like a non-structural inherent case. This is discussed in detail in section 3.7.1. Instead, I take Appl to assign case to the IO only, while (active) Voice assigns accusative case to the DO. This also allows us to manipulate the properties of Voice to account for the (un)availability of accusative case in different Voice-related constructions (see Chapter 4).

3.4 Accusative Case Assignment

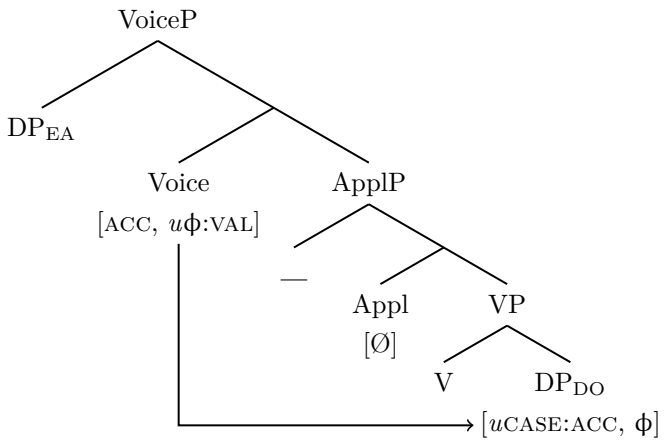
In this section, I illustrate derivations for accusative case assignment, or lack thereof, to human, non-human and incorporated objects.

[14] In the functional structure I am assuming (presented in section 2.2), an alternative option for the landing site may be Spec-vP. Here, too, the DO would not c-command the EA after moving. In section 2.2, I stated that v introduces event semantics, but does not introduce arguments or assign case. Since there is no thematic v, there is no evidence that v projects a specifier in Urdu. On the other hand, Appl does have a thematic variant, showing that it can project a specifier, therefore, making it the more appealing choice.

3.4.1 Human objects

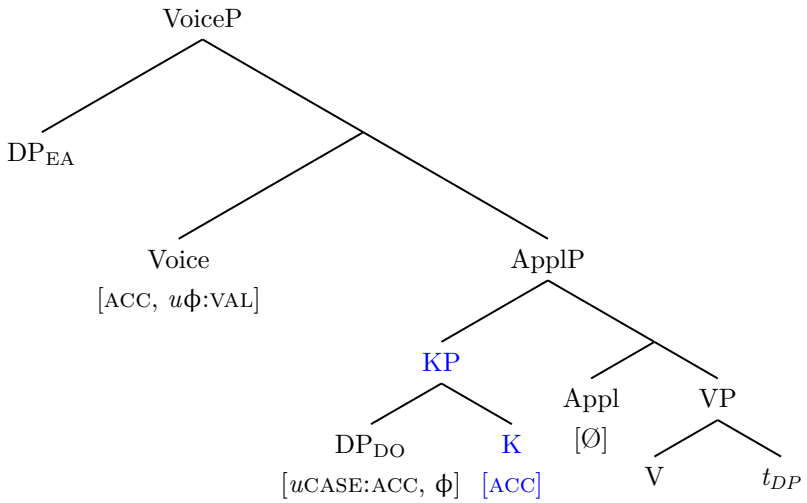
As established in section 2.2, I take Voice to be responsible for introducing the EA, as well as assigning accusative case. To act as a probe, Voice must have unvalued ϕ-features.[15] It also has a case-assigning feature, which I encode as ACC for simplicity.[16] The DO originates in Comp-V as a DP. Here, DP is used to refer to a nominal with any number of functional projections above NumP, but specifically excluding KP. Human objects have the functional projection, Human, which introduces an unvalued, uninterpretable case-feature, [*u*CASE:_]. Voice probes the DO, resulting in valuation of Voice's ϕ-features and the DO's case-feature (41).

(41)



The valued case-feature causes the DP to move out of VP to Spec-ApplP (42). K is Merged with DP in the landing site, leading to projection of KP at the top of the nominal structure.

(42)



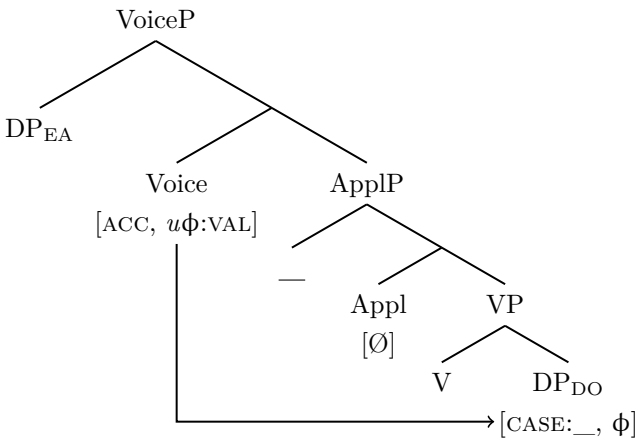
[15] Voice does not show any agreement inflection in Urdu. Agreement inflection is only seen on higher functional heads, such as Asp and T.

[16] See section 2.3.3 for discussion on what case-features might actually be.

3.4.2 Non-human objects

Non-human DOs do not have a Human projection and, therefore, do not have an uninterpretable case-feature. As discussed in section 3.2, there is an important distinction between nominals that *must* receive case versus nominals that *can* receive case. Unvalued *uninterpretable* case-features *must* be valued to prevent a derivational crash. Conversely, unvalued *interpretable* case-features do not need to be valued as they do not cause a derivational crash, but *can* still be valued. As a result, non-human objects in Urdu have their interpretable case-feature valued optionally. When their case-feature is valued, the derivation proceeds as described in section 3.4.1 for human objects: Voice probes the DO, and values its case-feature as accusative; the valued case-feature triggers OS; K is Merged with the DP in the landing site. When a non-human object's case-feature is not valued, the DO remains inside VP, and no KP is projected (43).[17] Since this case-feature is interpretable, lack of valuation does not cause a crash.

(43)



Notice that while all marked objects have a valued case-feature, marked human objects have a valued *uninterpretable* feature, [*u*CASE:ACC], and marked non-human objects have a valued *interpretable* feature, [CASE:ACC]. This makes the prediction that marking on non-human objects has a semantic contribution while marking on human objects does not. This is exactly what is found. As discussed in section 3.1, accusative case on non-human objects is associated with definite/specific interpretations but has no special meaning on human objects. Alternatively, assuming optional operations must have interpretive effects, the difference in interpretation of marked non-human versus human objects can be attributed to optionality versus lack of optionality: the case-feature on non-human objects is optionally valued, hence, has interpretive effects, while the case-feature on human objects is obligatorily valued,

[17]Note that there is no assumption in my system that a head which *can* assign case *must* assign case. Note also that probing without case-valuation is considered to be a successful instance of Agree under the redefinition discussed in section 2.3.1, as the probe's ϕ-features are presumably valued (although not visible in morphology), despite the goal's case-feature not being valued.

and hence, does not have any interpretive effects. Note that simply assuming that the accusative case marker makes a semantic contribution is not enough as this incorrectly predicts that marking on both human and non-human objects should have definite/specific connotations.[18]

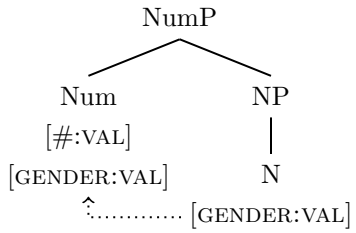
3.4.3 Incorporated objects

As discussed in section 3.1.1, pseudo-noun-incorporation in Urdu involves NumPs rather than bare nouns, Ns, as argued by Dayal (2011). I take Dayal's claim one step further and posit that incorporated nominals cannot have any functional structure above NumP (Baker, 1988; Massam, 2001, 2017). This explains why DPs cannot be incorporated (D cannot be projected), and why incorporated nominals only have generic interpretations (Spec(ific) cannot be projected either). Recall that incorporated human objects are interpreted as functional or collective (Montaut, 2018), and are essentially 'de-animated'. We can take this to mean that Human can also not be projected in incorporated nominals. Consequently, there is no difference in the structure of human and non-human incorporated nominals; they are both NumPs.

In Kalin's (2014: Ch.4) analysis, Num and N heads introduce interpretable case-features. This would mean that incorporated nominals also have a case-feature, which may be optionally valued in the same way as the case-feature on non-human objects. However, incorporated nominals in Urdu never receive accusative case, as is also common in other languages. This has been attributed to the fact that incorporated nominals do not have case-features (Baker, 1988; Massam, 2001, 2017). We can assume either that Num and N do not have case-features in incorporated nominals, or that they never have case-features at all and that case-features, interpretable and uninterpretable, are only introduced by higher heads in Urdu. I adopt the second option for simplicity, with the acknowledgement that further investigation is needed.

The proposed structure for incorporated nominals is shown in (44). Num and N introduce ϕ-features (number and gender, respectively) but no case-features.

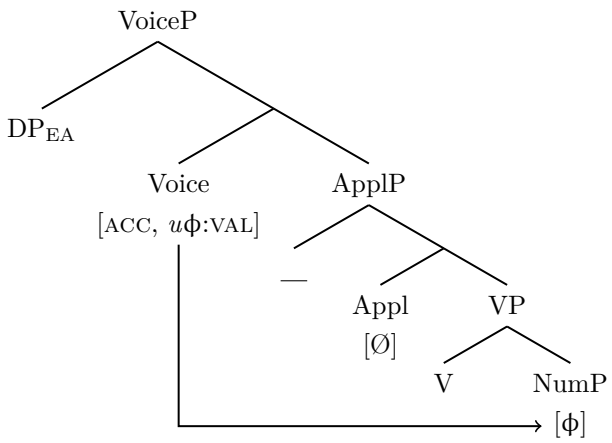
(44)



[18]For the same reason, attributing the definite/specific interpretation of marked non-human objects to object shift of the accusative object out of the VP, in line with Diesing (1992), is not a sufficient explanation either, as marked human objects also undergo object shift, yet do not show the same definiteness effects. Moreover, unmarked non-human objects can also be interpreted as definite/specific, as discussed in section 3.1, suggesting that any interpretation-related movement is distinct from case-related movement.

Consequently, incorporated nominals never receive case, as there is no case-feature, uninterpretable or interpretable, to value. As a result, incorporated nominals will always remain inside VP and will never become KPs (45).

(45)



Note that while the structure in (45) is similar to the structure for non-human objects without case in (43), the crucial difference is that incorporated nominals cannot project any structure beyond NumP, while non-human objects without case can (as indicated by their DP label on the tree). This difference may also be responsible for their non-referential and referential interpretations, respectively, in light of work by Longobardi (1994, 2001, 2005, 2008), Richards (2004, 2008a,b) and others, showing that referential nouns have more structure than non-referential ones.

3.5 Interim Summary

I have argued that DOM is the result of some but not all nominals requiring case-licensing. Human objects have an uninterpretable case-feature, which must be valued to prevent a derivational crash. Non-human objects only have interpretable case-features, which do not cause a derivational crash if left unvalued, and hence, need only be valued optionally. Upon valuation of case-features, the nominal must move out of VP. I argued that the landing site for this movement is the specifier of a non-thematic applicative head. K is Merged with the moved object. Finally, incorporated objects are NumPs in Urdu, and do not project any further extended functional projections. They do not have any case-features at all, and hence, never receive case.

In the rest of this chapter, I look at two remaining issues. First, I explore the fate of unmarked objects, that is, objects that do not have their case-feature valued (section 3.6). I argue that these objects are not nominative or (null) accusative, but simply have no case-value. I also propose an account of agreement mechanisms in Urdu, along the lines of Bhatt & Walkow (2013). Next, I look at dative intervention

in accusative case assignment (section 3.7). As mentioned in section 3.3, accusative case is not assigned in the presence of a dative indirect object. I argue this is because dative indirect objects bleed object shift. Accusative case assignment would therefore leave a valued case-feature inside VP. I also look at source indirect objects, which do not prevent accusative case assignment. I propose this is so because they do not bleed object shift, thus allowing accusative DOs to move out of VP, as needed.

3.6 Unmarked Objects and Agreement

In section 3.4.2, I claimed that unincorporated objects which do not receive accusative case have an unvalued case-feature. I call these objects caseless, for ease of exposition, although they do bear a case-feature. In this section, I discuss two alternatives which have been proposed in the literature. The first suggests that these objects are nominative, which is assumed to be the default case (Mohanan, 1994: pp.86–90, Butt & King, 2004; Davison, 2015). The second claims that such objects have accusative case but with a null realisation (Bhatt, 2005; Anand & Nevins, 2006; Keine, 2007; Mahajan, 2017). I show that neither of these analyses is correct, and that a caseless analysis is more attractive (see also Bhatia & Bhatt, 2023: §3).

This conclusion raises some challenges for agreement. The proposed caseless objects trigger agreement when the subject is case-marked. Following Bhatt & Walkow (2013), I propose that object agreement in Urdu is the result of a post-syntactic process, Feature-Copying, which comes about when T cannot value its uninterpretable features via Agree in syntax. This adds to the extensive literature showing that case assignment and agreement must be dissociated (Bobaljik, 2008, and subsequent; see Baker, 2013, 2015: Ch.2, for a nice overview of the extent to which case and agreement pattern together, and Bhatt, 2005, for the dissociation of case and agreement in Hindi-Urdu).

3.6.1 Unmarked objects are not nominative

One commonly assumed analysis of unmarked objects[19] is that they are nominative (Mohanan, 1994: pp.86–90, Butt & King, 2004; Davison, 2015). This is primarily because they can trigger agreement. Agreement is with the subject when it is nominative (46a), or with the unmarked object when the subject is non-nominative (46b). If the subject is non-nominative and the object is marked, default agreement (3M.SG) is seen (46c).

[19]Throughout this section, when I refer to unmarked or bare objects, I am referring specifically to unmarked unincorporated objects, that is, objects with unvalued case-features. Incorporated objects, as we have established, do not have a case-feature at all (section 3.4.3).

(46) a. ***hum*** *eik mosambi kHa rah-e hein.*
1PL.NOM one orange.F.SG eat PROG-M.PL be.PRS.1PL
'We are eating an orange.'

b. *hum=ne* ***eik mosambi*** *kHa-i tHi.*
1PL=ERG one orange.F.SG eat-PFV.F.SG be.PST.F.SG
'We ate an orange.'

c. *hum=ne eik mosambi=ko kHa-ya tHa.*
1PL=ERG one orange.F.SG=ACC eat-PFV.M.SG be.PST.M.SG
'We ate a specific orange.'

Unmarked objects can be contrasted with bare locatives. As mentioned in section 1.2.3, locative case has four realisations, one of which is a null marker. Arguments with null locative case do not trigger agreement (47a). This is in contrast to unmarked DOs (47b). Assuming unmarked objects are nominative, this contrast can be explained easily by stating that agreement tracks nominative case as opposed to null case forms.

(47) a. *mujHe* ***library*** *jaa-na he.*
1SG.DAT library.F.SG.LOC go-INF.M.SG be.PRS.3SG
'I want to go to a/the library.'

b. *mein=ne* ***library*** *dekH-i.*
1SG=ERG library.F.SG see-PFV.F.SG
'I saw a/the library.'

However, there are some key differences between subject and object agreement on the basis of which Bhatt (2005) and Bhatt & Walkow (2013) argue that the two come about as the result of different processes. Bhatt (2005) looks at long-distance agreement (LDA) in Hindi-Urdu where matrix T agrees with an embedded object in a non-finite clause (48).[20] This is only possible when matrix T does not have an argument in its own clause to agree with (i.e. all arguments in the matrix clause are case-marked).

[20] Bhatt (2005) reports the pattern in (48) with agreement 'skipping' the infinitival as ungrammatical, although he notes that it is possible in some dialects. The patterns he reports as grammatical require that either both the infinitival and the matrix verb show agreement or neither. I assume that LDA proceeds in a parasitic fashion as proposed by Bhatt, but that there are simply no morphological exponents for agreement on the infinitival in the dialect reported here (see Yadav, 2023, for an alternative analysis of LDA in such dialects).

(48) *Rami=ne* [***kitaab*** *paRh-na*] ??***chaah-a*** / ***chaah-i***.
Rami=ERG [book.F.SG read-INF] ??want-PFV.M.SG / want-PFV.F.SG

'Rami wanted to read a book.'

Crucially, T does not assign case to the embedded object since T is involved in assigning case to the ergative subject (see section 5.2.2). Bhatt argues that this is also the case in local object agreement: T does not assign case to the object, yet agrees with it. This is different from agreement with subjects, where T both assigns case to the subject (nominative) and agrees with it.

Bhatt & Walkow (2013) show that there are also asymmetries between subject and object agreement with respect to coordinated phrases, &Ps (see also Benmamoun, Bhatia & Polinsky, 2009; A. Bhatia, 2011). In &Ps with mismatched conjuncts, subjects trigger resolved agreement, while objects trigger closest conjunct agreement. In (49), the coordinated subject has one masculine singular conjunct and one feminine singular conjunct. Agreement is masculine plural regardless of the order of conjuncts.

(49) a. [*Sita aur Ramesh*] *gaa* { ***rah-e*** ***hein*** /
[Sita.F and Ramesh.M].NOM sing { PROG-M.PL be.PRS.3PL /
**rah-a* *he* }.
*PROG-M.SG be.PRS.3SG }

'Sita and Ramesh are singing.'

b. [*Ramesh aur Sita*] *gaa* { ***rah-e*** ***hein*** /
[Ramesh.M and Sita.F].NOM sing { PROG-M.PL be.PRS.3PL /
**rah-a* *he* }.
*PROG-M.SG be.PRS.3SG }

'Ramesh and Sita are singing.' (Bhatt & Walkow, 2013: p.956)

Conversely, agreement is always with the conjunct that is in closest linear proximity to the verb with coordinated objects. This is shown with a masculine singular and a feminine singular object below (50). Bhatt & Walkow also illustrate this with several other combinations of feature mismatches, not shown here.

(50) a. *Ram=ne* [*eik tHeli aur eik baksa*] { ***uTH-a-ya***
Ram=ERG [one bag.F.SG and one box.M.SG] { rise-CAUS-PFV.M.SG
/ ∗*uTH-a-ey* }.
/ *rise-CAUS-PFV.M.PL }

'Ram lifted a bag and a box.'

b. *Ram=ne* [*eik tHela* *aur eik peTi*] { ***uTH-a-i***
Ram=ERG [one bag.M.SG and one box.F.SG] { rise-CAUS-PFV.F.SG
/ **uTH-a-ey* }.
/ *rise-CAUS-PFV.M.PL }

'Ram lifted a bag and a box.' (Bhatt & Walkow, 2013: pp.958-59)

Examples with non-default word order show that object agreement depends entirely on linear proximity and not a specific structural position within &P. In (51a), the object follows the verb; agreement is with the first conjunct. When the object remains in its pre-verbal position (51b), agreement is with the second conjunct. (52) illustrates the same contrast with a number mismatch between the two conjuncts.

(51) a. *us=ne* ***kharid-i*** [*kursi* *aur sofa*].
3SG=ERG buy-PFV.F.SG [chair.F.SG and sofa.M.SG]

'He bought the chair and the sofa.' (Benmamoun et al., 2009: p.77)

b. *us=ne* [*kursi* *aur sofa*] ***kHarid-a***.
3SG=ERG [chair.F.SG and sofa.M.SG] buy-PFV.M.SG

'He bought the chair and the sofa.'

(52) a. *Mona=ne* *bazaar=mein* ***dekH-a*** ***tHa*** [*eik*
Mona=ERG market=LOC see.CAUS-PFV.M.SG be.PST.M.SG [one
gHoRa *aur kai* *kutte*].
horse.M.SG and many dog.M.PL]

'Mona saw a horse and many dogs in the market.'
(Bhatt & Walkow, 2013: p.960)

b. *Mona=ne* *bazaar=mein* [*eik gHoRa* *aur kai* *kutte*]
Mona=ERG market=LOC [one horse.M.SG and many dog.M.PL]
dekH-ay ***tHe***.
see.CAUS-PFV.M.PL be.PST.M.PL

'Mona saw a horse and many dogs in the market.'

Bhatt & Walkow propose that the differences in subject and object agreement arise because there are two different processes at work. Subject agreement is the result of Agree with T, which also leads to nominative case assignment to the subject. However, object agreement is the result of post-syntactic feature-matching (see also

Benmamoun et al., 2009).[21] In other words, T does not enter into Agree with objects and does not assign nominative case to them. The details of this operation are given in section 3.6.4, where I propose a similar analysis of object agreement.

The distribution of subjects and objects in non-finite clauses also shows that unmarked objects cannot be nominative. Nominative subjects are ungrammatical in non-finite clauses (53). The subject of a non-finite embedded clause must have genitive case or be PRO, but cannot have either nominative or ergative case. Unmarked objects, on the other hand, are perfectly acceptable in non-finite clauses, as seen with the object, *seb* 'apple', in (53).

(53) *Rami*$_i$ [*PRO*$_i$ / *Omar=ka* / ***Omar** / *Omar=ne* ***seb***
Rami.NOM$_i$ [PRO$_i$ / Omar=GEN / *Omar.NOM / *Omar=ERG apple
kHaa-na] *chah-ta* *he.*
eat-INF] want-IPFV.M.SG be.PRS.3.SG

'Rami wants (Omar) to eat an apple.'

Mahajan (2017) shows the same pattern with data from pre-nominal relative clauses. Nominative subjects are ungrammatical in relative clauses (54b), while unmarked objects are grammatical (54c).

(54) a. *Kabir=ne* / *laRki=ne* *kitaab* *paRh-i.*
Kabir=ERG / girl=ERG book read-PFV.F.SG

'Kabir/The girl read a/the book.'

b. [*Kabir=ki* / ***Kabir** *paRh-i* *hui*] *kitaab* *kHo*
[Kabir=GEN / *Kabir.NOM read-PFV.F.SG be.PTCP.F.SG] book lose
gai
PASS.PFV.F.SG

'The book read by Kabir was lost.'

(adapted from Mahajan, 2017: pp.96–97)

c. [***kitaab*** *paRh-ti* *hui*] *laRki...*
[book read-IPFV.F.SG be.PTCP.F.SG] girl...

'a/the girl reading a book...' (Mahajan, 2017: p.104)

[21] As mentioned in section 2.3.1, Bobaljik (2008) and following work propose that agreement is a post-syntactic phenomenon. This is contra Chomsky-style approaches under which agreement is the result of the syntactic process, Agree. More recently, some works have argued that there may be both syntactic and post-syntactic processes at work within a given language (Benmamoun et al., 2009; Arregi & Nevins, 2012: Ch.2; Bhatt & Walkow, 2013; Landau, 2016; Atlamaz & Baker, 2018).

Nominative subjects are ungrammatical in non-finite contexts because non-finite T cannot assign case. The grammaticality of unmarked objects in these contexts shows that they are not nominative.

Nominative objects also pose a challenge from a theoretical perspective. Unmarked objects occur with both ergative and nominative subjects in Urdu. Assuming unmarked objects are nominative, we would have two nominative arguments when the subject is also nominative. However, each case should only be assigned once in a given clause. As outlined in section 2.3.1, to enter into Agree, probes and goals must be *active* (Chomsky, 2000, 2001). Once a probe or goal's features have been valued, it is no longer visible for any further Agree operations, that is, it is *inactive*. The consequence of the Activity Condition for case assignment is that each probe assigns case only once and each goal receives only one case.[22] In double-nominative constructions, T would have to enter into Agree with both the subject and object to assign both of them nominative case. This is not possible as T's ϕ-features will be valued once it has entered into Agree with the closest nominal, the nominative subject. T will no longer be active to probe further and enter into Agree with the object as well.

Thus, upon closer examination, unmarked objects do not seem to have the same case as nominative subjects. This leads us to the next possibility that unmarked objects carry a null exponent of accusative case.

3.6.2 Unmarked objects are not accusative

Firstly, it should be noted that many accounts which propose a null form of accusative case do not do away completely with nominative objects. The general gist of such proposals is this: objects with nominative subjects are (null) accusative; objects with ergative subjects are nominative (also null); and *ko* is associated with DOM, which may or may not be categorised as case depending on individual accounts (Anand & Nevins, 2006; Mahajan, 2017; S. Kidwai, 2019). This neatly classifies Urdu as a split-ergative system with ergative-absolutive/nominative alignment in perfective environments, and nominative-accusative alignment in imperfective environments.

[22]There are some known exceptions to this. Probes have been argued to Agree more than once due to what has been labelled as *feature gluttony* by Coon & Keine (2021). In instances of feature gluttony, different segments (probing features) of a single probe (head) Agree with distinct goals. Bhatia & Bhatt (2023) have proposed a feature gluttony account of multiple nominative arguments in Hindi-Urdu copular clauses. However, this is not a case of Multiple Agree, per se, but rather decomposition of the probe head into multiple probing features, each of which Agrees once. Similarly, goals may also seem to enter into Agree more than once, for example, in instances of case-stacking. In section 3.7.3.2, I show that locative-instrumental case-stacking in Urdu is not an instance of the same goal receiving case twice, but rather an instrumental PP with a locative inside. Notably, both feature gluttony and case-stacking are exceptions rather than the norm.

A split-ergative analysis predicts that objects in ergative-nominative constructions should behave like nominative subjects, even if objects (with null accusative) in nominative-accusative constructions do not. For example, one would expect that coordinated objects in ergative-nominative constructions would show resolved agreement like coordinated subjects, even if coordinated objects in nominative-accusative constructions show a different pattern. However, this is not so. Examples (50) to (52) in section 3.6.1 all have ergative subjects, yet their objects do not pattern with subjects in triggering resolved agreement in coordinated constructions, showing that they are not nominative.

Similarly, a split-ergative analysis would also expect differences in the distribution of objects in non-finite clauses. Objects of ergative-nominative constructions should be ungrammatical in non-finite clauses, while objects of nominative-accusative constructions should be possible. Mahajan (2017) claims that this prediction is borne out. He reports that there is a difference between objects in perfective and imperfective clauses, that is, in ergative-nominative and nominative-accusative alignments, respectively. Perfective pre-nominal relative clauses are ungrammatical with both marked and unmarked objects (55). Mahajan assumes that DOM is a non-case marker that attaches to nominative or (null) accusative objects. He also assumes that accusative case is unavailable in perfective contexts. This means that the only source of case for objects in perfective constructions is T. Since T is absent in non-finite clauses, and perfective *v* cannot assign accusative case according to Mahajan, there is no object case available in perfective pre-nominal relative clauses, making (55) ungrammatical.

(55) a. *[*kitaab* *paRh-a* *hua*] *laRka...*
[book read-PFV.M.SG be.PTCP.M.SG] boy...

'a/the boy who has read a book...' (Mahajan, 2017: p.98)

b. *[*kitaab=ko* *paRh-a* *hua*] *laRka...*
[book=ACC read-PFV.M.SG be.PTCP.M.SG] boy...

'a/the boy who has read the book...' (S. Kidwai, 2019: p.41)

On the other hand, objects in imperfective pre-nominal relative clauses (nominative-accusative alignment) are perfectly possible (ex.54c, repeated). For Mahajan, this is because these objects are accusative, expressed as a null exponent, and so do not depend on finite T for case.

(54c) [***kitaab*** *paRh-ti* *hui*] *laRki...*
[book read-IPFV.F.SG be.PTCP.F.SG] girl...

'a/the girl reading a book...' (Mahajan, 2017: p.104)

However, S. Kidwai (2019: p.41) shows that the ungrammaticality of the perfective relative clause examples in (55) has nothing to do with case at all. She gives the example in (56b) with an unergative verb in perfective aspect. The ungrammaticality of this example cannot be attributed to the unavailability of an object case since there is no object to assign case to.[23]

(56) a. *laRka* *bHaag-a.*
boy.NOM run-PFV.M.SG

'The boy ran.'

b. *[*bHaag-a* *hua*] *laRka...*
[run-PFV.M.SG be.PTCP.M.SG] boy...

'the boy who has run...' (S. Kidwai, 2019: p.41)

From this, we can speculate that there may be something about perfective aspect itself which makes Mahajan's (2017) examples ungrammatical, rather than the unavailability of object cases. Thus, these examples are not concrete evidence for a contrast between objects in perfective and imperfective contexts.

Mohanan (1994: pp.86-90) presents two additional challenges for null accusative analyses. Firstly, assuming both *ko* and Ø are realisations of accusative case, the selection of these exponents is not determined by the types of factors that usually govern selection of competing case forms, namely lexical subclass (e.g. pronouns may have a different form of the same case than common nouns).[24] Secondly, she argues that drawing a distinction between nominative and null accusative objects is misleading as they show all the same behaviour: both can trigger verb agreement; and both select the same morphological form, the direct form. Recall that non-nominative cases select oblique forms of nouns, while nominative case selects direct forms (57), as described in section 1.2.3. Selection of oblique forms by non-nominative cases extends to the null exponent of locative case (58a), but not to the hypothetical null accusative (58b).

(57) ***laRke***=*ne* vs. ***laRka***
boy.OBL=ERG boy.DIR.NOM

'boy'

[23] On a cognate object analysis of intransitives (Hale & Keyser, 1993), the syntactically present null cognate object would need to undergo (pseudo-)noun-incorporation, and would, therefore, not require case. Thus, (56b) would still be predicted to be grammatical, if lack of object case is the root for the ungrammaticality in (55).

[24] The exception in Urdu are the different forms of locative case whose selection depends entirely on meaning, similar to selection of different lexical items. This can be attributed to their postpositional qualities (section 2.3.2).

(58) a. *laRka* ***Daak-khaane*** *jaa rah-a* *he.*
boy.NOM post-office.OBL.LOC go PROG-M.SG be.3SG
'The boy is going to the post office.'

b. *laRka* ***Daak-khaana*** *duur=se* *dekH rah-a* *he.*
boy.NOM post-office.DIR distance=INS see PROG-M.SG be.3SG
'The boy is looking at the post office from a distance.'

To conclude, analyses of unmarked objects as bearing a null form of accusative case face several challenges. These analyses seem primarily motivated by a desire to fit Urdu into a stereotypical split-ergative characterisation, but this is not suitable for the Urdu facts (see also Butt, 2017: pp.811–12). As mentioned, these analyses sometimes also rely on analysing *ko*-marking as non-case DOM (e.g. Mahajan, 2017). I have not discussed this aspect of these analyses here, but S. Kidwai (2019: pp.37–46) explores the problems this line of thinking faces in depth.

3.6.3 Interim summary

We have seen that unmarked objects cannot be classified as either nominative or accusative. A final option may be to posit that they have absolutive case, along the lines of Keine (2007). Keine's conception of absolutive case in Hindi functions as a sort of 'low nominative', assigned by *v*. This means that unmarked objects are not expected to be in an Agree relation with T the way nominative subjects are. Postulating absolutive case gains us the same empirical ground that a caseless analysis does. Under both, we expect subject and object agreement to differ on the grounds that the subject receives case from T but the object does not; we expect objects to be grammatical in non-finite clauses as they do not rely on finite T for case; and we do not need to divide unmarked objects into sub-groups based on the case the subject receives. However, 'absolutive case' is a somewhat ambiguous term that has been used as a catch-all cross-linguistically (see discussion in Legate, 2005, 2006, 2008), and therefore, in the absence of concrete evidence, it provides no explanatory value. A caseless analysis is thus preferential for reasons of parsimony.

Unmarked objects show the following properties: (i) they can trigger agreement; (ii) when coordinated, they trigger closest conjunct agreement; (iii) they are grammatical in non-finite clauses; and (iv) they have direct forms (as opposed to oblique forms). How can a caseless analysis explain these facts? The first two properties related to agreement are discussed in detail in the following section. The acceptability of unmarked objects in non-finite clauses is easily explained: they do not depend on T for case, and thus, are not predicted to be ungrammatical in this context. Their

morphological form can be explained if the direct form is default, and oblique forms are selected by K heads during spell-out. I now turn to agreement.

3.6.4 Agreement

In this section, I present an analysis of agreement with particular focus on how caseless objects trigger agreement in Urdu. I adopt elements of Bhatt & Walkow's (2013) analysis in which they propose that agreement in Urdu has both syntactic and post-syntactic components (see also Benmamoun et al., 2009). Subject agreement is the result of Agree between T and the subject, while object agreement is the result of Feature-Copying at PF.

Bhatt & Walkow's (2013) proposal draws on Chomsky's (1999, 2000) Matching relation as an intermediate step towards Agree. Matching is a prerequisite for Agree but, crucially, not all Matching pairs enter into Agree.

(59) Matching is a relation that holds of a probe P and a goal G. **Not every Matching pair induces Agree.** To do so, G must (at least) be in the domain D(P) of P and satisfy locality conditions. The simplest assumptions for the probe-goal system are shown [below:]

a. Matching is feature identity.

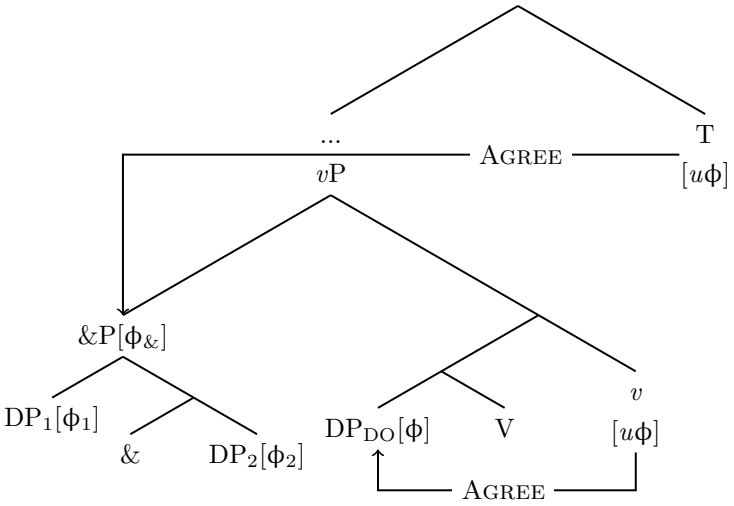
b. D(P) is the sister of P.

c. Locality reduces to 'closest c-command.' (Chomsky, 2000: p.122)

Bhatt & Walkow propose that while T Matches *and* Agrees with subjects, it Matches but does not Agree with objects. This is because objects receive (null accusative) case from v in their analysis and are not active for Agree. Match, on the other hand, is not sensitive to the Activity Condition. Successful Match identifies the search space for PF Feature-Copying. At PF, ϕ-features from the object are copied to T.

Bhatt & Walkow's proposal is based on the asymmetries in agreement with coordinated subjects and objects, discussed in section 3.6.1. As mentioned, coordinated subjects show resolved agreement, while coordinated objects show closest conjunct agreement. Bhatt & Walkow propose that in the case of coordinated subjects, T enters into Agree with &P. &P has a resolved set of features from both its conjuncts, [$\phi_{\&}$], which values T's ϕ-features, leading to resolved agreement (60).

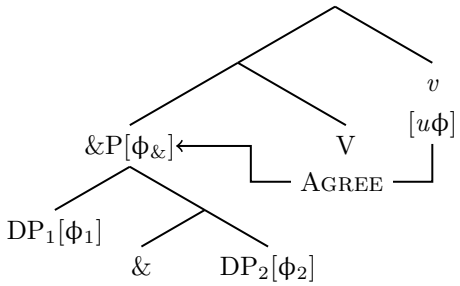
(60)



(Bhatt & Walkow, 2013: p.974)

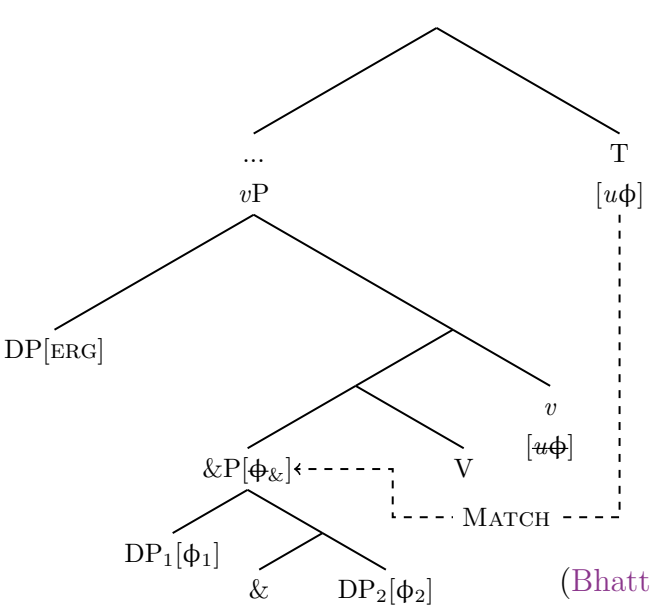
On the other hand, coordinated objects enter into Agree with v, as a result of which they receive (null) accusative case (61a). When T probes, it cannot enter into Agree with the object &P, as the object is no longer active. T can, however, Match with the object (61b).[25] Feature-Copying at PF is sensitive to linear proximity leading to copying of the closest conjunct's features onto T.

(61) a.



[25]It is unclear from Bhatt & Walkow's (2013) proposal why T does not Match with the ergative subject which is higher and should be probed first, given that Match is not sensitive to the Activity Condition.

b.



(Bhatt & Walkow, 2013: p.974)

There are two core differences between Bhatt & Walkow's assumptions about case and mine. Regarding object case, Bhatt & Walkow assume that unmarked objects receive null accusative case from *v*, making them inactive for Agree with T. In my model, unmarked objects have an interpretable case-feature which remains unvalued, and hence, should still be active for Agree with T without additional assumptions.[26] Secondly, with respect to subject case, Bhatt & Walkow take ergative case to be an inherent case from *v*, while I take it to be a structural case requiring probing by T, in conjunction with other heads (see also Davison, 1999, 2004b; Bhatt, 2005: p.767). Ergative case assignment is described below, with more details given in section 5.2.2.

I follow Bhatt & Walkow in assuming that there are three agreement processes: syntactic Agree, post-syntactic Feature-Copying, and default valuation. Evidence for default valuation comes from default agreement marking (3M.SG) seen when both the subject and object are case-marked (section 3.6.1, ex.46c). Default agreement is also seen in constructions with no argument at all, such as impersonal passives (62).

(62) *shaadi=mein khuub naach-a gya.*
wedding=LOC a-lot dance-PFV.M.SG PASS.M.SG

At the wedding, [it] was danced a lot.'

[26]This case-feature is probed first by Voice but remains unvalued due to the optionality of valuing interpretable case-features, as shown in section 3.4. Later in the derivation T may probe this feature, since it is still unvalued and active. However, it is unclear why the same feature which opted to be unvalued at the first stage of probing, would opt to be valued at the second stage. This situation does not arise, as the derivations below show, but poses an interesting theoretical question.

Additionally, I take KPs to be phases in Urdu, which prevent probing of the DP inside, thus precluding both Match and Agree. As discussed in section 2.3, case-marked nominals never trigger agreement, which we can account for by postulating that KPs are phases.

Lastly, I assume that Multiple Agree is not possible, that is, each probe/goal can only enter into Agree once. The motivation for this comes from differences in the behaviour of objects in actives versus passives and dative predicates, discussed below.

The order of operations is as follows: Probes and goals enter into Match. Some Matched pairs may result in Agree, leading to valuation of unvalued features. For pairs that Match but do not Agree, PF values features through Feature-Copying. The search space for Feature-Copying is identified by Match. Finally, if no Match has taken place, and therefore, no Agree or Feature-Copying, then PF inserts default values.

(63) Order of operations:

a. Syntax: Match

b. Syntax: Agree

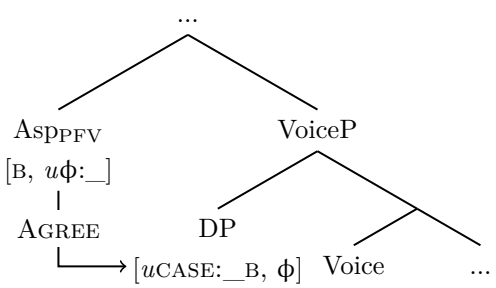
c. PF: Feature-Copying

d. PF: Default valuation

Before looking at how agreement proceeds, we must first understand case assignment to subjects. This is discussed in detail in section 5.2.2 but I give a basic description here. Transitive subjects of actives have either nominative or ergative case in finite clauses. The availability of ergative case is conditioned by perfective aspect. In section 2.3, I discussed how individual case-features are bundles of sub-features, and moreover, that these sub-features can each project their own KP. In most situations, the entire bundle is valued by a probe; however, in some circumstances, it may be possible that a probe can only value some sub-features, leaving other sub-features unvalued and active for Agree. I propose that Asp_{PFV} is a partial probe of this type. This means that in addition to Asp_{PFV}, T must also probe the subject to value remaining case sub-features. Asp_{IPFV} is not a case-assigning probe. Let us go through the derivations step-by-step, and see how case assignment and agreement fall out from this.

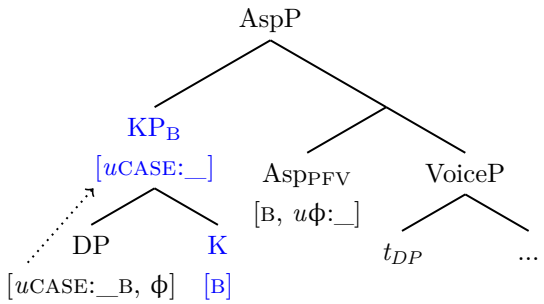
Starting with perfective clauses, Asp_{PFV} probes the subject and partially values its case-feature (64). The value assigned by Asp_{PFV} to a sub-feature is simply given as [B] (64).

(64)



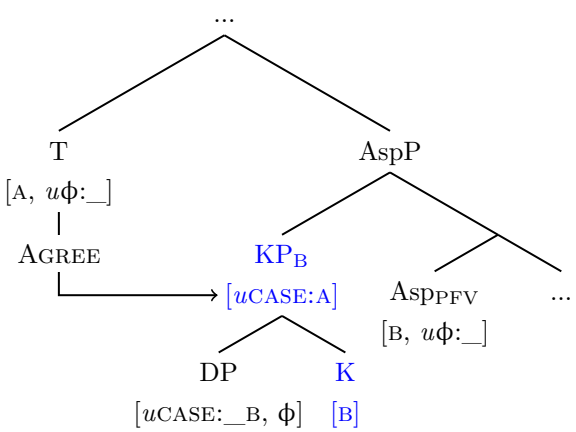
The subject then moves into Spec-AspP,[27] where K is inserted (shown in blue), projecting a KP layer (65). The subject's remaining unvalued case-features are copied to KP_B, leaving it active for further Agree. Details regarding the copying mechanism are given in section 5.2.2.

(65)



T then probes and Agrees with KP_B (66). The remaining sub-features are valued, encoded as [A], and the remaining unvalued case-feature within DP is valued via Feature-Sharing within the nominal projection. The subject then moves to Spec-TP (not shown). Since [A] essentially corresponds to nominative case (see below), no additional KP layer is projected.

(66)



However, despite Agreeing with the subject, T's ϕ-features are not valued. This is because KP_B blocks access to the DP inside. Despite T's ϕ-features not being valued, I consider this to be a successful instance of Agree, as per the definition in

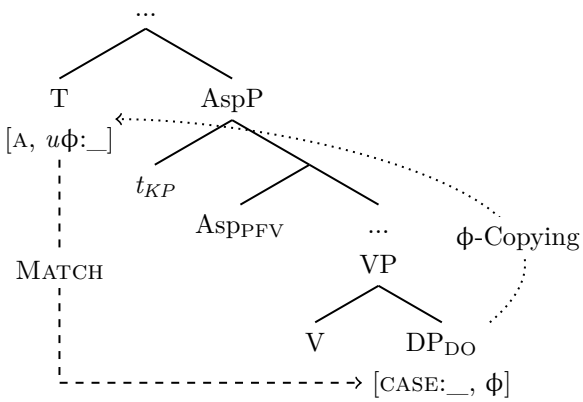
[27] See section 6.2.2 for discussion on movement and case assignment.

(67), discussed in section 2.3.1. The goal's case-feature has been valued by T, hence, Agree has been successful.

(67) Agree is successful if the probe finds the goal, and at least one of the probe or goal's features are valued by the other.

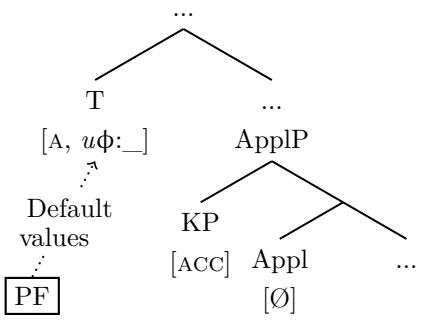
T continues to probe. In situations where the object's case-feature has not been valued as accusative by Voice, the object is a DP which is accessible to T. However, T cannot enter into Agree again, as it has already Agreed with the subject to assign ergative case. Hence, T only Matches with this object (68). This results in Feature-Copying from the object to T at PF, which is seen as object agreement.

(68) Object agreement:



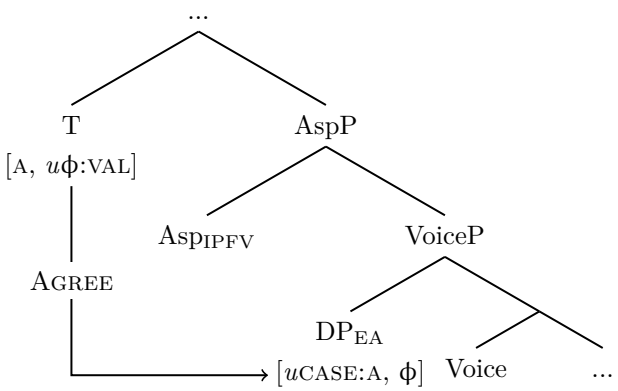
Where the object's case-feature has been valued as accusative by Voice, the object is a fully valued KP. T cannot Match with the DP inside. Since Match is necessary to identify the search space for Feature-Copying, when Match is not successful, no Feature-Copying takes place. Hence, default values are assigned to T at PF (69).

(69) Default agreement:



In imperfective contexts, Asp_{IPFV} does not assign case. This means that when T probes, it enters into Agree with a DP, and is able to access DP's ϕ-features to value its own, thus, resulting in subject agreement. T also values DP's case-feature as [A] or nominative.

(70) Subject agreement:



I have assumed that Multiple Agree is not possible. This is motivated by the contrast in behaviour of objects with ergative and other inherent case subjects (dative subjects and *by*-phrases). As we saw in section 3.6.2, unmarked objects in constructions with ergative subjects pattern with other objects, and not with nominative subjects. Objects of dative predicates (predicates that require dative subjects), on the other hand, pattern like nominative subjects. For example, they show resolved agreement in coordinated constructions (71).

(71) a. *Sana=ko* [*Omar aur Hira*] ***yaad*** ***aaey*** /
Sana=DAT [Omar.M and Hira.F].NOM memory come.PFV.M.PL /
****yaad*** ***aai.***
*memory come.PFV.F.SG

'Sana remembered/missed Omar and Hira.'

b. *Sana=ko* [*Hira aur Omar*] ***yaad*** ***aaey*** /
Sana=DAT [Hira.F and Omar.M].NOM memory come.PFV.M.PL /
****yaad*** ***aa-ya.***
*memory come.PFV.M.SG

'Sana remembered/missed Hira and Omar.'

I take dative case to be an inherent case assigned to experiencers (see details in section 5.3.2). T is not involved in assigning dative case, and therefore, is free to enter into Agree with the object in these constructions. The object receives nominative case from T. Object agreement is the result of Agree with T in these constructions, hence, resolved agreement is seen with coordinated phrases. In passives too, objects show resolved agreement like nominative subjects of actives (72). Once again, T does not enter into Agree with the EA here, as instrumental case is an inherent case assigned by non-active Voice (see Chapter 4). Therefore, T can Agree with the object, resulting in both nominative case assignment and object agreement.

(72) a. [*Omar* *aur* *Hira*] *(Rami=se)* ***pakR-e***
[Omar.M and Hira.F].NOM (Rami=INS) catch-PFV.M.PL
gaey / ****pakR-i*** ***gai***.
PASS.PFV.M.PL / *catch-PFV.F.SG PASS.PFV.F.PL

'Omar and Hira were caught (by Rami).'

b. [*Hira* *aur* *Omar*] *(Rami=se)* ***pakR-e***
[Hira.F and Omar.M].NOM (Rami=INS) catch-PFV.M.PL
gaey / ****pakR-a*** ***gya***.
PASS.PFV.M.PL / *catch-PFV.M.SG PASS.PFV.M.SG

'Hira and Omar were caught (by Rami).'

If Multiple Agree were possible, we would expect objects in ergative subject constructions, dative predicates and passives to behave in the same way, that is, as if they all had nominative case. However, this is not what we find. The current proposal accounts for this. T Agrees with ergative subjects, and since Multiple Agree is not possible, T cannot enter into Agree with another argument, despite its own ϕ-features being unvalued. Conversely, T does not Agree with dative subjects and instrumental *by*-phrases, and therefore, *can* Agree with the object and assign nominative case to it.

Finally, recall that incorporated objects can also trigger agreement (section 3.1.1). Ergative case assignment proceeds as detailed above. T Agrees with the subject, but this does not value T's ϕ-features as the subject is a KP at the point when T probes it. T continues probing, and Matches with the incorporated object. This is possible even though the object does not have an unvalued case-feature because Match is not sensitive to the Activity Condition the way Agree is. Agree requires probes/goals to have unvalued features to be active. This means that probes/goals *without* a given feature are inactive (a feature cannot be unvalued if it is not present at all). Because Match is not subject to Activity, goals without case-features can also enter into Match for their ϕ-features (although this will never lead to Agree). Feature-Copying results in agreement with the incorporated object.

(73) Agreement with incorporated objects:

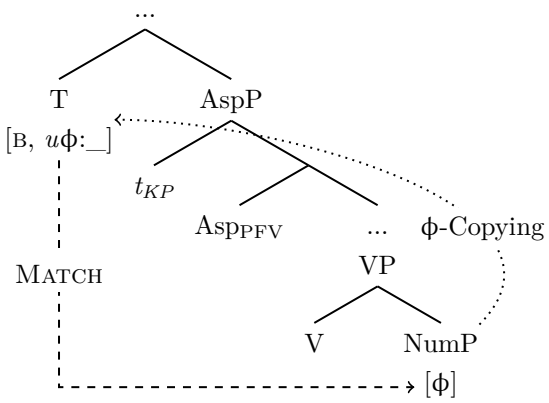


Table 3.2 summarises the different scenarios for agreement. Asp_{IPFV} is not a case-assigner. T probes a DP, whose ϕ-features are accessible to T, hence T's ϕ-features are valued via Agree, leading to subject agreement. In perfective contexts, Asp_{PFV} is a partial probe, which results in a KP layer being projected on top of DP_{EA}. T Agrees with this KP (active due to the partially unvalued case-feature) and values its case-feature, but is not able to access DP_{EA}'s ϕ-features to value its own unvalued ϕ-features. Thus, T continues probing. If the object does not have a valued case-feature (i.e. it is not a KP), T Matches with it, but having already Agreed with the subject, it cannot Agree again. As a result, T's ϕ-features are valued via Feature-Copying of the object's ϕ-features at PF, leading to object agreement. If the object has already received case, it is a KP and cannot be accessed for Match. Feature-Copying cannot take place, and so T's ϕ-features are given default values at PF, resulting in default agreement.

Subject agreement	i.	$Asp_{IPFV} \neq$ case-assigner
	ii.	T Agrees with DP_{EA}
	iii.	$u\phi =$ VAL (via Agree)
Object agreement	i.	Asp_{PFV} = partial probe $\rightarrow$ KP
	ii.	T Agrees with KP ($u\phi \neq$ VAL)
	iii.	T Matches with $DP/NumP_{DO}$
	iv.	$u\phi =$ VAL (via Feature-Copying)
Default agreement	i.	As in object agreement
	ii.	As in object agreement
	iii.	T cannot Match KP_{DO}
	iv.	$u\phi =$ VAL (via Default Valuation)

Table 3.2: Summary of agreement derivations in Urdu.

Under this analysis, agreement with T and case assignment by T do not always go hand-in-hand, as has already been noted for Hindi-Urdu by Bhatt (2005) and Bhatt & Walkow (2013). There are multiple ways of valuing T's features, hence, agreement is not always with the argument T assigns case to. Agreement is case-

sensitive, in the sense that case-marking is a spell-out of K heads and that KPs act as phases, blocking access to the ϕ-features of the DP inside. Bobaljik (2008) also argues for the case-sensitivity of agreement, which he calls *case-discrimination*. Following dependent case theory, he takes case to be assigned at Spell-Out, and uses the case-discriminatory nature of agreement to argue that agreement is also post-syntactic. However, taking *all* agreement to be post-syntactic cannot derive the asymmetries in agreement in Urdu. These asymmetries show clearly that there are two different processes at work, syntactic Agree and post-syntactic Feature-Copying, both of which lead to agreement but with slight differences. Moreover, because agreement *is* case-sensitive and at least some agreement takes place in syntax, case assignment too must take place in syntax, providing an argument against dependent case theory.

3.7 Dative Intervention

In several DOM languages, accusative case cannot be assigned to the direct object (DO) in the presence of the indirect object (IO) (e.g. Spanish; Bárány, 2018). This has also been noted for Hindi-Urdu (ex.24a, repeated) (Mohanan, 1994: pp.85–86; Bhatt & Anagnostopoulou, 1996; Bárány, 2018).[28] I refer to this as *dative intervention*.[29]

(24a) *Ram=ne* *Anita=ko* ***chiTThi*** *bHej-i.*
Ram=ERG Anita=DAT letter send-PFV.F.SG
'Ram sent the letter to Anita.' (Bhatt & Anagnostopoulou, 1996: p.17)

In languages with such dative intervention, it is often the case that DOM or accusative case is syncretic with dative case (Bossong, 1991). As mentioned earlier, accusative-dative syncretism is also found in Urdu (74).

(74) a. *mein=ne* *aurat**=ko*** *dekH-a.*
1SG=ERG woman=ACC see-PFV.M.SG
'I saw the woman.'

[28] For Bhatt & Anagnostopoulou (1996), accusative case is possible with dative indirect objects if the object moves over the IO, as discussed in section 3.3 (ex.24).

[29] The term *(defective) dative intervention* is generally used to refer to intervention by a dative argument in agreement with a lower argument that would otherwise control agreement, as defined by Chomsky (2000: p.123). In my analysis, the dative argument does not formally intervene in accusative case assignment, but rather bleeds the necessary subsequent movement of accusative objects.

b. *mein=ne aurat=**ko** kitaab dii.*
1SG=ERG woman=DAT book give.PFV.F.SG

'I gave the woman the book.'

There have been two major approaches to explaining the syncretism which have in turn fed analyses of dative intervention. Under syntactic approaches to accusative-dative syncretism, the two cases share form because they are in fact the same case. In Agree-based approaches to case assignment, the functional head responsible for assigning this case (usually Appl) will only be able to do so once. Since the IO is higher, it is probed first and is case-marked as a result. An analysis along these lines has been proposed for Hindi by Kalin (2014: pp.173–78). In dependent case approaches, assuming accusative/dative case assignment follows the rule in (75), it can be further specified that if there are two XPs such that ZP c-commands them, the higher XP will be assigned Case Y. This ensures that the IO receives case-marking in ditransitives while the DO receives default case.

(75) If XP is c-commanded by ZP in TP, then assign Case Y (accusative) to XP.
(Baker, 2015: p.131)

Agarwal (2022: Ch.3–4) accounts for dative intervention in Hindi-Urdu using a dependent case model.

The second approach to the accusative-dative syncretism is morphological. Under these approaches, the syncretism follows from shared sub-features of accusative and dative case which cause them to be spelled out as the same exponents. Keine (2007) and Bárány (2018) provide analyses of accusative-dative syncretism in Hindi as the result of shared sub-features, which they also use to account for dative intervention.

In the model of case adopted in this dissertation, such shared sub-features would also be represented in syntax, and require probing by case-assigning functional heads. Since the dative IO is higher than the DO, the IO would be probed first, thus intervening in probing of the DO, preventing accusative case assignment to it. The challenge here is that IOs receive inherent dative case, and should be inactive for further probing, as per Chomsky's (2000: p.123) Activity Condition. The IO acts as a *defective intervener* (Chomsky, 2000: pp.123–25; Preminger, 2014: Ch.8).

I begin by describing the properties and distribution of two types of dative IOs, experiencers and recipients, and establishing their structural position (section 3.7.1). In section 3.7.2, I describe the dative intervention pattern in detail, and propose that dative intervention arises due to bleeding of object shift. Hence, DOs with valued case-features cannot move out of VP as required. In section 3.7.3, I extend this analysis to other IOs, namely instrumental sources, which do not intervene in

accusative case assignment. I show that sources are PPs, which allows them to remain inside VP, thereby precluding competition for movement with accusative DOs.

3.7.1 Dative indirect objects

The base word order in ditransitives is S-IO-DO-V (Mahajan, 1990: pp.19–20; A. Kidwai, 2000: p.3). The IO may be either an experiencer/beneficiary (76a) or a recipient/goal (76b), and is marked with *-ko*, which I call dative case (see below).

(76) a. *Rami=ne* ***Omar=ko*** *kitaab dikH-a-i.*
Rami=ERG Omar=DAT book see-CAUS-PFV.F.SG

'Rami showed Omar a/the book.'

b. *Rami=ne* ***Omar=ko*** *kitaab dii.*
Rami=ERG Omar=DAT book give.PFV.F.SG

'Rami gave Omar a/the book.'

As is common cross-linguistically, dative IOs are almost always human. For example, while an inanimate location may be an IO, it cannot have dative case (77).

(77) *Ram=ne* ***dilli(*=ko)*** *kitaab bHej-i.*
Ram=ERG Delhi(*=DAT) book send-PFV.F.SG

'Ram sent a/the book to Delhi.' (Malhotra, 2014: p.134)

Malhotra (2014) shows that locative goals are in a lower structural position than dative IOs (Spec-VP vs. Spec-ApplP; see below for the position of dative IOs). The fact that locative goals are in a different position than dative IOs is supported by the fact that both may appear together (78).

(78) *Ram=ne* ***Sita=ko*** ***dilli*** *khat bHej-a.*
Ram=ERG Sita=DAT Delhi.LOC letter send-PFV.M.SG

'Ram sent Sita a letter to Delhi.' (adapted from Malhotra, 2014: p.137)

Non-human dative IOs are possible in some exceptional circumstances (79). Such sentences usually have an idiomatic meaning, in that the verb is not used literally, or the IO is personified.

(79) *Rami=ne* ***gHar=ko*** *dihaan / tohfay di-ya.*
Rami=ERG house=DAT attention / presents give-PFV.M.SG

'Rami gave attention/presents to the house.'

Despite their homophony, dative case on IOs differs from accusative case on DOs (Mohanan, 1994: pp.91–101; Butt & King, 2004: pp.161–62; Bárány, 2018; Montaut, 2018; S. Kidwai, 2019: §5 – contra Kachru, 1980; Mahajan, 1990; Davison, 2004a,b).[30, 31] Firstly, as discussed earlier in this chapter, accusative case is governed by DOM conditions and is optional on many types of DOs. Dative case, on the other hand, is always obligatory, even if the IO is inanimate (80).

(80) *Rami=ne* ***gHar*(=ko)*** *dihaan / tohfay di-ya.*
Rami=ERG house*(=DAT) attention / presents give-PFV.M.SG

'Rami gave attention/presents to the house.'

Secondly, dative case behaves like an inherent case, while accusative case behaves like a structural case. Woolford (2006) identifies several diagnostics for differentiating inherent and structural cases. One test comes from A-movement, such as passivisation. Inherent cases are assigned to arguments First-Merged in θ-positions, which are c-selected as KPs in my model (section 2.3.1). Consequently, inherent case is unaffected by A-movement. On the other hand, structural cases depend on c-command relationships between functional heads and arguments, which may be changed by A-movement. In Urdu, accusative case is affected by passivisation: human proper names which are obligatorily marked in actives are optionally marked in passives (81a vs. b).[32] Conversely, dative case behaves the same way in actives and passives, and is obligatory in both (80, 82).

[30] Davison (2004a,b) distinguishes between structural and inherent dative case, where the former is assigned to DOs and the latter to IOs and experiencer subjects. In practice, this is the same as calling 'structural dative' accusative, and 'inherent dative' simply dative.

[31] Montaut (2018) discusses the diachronic development of DOM in Indo-Aryan languages, including Hindi-Urdu, in detail. She reports that accusative uses of *-ko* are derived from dative uses, and that from the earliest stages of accusative case, dative and accusative uses of *-ko* never co-occur. This suggests that dative intervention may have at least originated from the fact that dative and accusative case were the same diachronically, even though they are not the same case synchronically.

[32] More accurately, accusative case on objects, including those which are obligatorily marked in actives, is always lost in passives (as is common cross-linguistically; see Perlmutter, 1978; Chomsky, 1981; Burzio, 1986: pp.178–88; Jaeggli, 1986; Baker et al., 1989). In section 4.2, I show that the passive-like structure with accusative case in (81b) is underlyingly active, and that true passives never have accusative objects.

(81) a. *Rami=ne* ***Omar*(=ko)*** *pakR-a.* (active)
Rami=ERG Omar*(=ACC) catch-PFV.M.SG

'Rami caught Omar.'

b. ***Omar(=ko)*** *pakR-a* *gya.* (passive)
Omar(=ACC) catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught.'

(82) ***Omar*(=ko)*** *kitaab* *di* *gai.*
Omar*(=DAT) book give.PFV.F.SG PASS.PFV.F.SG

'Omar was given a/the book.'

The clear differences in the syntactic behaviour of accusative and dative case show that they cannot be reduced to one case. Thus, dative case is characterised as an inherent case associated with experiencers and recipients (Mohanan, 1994: pp.65–66; Butt & King, 2004: p.162).

Malhotra (2014) shows that dative IOs not only precede DOs in linear order, but are also structurally higher (contra A. Kidwai, 2000: pp.67–79). Evidence for this comes from binding and scope relations.[33] Experiencers and recipients are able to bind pronouns in DOs, but not vice versa (83, 84).

(83) a. *Rami=ne* ***Omar$_i$=ko*** ***us$_i$=ki*** *kitaab* *dikH-a-i.*
Rami=ERG Omar$_i$=DAT 3SG$_i$=GEN book see-CAUS-PFV.F.SG

'Rami showed Omar$_i$ his$_i$ book.'

b. *Rami=ne* ***us$_{*i/j}$=ko*** ***Omar$_i$=ki*** *kitaab* *dikH-a-i.*
Rami=ERG 3SG$_{*i/j}$=DAT Omar$_i$=GEN book see-CAUS-PFV.F.SG

'Rami showed Omar$_i$ his$_{*i/j}$ book.'

(84) a. *mein=ne* ***Ram$_i$=ko*** [***us$_i$=ki*** *kitaab*] *dii.*
1SG=ERG Ram$_i$=DAT [3SG$_i$=GEN book] give.PFV.F.SG

'I gave Ram$_i$ his$_i$ book.'

[33]The validity of binding and scope as c-command diagnostics for Hindi-Urdu is questionable, as they are sensitive to surface word order and influenced by factors such as scrambling (thanks to Rajesh Bhatt for bringing this to my attention). Consequently, they may not be informative of deep structure in the way one wants. However, in the absence of better tests, I have continued to use these tests as used by A. Kidwai (2000) and Malhotra (2014) in their study of Hindi-Urdu ditransitives.

b. *mein=ne* ***us$_{*i/j}$=ko*** [***Ram$_i$=ki*** *kitaab*] *dii.*
1SG=ERG 3SG$_{*i/j}$=DAT [Ram$_i$=GEN book] give.PFV.F.SG

'I gave him$_{*i/j}$ Ram's$_i$ book.' (A. Kidwai, 2000: p.77)

Similarly, quantifiers in experiencer or recipient IOs take scope over quantifiers in the DO (85). Inverse scope is not possible.

(85) a. *Rami=ne* ***kisi=ko*** ***har*** ***khat*** *dikH-a-ya.*
Rami=ERG someone=DAT every letter see-CAUS-PFV.M.SG

'Ram showed someone every letter.' (some > every, *every > some)

b. *Ram=ne* ***kisi=ko*** ***har*** ***khat*** *bHej-a.*
Ram=ERG someone=DAT every letter send-PFV.M.SG

'Ram sent someone every letter.' (some > every, *every > some)
(adapted from Malhotra, 2014: p.138)

Malhotra also provides evidence from promotion in inchoatives. Some ditransitive verbs have inchoative forms. The external argument is not projected in the inchoative. Instead, one of the internal arguments is promoted to subject. In inchoatives of ditransitives with experiencer or recipient IOs, it is the IO which is promoted.[34] This can be illustrated using anaphor binding. Anaphor binding is a subject property which IOs generally do not exhibit, as shown in (86a, 87a). In the inchoative, the IO can bind anaphors (86b, 87b), showing that it has been promoted.[35]

(86) a. *Rami$_i$=ne* ***Omar$_j$=ko*** ***apni$_{i/*j}$*** *kitaab* *dikH-a-i.* (ditransitive)
Rami$_i$=ERG Omar$_j$=DAT REFL$_{i/*j}$ book see-CAUS-PFV.F.SG

'Rami$_i$ showed Omar$_j$ his$_{i/*j}$ own book.'

b. ***Omar$_j$=ko*** ***apni$_j$*** *kitaab* *dikH-i.* (inchoative)
Omar$_j$=DAT REFL$_j$ book see-PFV.F.SG

'Omar$_j$ saw his$_j$ own book.'

[34]Here, promotion does not mean movement to subject position. In Chapter 5, I show that only arguments which Agree with T move to Spec-TP. Dative IOs do not Agree with T, hence cannot move to Spec-TP (similar to experiencer subjects of dative predicates, see section 5.3). Instead, the IO is only promoted in the sense that it is the highest argument in the absence of the EA, and so shows subject properties which are tied to relative height and not specific structural position (e.g. anaphor binding, ex.86b, 87b). It does not show subject properties associated with Spec-TP (e.g. pronoun obviation). The same applies to promotion in passives, discussed below.

[35]The translations of inchoatives in in (86b) and (87b) are given as causatives. It should be noted that the inchoative differs structurally from causatives both with regards to the form of the verbal stem (intransitive vs. transitive), and the case of the subject (dative vs. ergative).

(87) a. *Rami$_i$=ne* ***Omar$_j$=ko apni$_{i/*j}$*** *kitaab bHej-i.* (ditransitive)
Rami$_i$=ERG Omar$_j$=DAT REFL$_{i/*j}$ book send-PFV.F.SG

'Rami$_i$ sent Omar$_j$ his$_{i/*j}$ own book.'

b. ***Omar$_j$=ko apni$_j$*** *kitaab mil-i.* (inchoative)
Omar$_j$=DAT REFL$_j$ book meet-PFV.F.SG

'Omar$_j$ received his$_j$ own book.'

A similar pattern is seen in passives of ditransitives, where the dative IO once again shows anaphor binding (88).

(88) a. ***Omar$_j$=ko apni$_j$*** *kitaab dikH-a-i* *gai.*
Omar$_j$=DAT REFL$_j$ book see-CAUS-PFV.F.SG PASS.PFV.F.SG

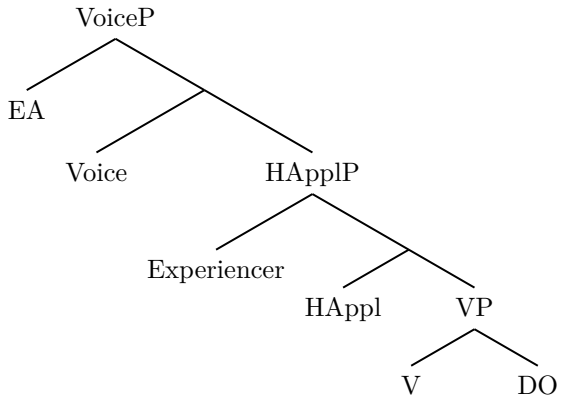
'Omar$_j$ was shown his$_j$ own book.'

b. ***Omar$_j$=ko apni$_j$*** *kitaab bHej-i* *gai.*
Omar$_j$=DAT REFL$_j$ book send.PFV.F.SG PASS.PFV.M.SG

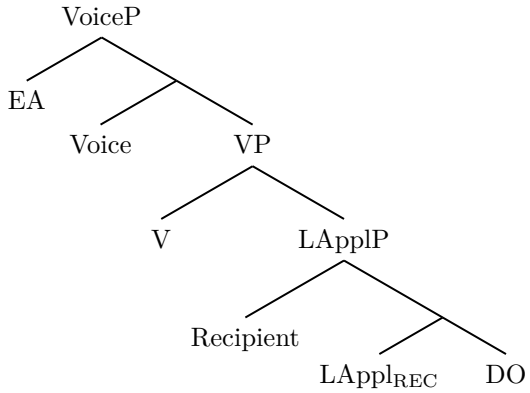
'Omar$_j$ was sent his$_j$ own book.'

Following a long line of literature (Marantz, 1993; Ura, 1996; McGinnis, 2001, 2008; Pylkkänen, 2002, 2008: Ch.2; Anagnostopoulou, 2003; Cuervo, 2003, 2020), including Malhotra's (2014) analysis for Hindi ditransitives, I assume that IOs are introduced in the specifier of an applicative head. Pylkkänen (2002, 2008: Ch.2) differentiates high and low applicatives. High applicatives denote a relation between an event and an individual, and are found outside the VP but below the base position of the EA. Conversely, low applicatives denote a relationship between two individuals, and are found in the complement of VP. Both the IO and DO are introduced inside the low applicative phrase. Based on their respective semantic interpretations, Malhotra proposes that experiencers are introduced by a high applicative head, HAppl, in Hindi (89a), while recipients are introduced by a low applicative head, LAppl, (89b). I assume the same for Urdu. As we shall see in section 3.7.3.2, Urdu also has another low applicative head, which introduces source IOs. Hence, I label the LAppl which introduces recipients as LAppl$_{\text{REC}}$.

(89) a.



b.



3.7.2 Analysis for dative intervention

Both experiencers and recipients intervene in accusative case assignment (90).

(90) a. *Rami=ne* *Omar=ko* ***kitaab(*=ko)*** *dikH-a-i.*
Rami=ERG Omar=DAT book(*=ACC) see-CAUS-PFV.F.SG

'Rami showed Omar the book.'

b. *Rami=ne* *Omar=ko* ***kitaab(*=ko)*** *dii.*
Rami=ERG Omar=DAT book(*=ACC) give.PFV.F.SG

'Rami gave Omar the book.'

As mentioned in section 3.3, Bhatt & Anagnostopoulou (1996) report that scrambling the DO over the IO makes accusative case possible in Hindi (ex.24, repeated). Scrambling does not make accusative case available in the Urdu dialect reported here (91).

(24) a. *Ram=ne* *Anita=ko* ***chiTThi*** *bHej-i.*
Ram=ERG Anita=DAT letter send-PFV.F.SG

'Ram sent the letter to Anita.'

b. *Ram=ne* ***chiTThi=ko***$_i$ *Anita=ko* ***t***$_i$ *bHej-a.*
Ram=ERG letter=ACC$_i$ Anita=DAT t_i send-PFV.M.SG

'Ram sent the letter to Anita.'

(Bhatt & Anagnostopoulou, 1996: p.17)

(91) a. *Rami=ne* ***kitaab(*=ko)*** *Omar=ko* *dikH-a-i.*
Rami=ERG book(*=ACC) Omar=DAT see-CAUS-PFV.F.SG

'Rami showed Omar the book.'

b. *Rami=ne* ***kitaab(*=ko)*** *Omar=ko* *dii.*
Rami=ERG book(*=ACC) Omar=DAT give.PFV.F.SG

'Rami gave Omar the book.'

Mohanan (1994: p.85, fn.37) notes that dative intervention in Urdu is not simply due to adjacency of identical elements. She gives the example in (92) where the IO and DO are separated with an adverbial PP, yet accusative case on the DO remains ungrammatical.

(92) *Ila=ne* ***maa=ko*** *das din=ke* *baad* *bachcha* / ****bachchay=ko***
Ile=ERG mother=DAT ten days=GEN after child / *child=ACC
di-ya.
give-PFV.M.SG

'Ila gave a/the child to the mother after ten days.'

(Mohanan, 1994: p.85, fn.37)

Separating the IO and DO through movement also does not prevent intervention (contra A. Kidwai, 2000: pp.79–80). In (93), the IO is topicalised. It moves to sentence-initial position and is marked with the topic marker. The DO still cannot receive accusative case.

(93) ***Omar=ko***=*to* *Rami=ne* ***kitaab(*=ko)*** *dii.*
Omar=DAT=TOP Rami=ERG book(*=ACC) give.PFV.F.SG

'To Omar, Rami gave the book.'

Note that it is not the case that accusative case assignment is never possible in ditransitives. As we shall see in section 3.7.3, source IOs do not intervene in accusative case assignment. Similarly, PP-goals also do not intervene in accusative case assignment (94). The availability of accusative case in such cases is discussed in section 3.7.3.3.

(94) *Rami=ne* ***bachon=ko*** [$_{PP}$ *Omar=ke* *paas*] *bHej-a.*
Rami=ERG children=ACC [PP Omar=GEN near] send-PFV.M.SG
'Rami sent the kids to Omar.'

As discussed in section 3.7.1, under syntactic approaches to the accusative-dative syncretism, accusative and dative case are one and the same, assigned to the same structural position or in the same structural configuration. Since each case can only be assigned once in a given clause, only one instance of accusative/dative case is found. However, as we saw, accusative case on DOs and dative case on IOs show categorically different behaviour in Urdu, and cannot be conflated as one case, making such accounts unviable.

A common approach to dative intervention is to propose that dative IOs are *defective interveners* (Chomsky, 2000: pp.123–25; Preminger, 2014: Ch.8). Defective intervention occurs when, in a configuration like (95), where > indicates c-command, both β and ɣ match the features of the probe, α, and β being higher prevents α from probing ɣ, despite β itself being inactive for Agree.

(95) $\alpha > \beta > \gamma$ (Chomsky, 2000: p.123)

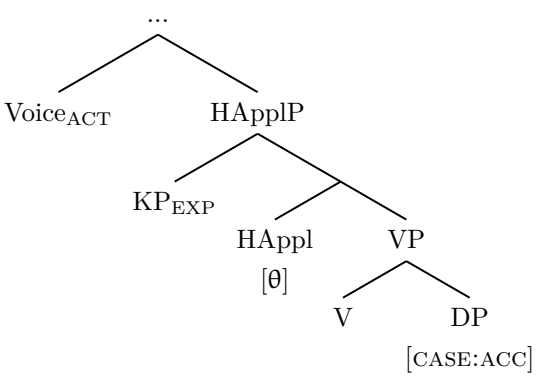
In the context of dative intervention in accusative case assignment, Voice, the IO and the DO are α, β and ɣ, respectively. The IO receives dative case from Appl, making it inactive for further probing, yet prevents Voice from probing the DO and assigning accusative case to it. The challenge for such approaches of course is to explain why an inactive goal should intervene.

Instead, I propose that dative intervention occurs in Urdu because the presence of a dative IO bleeds object shift. The cause of bleeding, however, differs for the two types of dative objects. Experiencers, as we saw in section 3.7.1, are introduced in Spec-HApplP. This HAppl is thematic, that is, it introduces an argument, in contrast to non-thematic HAppl, which does not introduce an argument, but whose specifier is the landing site for object shift, as we saw in section 3.3.[36] These variants of HAppl presumably alternate in the same way that variants of Voice, T or any other functional head do. When there is an experiencer present, the thematic variant of HAppl has been selected, and not the non-thematic variant of HAppl. As a result, there is no landing site for OS, and the DO cannot move out of VP. If the DO were to have its case-feature valued in this configuration, the resulting valued case-feature would be forced to remain inside VP. This is shown in (96). Crucially, multiple

[36]The Spec-ApplP identified in section 3.3 must be Spec-HApplP and not Spec-LApplP, because movement to Spec-LApplP would not constitute movement out of VP (assuming, as I did in section 3.7.1, that LApplP is inside VP as proposed by Pylkkänen, 2002, 2008: Ch.2), thus, leaving the KP inside VP and defeating the purpose of object shift.

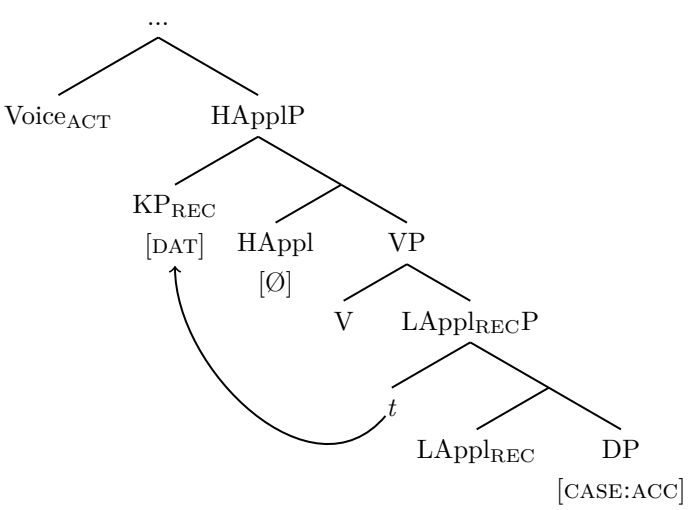
specifiers of HAppl are not possible – if multiple specifiers were possible, we would see the same pattern in Urdu as in Hindi, that is, the case-marked DO would move over the IO to a second specifier of HAppl and escape VP (ex.24 above; Bhatt & Anagnostopoulou, 1996).

(96) *



On the other hand, recipients are introduced in Spec-LApplP. Now, the non-thematic variant of HAppl can be selected,[37] which will project the landing site for OS. However, in this case, the dative IO and accusative DO are in competition to move out of VP, as they both have valued case-features. Being closer to the landing site, the dative IO will win (97). Moving the DO over the IO in this case will violate Relativised Minimality (Rizzi, 1990).

(97)



With both types of dative IOs, the DO cannot undergo object shift. Even if the DO's case-feature is valued, it will be forced to remain inside VP. Since valued case-features cannot remain inside VP, the derivation will not converge. Consequently, DOs with dative IOs can only have unvalued case-features. The prediction then is

[37] In fact, it seems that only non-thematic HAppl is possible with LAppl, as dative experiencers never co-occur with lower applicative arguments, including both recipients and sources (see section 3.7.3 on the structural position of sources). This is despite the fact that recipients and sources may occur together (see section 3.7.3, ex.107). The distribution of thematic/non-thematic HAppl bears further investigation.

that nominals with uninterpretable case-features which must be valued (i.e. human objects) cannot occur as DOs in ditransitives, as their unvalued uninterpretable case-feature would cause a derivational crash. This is borne out. Human objects are only possible in ditransitives if they have been incorporated, as indicated by their functional (98) or collective reference (99) in these uses.[38] Unincorporated human objects are ungrammatical (100)

(98) a. *Rami=ne Omar=ko* ***laRkiyan*** *dikH-a-iin.*
Rami=ERG Omar=DAT girls see-CAUS-PFV.F.PL

'Rami showed potential brides to Omar.' (≠ 'Rami showed girls to Omar.')

b. *Rami=ne Omar=ko* ***maali*** *bHej-ay.*
Rami=ERG Omar=DAT gardeners send-PFV.M.PL

'Rami sent Omar gardeners.' (≠ Rami sent the gardeners to Omar.')

(99) *Rami=ne Omar=ko* ***log*** *dikH-a-ey.*
Rami=ERG book=ACC Omar=DAT see-CAUS-PFV.M.PL

'Rami showed people to Omar.'

(100) a. * *Rami=ne Omar=ko* ***Hira*** *dikH-a-i.*
Rami=ERG Omar=DAT Hira see-CAUS-PFV.F.SG

Intended: 'Rami showed Hira to Omar.'

b. * *Rami=ne Omar=ko* ***Hira*** *bHej-i.*
Rami=ERG Omar=DAT Hira send-PFV.F.SG

Intended: 'Rami sent Hira to Omar.'

Let us now see how this proposal can be extended to other IOs, namely sources, which do not intervene in accusative case assignment.

3.7.3 Instrumental indirect objects

3.7.3.1 Distribution and argument status

Source IOs are marked with instrumental case. Just like dative IOs, they precede DOs in linear order.

[38] Similar observations regarding animate DOs with dative IOs have been made for Spanish by Ormazabal & Romero (2013: p.224), who note that animate DOs must be 'deanimated' to be acceptable with dative IOs (p.224).

(101) *Rami=ne* ***Omar=se*** / ***library=se*** *kitaab lii.*
Rami=ERG Omar=INS / library=INS book take.PFV.F.SG

'Rami took a/the book from Omar/the library.'

I define *sources* as expressions which attribute a starting point to the DO. In this sense, sources are 'opposites' of recipients which specify an end point for the DO. Instrumental expressions which attribute a location from which the EA performs the action, as in (102), are not considered to be sources.[39]

(102) *Rami=ne* ***chHat=se*** *fireworks dekH-ay.*
Rami=ERG rooftop=INS fireworks see.CAUS-PFV.M.SG

'Rami saw fireworks from the rooftop.'

Although sources are accepted as IOs in the wider literature (e.g. Pylkkänen, 2002, 2008: Ch.2), they have not previously been included in discussions on Urdu ditransitives, and consequently, dative intervention. This may be because there is a tendency to analyse instrumental expressions in Hindi-Urdu as adjuncts. For example, Ramchand (2014) proposes that all uses of instrumental case can be unified as modifiers at different levels of event structure. While some evidence in favour of adjuncthood has been proposed for other uses of instrumental cases, such as *by*-phrases,[40] causees and instruments (Ramchand, 2014; S. Bhatia, 2016; Bhatt & Embick, 2017), no such evidence has been presented for sources, to my knowledge.

There are several reasons to believe sources are arguments. The first piece of evidence comes from selection. Verbs select for arguments but not for modifiers. There are no verbs that must have modifiers or cannot have modifiers at all;[41] the only restriction is that modifiers must be semantically compatible with the meaning of the verb itself. Instrumental sources are selected for, showing that they are arguments, not adjuncts. For example, some verbs, such as *le-na* 'to take', must always have a source argument. The sentence in (103) is ungrammatical without the source.

(103) *Rami=ne* ****(Omar=se)*** *kitaabein li-in.*
Rami=ERG *(Omar=INS) books take-PFV.F.PL

'Rami took the books from Omar.'

[39] There is some grey area with verbs-of-motion, as the instrumental expression specifies both the location from which the subject performed the action and the starting point of the object (e.g. *Rami=ne* ***garden=se*** *ball pHenki* 'Rami threw a ball **from the garden**').

[40] In section 4.1.3, I argue against an adjunct analysis of *by*-phrases, and show that they are arguments.

[41] English middles may be potential counterexamples, as they seem to require adverbs (e.g. *This book is selling well*).

On the other hand, some verbs are unable to take a source, even when it is semantically conceivable in the event structure. For example, while the verb *jaag-na* 'to wake up' can form a ditransitive with the state *so-te* 'be sleeping' as a stative source (104a), its antonym *so-na* 'to sleep' cannot form a ditransitive with the state *jaag-te* 'be awake' as a source (104b). This is despite the intended meaning of (104b) being perfectly comprehensible.

(104) a. *Rami=ne* *Omar=ko* ***so-te=se*** *jag-a-ya.*
Rami=ERG Omar=ACC sleep-IPFV=INS awake-CAUS-PFV.M.SG
'Rami woke up Omar from [a state of] sleeping.'

b. * *Rami=ne* *Omar=ko* ***jaag-te=se*** *sul-a-ya.*
Rami=ERG Omar=ACC awake-IPFV=INS sleep-CAUS-PFV.M.SG
Intended: 'Rami put Omar to sleep from [a state of being] awake.'

The second piece of evidence for the argumenthood of sources comes from word order. As mentioned, the base word order in Urdu is S-IO-DO-V. Adjuncts precede both IOs and DOs (105).[42]

(105) *Rami=ne* ***jaldi=se*** *Omar=ko* *ball* *pHenk-i.*
S Adv IO DO V
Rami=ERG quickly=INS Omar=DAT ball throw-PFV.F.SG
'Rami quickly threw the ball to Omar.'

(106) WORD ORDER:
Subject – Adjunct – Indirect Object – Direct Object – Verb

Since both IOs and adjuncts precede DOs in the unmarked word order (106), the position of sources relative to DOs is uninformative. Instead, we must look at the interaction between sources and known IOs, such as dative recipients. Some verbs in Urdu can take both recipient and source arguments together. In such cases, the source most naturally follows the recipient, as in (107), unlike adjuncts which precede the recipient, as in (105) above.

(107) *Rami=ne* ***Omar=ko*** ***chHat=se*** *ball* *pHenk-i.*
S Rec Src DO V
Rami=ERG Omar=DAT rooftop=INS ball throw-PFV.F.SG
'Rami threw the ball to Omar from the rooftop.'

[42]Other word orders are also possible due to scrambling. The one shown in (105) is the most natural or default word order.

Finally, I would like to counter an argument in favour of an adjunct analysis of sources. In some cases, sources seem to be optional (108), a typical characteristic of modifiers. Importantly, note that dative IOs also seem to be optional with some verbs (109).

(108) *Rami=ne* ***(chHat=se)*** *ball pHenk-i.*
Rami=ERG (rooftop=INS) ball throw-PFV.F.SG

'Rami threw the ball (from the rooftop).'

(109) *Rami=ne* ***(Omar=ko)*** *ball pHenk-i.*
Rami=ERG (Omar=DAT) ball throw-PFV.F.SG

'Rami threw the ball (to Omar).'

I propose that the seeming optionality of sources is in fact an alternation between transitive and ditransitive structures. With the exception of ingestives, ditransitives tend to share form with transitives, as shown in Table 3.3.

Stem Gloss	**Intransitive**	**Transitive**	**Ditransitive**
run	*bHaag-na*	*bHag-a-na*	*bHag-a-na*
get/take out	*nikal-na*	*nikaal-na*	*nikaal-na*
move	*haT-na*	*haT-a-na*	*haT-a-na*
arrive	*puhanch-na*	*puhnch-a-na*	*puhnch-a-na*
write	–	*likH-na*	*likH-na*
throw	–	*pHenk-na*	*pHenk-na*

Table 3.3: Ditransitive verb forms.

Given that the verb forms in (108, 109) are ambiguous, these examples can be considered as alternations between transitive and ditransitive structures. The versions of (108) and (109) without an IO have a transitive structure: the relevant applicative head is not projected, hence, no IO is introduced. Conversely, the versions with an IO have a ditransitive structure: there is an applicative head present which introduces the IO.

This analysis is nicely supported by two additional facts (p.c. Rajesh Bhatt). Firstly, when these verbs occur with a single object, that object can only be interpreted as the DO, and not as the IO (110). This is to be expected if there is a structure available which does not project the IO, but no structure available which does not project the DO.

(110) *Rami=ne* ***bachche=ko*** *pHenk-a.*
Rami=ERG child=ACC throw-PFV.M.SG

'Rami threw the child.'
≠ 'Rami threw <something> to the child.'

Secondly, as also shown by (110), when there is no IO, the DO can be human and receive accusative case. This is not possible when there is an IO present ((111)). This is expected if the necessary movement of DOs after accusative case assignment is prevented by dative IOs, as argued in section 3.7.2, and if the dative IO is not projected in sentences like (110).

(111) * *Rami=ne* *Omar=ko* ***bachche=ko*** *pHenk-a.*
Rami=ERG Omar=DAT child=ACC throw-PFV.M.SG

'Rami threw the child to Omar.'

Therefore, neither sources nor recipients are optional, and are introduced whenever the applicative head is present.

3.7.3.2 Structural position and PP-status

Like dative IOs, we can show that sources are structurally higher than DOs through binding and scope relations. Sources are able to bind pronouns in the DO, but not vice versa (112). Note that the English translations may be misleading as to the correct binding relations in the Urdu sentence, since DOs in English are structurally higher than sources leading to opposite c-command relationships.

(112) a. *Rami=ne* ***Omar$_i$=se*** ***us$_i$=ki*** *kitaab lii.*
Rami=ERG Omar$_i$=INS 3SG$_i$=GEN book take.PFV.F.SG

'Rami took his$_i$ [Omar's] book from Omar$_i$.'

b. *Rami=ne* ***us$_{*i/j}$=se*** ***Omar$_{*i/j}$=ki*** *kitaab lii.*
Rami=ERG 3SG$_{*i/j}$=INS Omar$_i$=GEN book take.PFV.F.SG

'Rami took Omar$_{*i/j}$'s book from him$_{*i/j}$.'

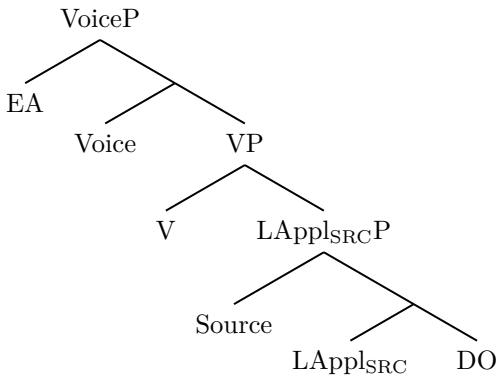
Likewise, quantifiers in sources take scope over quantifiers in the DO (113). The reverse is not possible.

(113) *Rami=ne* ***kisi=se*** ***har*** ***kitaab*** *lii.*
Rami=ERG someone=INS every book take.PFV.F.SG

'Rami took every book from someone.' (some > every, *every > some)

I take sources to be introduced by an applicative head. Like recipients, sources stand in a possession relation with the DO, with the only difference being the direction of possession. Dative IOs are in a *possession to* relation while sources are in a *possession from* relation. The possession relation suggests that sources are introduced by a low applicative head. Recall that high applicatives denote a relation between an individual and the event while low applicatives denote a relation between two individuals (Pylkkänen, 2002, 2008: Ch.2), the source and DO, in this case. The low applicative which introduces sources must be different from the one which introduces recipients (section 3.7.1, ex.89b), firstly, because different applicative heads are responsible for the difference in semantics, and secondly, because recipients and sources can occur together, as seen in (107) above. Pylkkänen (2002, 2008: Ch.2) identifies two low applicative heads (which may co-occur in some languages): $\text{LAppl}_{\text{REC}}$ to introduce recipients, and $\text{LAppl}_{\text{SRC}}$ to introduce sources. This gives us the basic structure in (114) for source ditransitives.

(114) (to be revised)



Furthermore, I argue that unlike dative IOs, sources are PPs. Evidence for this comes from the possibility of overt Ps in source expressions. Sources can be either case-marked expressions, as we have seen so far, or full PPs. In the PP *Omar=ke paas* 'near Omar' in (115), *paas* 'near' occupies P. It assigns genitive case to the DP, as is default for Ps in Urdu. The entire PP is marked with instrumental case.

(115) *Rami=ne* *Omar=se* / [**PP** ***Omar=ke*** ***paas***]***=se*** *kitaabein*
Rami=ERG Omar=INS / [PP Omar=GEN near]=INS books
li-in.
take-PFV.F.PL

'Rami took (the) books from Omar.'

Note that in contrast, recipient PPs are not marked with dative case (116), showing that dative case cannot be assigned to PPs.

(116) *Rami=ne* *Omar=ko* / [**PP** ***Omar=ke*** ***paas***]***(*=ko)*** *kitaabein*
Rami=ERG Omar=DAT / [PP Omar=GEN near](*=DAT) books
bHej-iin.
send-PFV.F.PL

'Rami sent (the) books to Omar.'

In fact, PPs only ever receive instrumental case to derive source expressions, and are never marked with any other case. This suggests that there is something specific to the representation of instrumental case in sources that allows for PPs to be case-marked. I propose that instrumental case on sources occupies P, making instrumental PPs, as in (115), akin to recursive PPs in English (e.g. *from inside the cupboard*).[43] As we saw in section 2.3.3, instrumental case is one of the higher cases on Caha's (2009) hierarchy, and in light of the case size hierarchy developed in section 2.3.2 (repeated below), may be expected to show postpositional behaviour.

(117) Case size hierarchy:
PP > KP_{LOC} > $\textbf{KP}_{\textbf{inherent}}$ > $\text{KP}_{\text{structural}}$ > DP/NOM

This is not to say, however, that all instances of instrumental case occupy P. Instrumental case has a range of uses in Urdu: it marks sources, comitative expressions, *by*-phrases, causees, instruments, and adverbs. On our fine-grained approach to case (section 2.3.2), different uses of instrumental case may instantiate different KPs, and as a result some uses (e.g. sources) may be more P-like while others (e.g. *by*-phrases) are more like canonical case-markers.[44]

The PP-analysis of sources also allows for an account of locative-instrumental case-stacking, which to my knowledge has not received an analysis in the literature so far. As we saw in section 2.3.2, instrumental case may stack on top of locative case to form a source expression (118a), which Butt & King (2004: p.172) liken to instrumental case-marking on PPs (118b). All forms of locative case-marking (*mein, par, tak, Ø*) may participate in stacking (118a, 119).[45]

[43] In fact, Urdu instrumental case shows great similarity to the English preposition *from* (thanks to Beth Levin for this observation; see also Mohanan, 1994: pp.169–70). Instrumental case encompasses many uses in Urdu, ranging from sources to comitative expressions to *by*-phrases. Interestingly, almost all of these uses have also been attributed to English *from*, either diachronically or synchronously (see Clark & Carpenter, 1989: pp.2–5 for a nice overview of the uses of *from*).

[44] This is similar to Caha's (2009: Ch.3) proposal that there may be multiple locative layers at different positions on a case hierarchy.

[45] While expressions of the type in (119c) are generally glossed as simply instrumental (*London=se* 'London=INS'), given that instrumental case can stack on all other forms of locative case, it seems more prudent to assume that these are instances of case-stacking with the null locative marker.

(118) a. *un* *logon**=mein=se*** *tiin*
those people=LOC=INS three

'three from among those people'

b. [*almari=ke* ***peechHay***]***=se***
[cupboard=GEN behind]=INS

'from behind the cupboard' (Butt & King, 2004: p.172)

(119) a. *shelf**=par=se***
shelf=LOC=INS

'from on top of the shelf'

b. *London**=tak=se***
London=LOC=INS

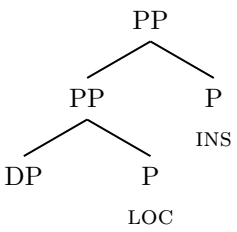
'till London and back' (Lit: from till London)

c. *London**=se***
London.LOC=INS

'from London'

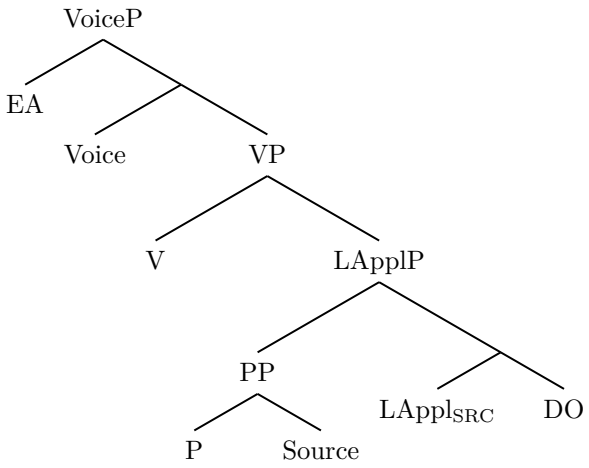
Assuming that sources are PPs, we can state that locative-instrumental case-stacking is simply another instance of PP-recursion, as illustrated in (120). Therefore, locative-instrumental case-stacking is not an instance of a single nominal receiving case twice, but rather recursion of PPs (or KP_{LOC} inside a PP).

(120)



Returning to the structure of source ditransitives, we can revise our tree in (114) to show that sources are PPs (121).

(121) (final)



Notice that the source DP does not technically c-command the DO, even though we saw that it can bind into the DO. This is not unique to sources, however; other PP IOs can also bind DOs (122). The same transparency of PPs for binding has also been observed for English prepositions (123) (see Pesetsky, 1996: pp.172–75; Phillips, 1996: pp.44–48). Why PPs behave this way is outside the scope of this dissertation.

(122) *Rami=ne* [**PP** ***har*** ***laRke$_i$=ke*** ***gHar***] *us$_i$=ki* *kitaabein*
Rami=ERG [PP every boy$_i$=GEN house] 3SG$_i$=GEN books
bHej-iin.
send-PFV.F.PL

'Rami sent his$_i$ books to every boy's$_i$ house.'

(123) a. Sue spoke [PP to these **people$_i$**] [PP about **each other's$_i$** friends] in Bill's house.

b. Sue gave books [PP to these **people$_i$**] [PP on **each other's$_i$** birthday]. (Pesetsky, 1996: p.172)

3.7.3.3 Lack of intervention in accusative case assignment

Unlike dative IOs, sources do not intervene in accusative case assignment (124).

(124) *Rami=ne* ***kitaab=ko*** *Omar=se* / *library=se* *li-ya.*
Rami=ERG book=ACC Omar=INS / library=INS take-PFV.M.SG

'Rami took the book from Omar/the library.'

Importantly, a change in word order is seen when the DO is marked, as mentioned in section 3.3. Unmarked DOs follow the source in the default word order, as we saw in section 3.7.3.1 (ex.101, repeated).

(101) *Rami=ne Omar=se / library=se* ***kitaab*** *lii.*
Rami=ERG Omar=INS / library=INS book take.PFV.F.SG

'Rami took a/the book from Omar/the library.'

However, when the DO is marked, it precedes the source (124). This is similar to the change in word order reported for Hindi ditransitives, where accusative DOs must move over the dative IO (Bhatt & Anagnostopoulou, 1996), as we saw in section 3.7.2. The change in word order when the DO receives accusative case shows that DOs are able to undergo object shift in the presence of sources. In other words, sources do not bleed OS, the way dative IOs do (section 3.7.2).

We saw in section 3.7.3.2 that sources, like dative IOs, are structurally higher than DOs. However, unlike dative IOs (ex.88, repeated), sources do not show any subject properties in passives. This is including properties, such as anaphor binding (125), which are associated with relative height in a given domain and not a specific structural position, like Spec-TP (see section 5.5.1).

(88) a. ***Omar$_j$=ko apni$_j$*** *kitaab dikH-a-i gai.*
Omar$_j$=DAT REFL$_j$ book see-CAUS-PFV.F.SG PASS.PFV.F.SG

'Omar$_j$ was shown his$_j$ own book.'

b. ***Omar$_j$=ko apni$_j$*** *kitaab bHej-i gai.*
Omar$_j$=DAT REFL$_j$ book send.PFV.F.SG PASS.PFV.M.SG

'Omar$_j$ was sent his$_j$ own book.'

(125) * ***Rami$_i$=se apni$_i$*** *kitaab lii gai.*
Rami$_i$=INS REFL$_i$ book take.PFV.F.SG PASS.PFV.F.SG

Intended: 'His$_i$ own book was taken from Rami$_i$.'

In section 5.5.1, I define the domain in which subject height is determined as the highest thematically related verbal projection (akin to Ramchand's, 2008, *first phase*). This is VoiceP or, in the absence of VoiceP, HApplP. Dative experiencers originate in Spec-HApplP. Dative recipients originate in Spec-LAppl$_{\text{REC}}$P, and under my proposal in section 3.7.2, move out of VP to non-thematic Spec-HApplP. The fact that sources do not qualify as subjects in the event domain on the basis of relative height suggests that there is a lower bound to this domain and that sources

are below this lower bound. This falls out if the lower bound is VP, and sources do not move out of VP to non-thematic Spec-HApplP, unlike dative recipients, which are also introduced by a low applicative head, but move out of VP and hence, show (some) subject properties.

The fact that sources do not move out of VP is to be expected under a PP-analysis. PPs are found low inside VP in many constructions, a notable example being English prepositional dative constructions (126b), in which the IO is a PP and is lower than the DO (Larson, 1988; and subsequent; see Harley & Miyagawa, 2017, for overview).

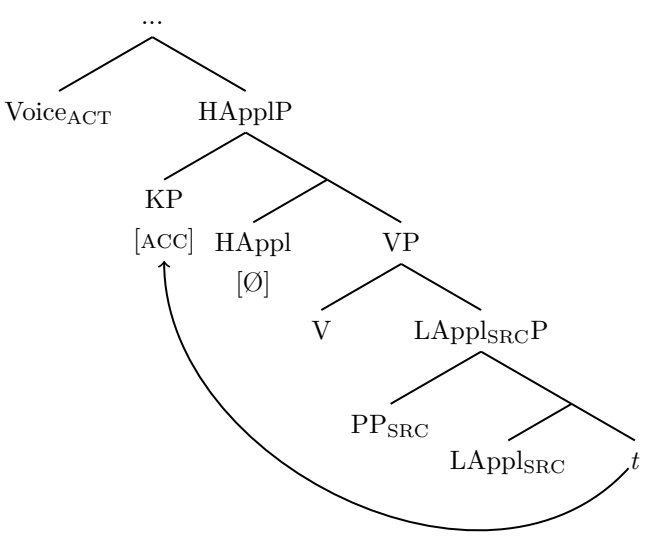
(126) a. Rami gave **Omar** a present. (double-object construction)

b. Rami gave a present **to Omar**. (prepositional dative)

From a theoretical standpoint too, PPs are independent domains for licensing (van Riemsdijk, 1978, and subsequent). Ps introduce arguments and assign case to them. On the other hand, KPs, despite some similarities to PPs, are not domains for licensing. In fact, under the present view, KPs are projected *as a result of* licensing of the DP, that is, case assignment to the DP (section 2.3.1). Thus, it is logical that dative KPs are subject to the constraint on valued case-features inside VP, which may even reflect some sort of licensing constraint, while source PPs are not.

In a ditransitive with a source IO, the source is introduced by $\text{LAppl}_{\text{SRC}}$ as a PP (127). The non-thematic HAppl, which provides a landing site for object shift, Merges above VP. As a PP, the source does not need to move out of VP. This means that when the DO receives accusative case, it is freely able to move to Spec-HApplP. There is no violation of Relativized Minimality (Rizzi, 1990). Thus, the DO may have accusative case with a source IO present.

(127)



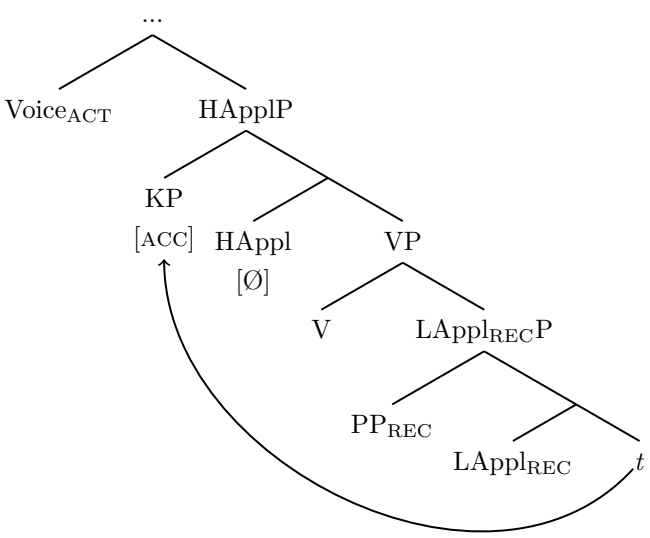
This analysis also explains why accusative case is possible with PP recipients/goals, as we saw in section 3.7.2 (ex.94, repeated).

(94) *Rami=ne* ***bachon=ko*** [$_{PP}$ *Omar=ke* *paas*] *bHej-a.*
Rami=ERG children=ACC [PP Omar=GEN near] send-PFV.M.SG

'Rami sent the kids to Omar.'

Here, the PP is introduced in Spec-LAppl$_{\text{REC}}$P. Being a PP, it does not need to move out of VP, unlike KP recipients. Therefore, as with sources, the DO is able to move out of VP (128), making accusative case possible in these dative ditransitive constructions. As a result, the same change in word order is seen in (94) as with sources and marked DOs (ex.124, above).

(128)



3.8 Summary

The first half of this chapter described the conditions on accusative case assignment, including differential object marking requirements and the need for object shift. I proposed a feature-licensing account of accusative case assignment in Urdu, as summarised in section 3.5. In the second half of this chapter, I have discussed two additional issues related to accusative case assignment.

The first is the fate of unmarked objects, which do not receive accusative case. I argued that these objects do not have their case-feature valued, yet they may trigger agreement. I proposed this is so because not all agreement comes about as the result of Agree. There are three agreement processes in Urdu. The first is canonical Agree, as seen in subject agreement. The second is PF Feature-Copying, seen in local object agreement in transitive actives, as well as long-distance agreement. Evidence for two distinct agreement processes comes from asymmetries between subject and object

agreement (Bhatt, 2005; Bhatt & Walkow, 2013). If neither Agree nor Feature-Copying take place, PF inserts default values.

The second issue discussed was dative intervention in accusative case assignment. I proposed that dative intervention occurs because dative IOs bleed object shift. Experiencers are introduced by the thematic variant of HAppl, meaning the non-thematic variant is not selected and there is no landing site for object shift. Recipients are introduced by $\text{LAppl}_{\text{REC}}$. Non-thematic HAppl is present in the structure, and so too is the landing site for object shift. However, as the recipient also has a valued case-feature, and is higher than the DO, and hence, closer to the landing site, it moves instead of the DO. This is in contrast to sources, which I argued are PPs, and so can remain within VP. There is no competition for movement for the DO in these cases.

This chapter has shown that it is not enough for a functional head (active Voice) to c-command an argument (DO) to assign case to it, but that there are additional factors which influence case assignment as well. Firstly, we saw that the internal structure of the nominal itself is crucial, in particular, the type of case-feature, interpretable or uninterpretable, that it bears. Additionally, some nominals do not have any extended functional projections, and hence, do not have any case-feature at all. Such nominals must undergo (pseudo-)noun-incorporation, and are never assigned case. Secondly, other arguments in the construction may also affect case possibilities. In the case we looked at in this chapter, dative IOs do not prevent case assignment itself, but rather intervene in the movement necessary after case assignment has taken place. This means that accusative case assignment in the presence of a dative IO will result in a structure that violates other constraints in the language, namely the constraint on valued case-features remaining inside VPs. Therefore, only constructions without accusative case are grammatical in dative ditransitives.

This concludes the discussion on accusative case assignment in actives. We now turn to non-active constructions in the following chapter.

Chapter 4

Properties of Non-Active Voice

This chapter investigates the properties of non-active Voice with respect to specifier projection and case assignment. We shall see that, like active Voice, non-active Voice in Urdu can introduce an argument in its specifier (i.e. the external argument), but unlike active Voice, it does so optionally. In terms of case, active Voice assigns accusative case to the direct object via structural case assignment (detailed in Chapter 3), while non-active Voice assigns a non-structural case to its specifier (i.e. it selects a valued KP). I take the inherent case-assigning properties of non-active Voice to explain why it cannot assign accusative case: assuming each functional head can only assign case once, non-active Voice cannot assign accusative case because it assigns inherent case instead (see also Kallulli & Roberts, 2022). The case-assigning properties of Voice have consequences for the remaining derivation, in particular, the case and movement possibilities of the direct object.

It has been reported that Urdu can optionally preserve accusative case in passives (Hook, 1979; Davison, 1982; Mohanan, 1994: pp.94–96; Mahajan, 1995; Bhatt, 2007; Srishti, 2011: Ch.5; Montaut, 2018), contrary to the cross-linguistically robust generalisation that accusative case is found only in active (transitive) contexts (Perlmutter, 1978; Chomsky, 1981; Burzio, 1986: pp.178–88; Jaeggli, 1986; Baker, Johnson & Roberts, 1989). The availability of accusative case in passives has received two prominent analyses in the Hindi-Urdu literature. On the one hand, Mahajan (1995) argues that Hindi-Urdu does not have true passives, and that all passive-looking structures are underlyingly active. Alternatively, others have argued that Hindi-Urdu does have true passives but with optional object promotion; the object can receive accusative case when it is not promoted (Davison, 1982; Mohanan, 1994: pp.183–91; Bhatt, 2003c, 2007). Under such analyses, non-active Voice is assumed to able to assign accusative case just like active Voice, making Urdu a true exception to the generalisation.

In the first half of this chapter, I show that Urdu has two passive-like constructions: a canonical passive (without accusative case) and an active impersonal

(with accusative case). Section 4.1 discusses the canonical passive construction, which has an optionally projected *by*-phrase and no accusative case on the object. I show that the *by*-phrase is an external argument (Baker et al., 1989; Collins, 2005, to appear; Roberts, 2019: pp.430–39; see Mahajan, 1995; Srishti, 2011: Ch.5, for Hindi-Urdu), and not an adjunct (Bruening, 2013; Alexiadou, Anagnostopoulou & Schäfer, 2015: Ch.4, 2018; see Bhatt, 2003c, for Hindi-Urdu). This provides evidence that non-active Voice can project a specifier in Urdu. Object promotion is optional in passives because of T's optional EPP feature. Lack of object promotion does not allow for accusative case. Instead, accusative-preserving 'passives' are impersonals with underlying active syntax (Cinque, 1988; Blevins, 2003; Roberts, 2019: §6.2), which I discuss in section 4.2. Active impersonals do not project a *by*-phrase, but rather project a *pro* subject, which is obligatorily interpreted as human. Similar analyses have been proposed for several other languages, such as Polish (Maling, 1993), Icelandic (Maling, 1993; Maling & Sigurjónsdóttir, 2002, 2015), Viennese German (Laszakovits, 2017) and Lithuanian (Legate, Akkuş, Šereikaitė & Ringe, 2020; Šereikaitė, 2020: Ch.2), to name a few. Section 4.3 summarises the proposed analyses for passives and active impersonals.

The latter half of the chapter explores the properties of non-active Voice in marked anticausatives (section 4.4). Anticausatives are unaccusative verbs which participate in the causative alternation. In Urdu, unaccusative verbs can be accompanied by the light verb *jaa* 'go', which is identical to the passive auxiliary.[1] In previous work, *jaa* has been analysed as a light verb with no syntactic connection to the identical marking found on passives (Butt, 1995: pp.152–53; Bhatt, 2003c; Butt, 2010). I propose a re-analysis of *jaa* as a spell-out of a non-active Voice head found in marked anticausatives. I argue that marked anticausatives in Urdu not only share morphology with passives, but also introduce an external argument similar to the *by*-phrase. Such an argument is found in many anticausatives cross-linguistically (Alexiadou, Anagnostopoulou & Schäfer, 2006; Schäfer, 2008, 2009b), and has been called an *oblique causer*. I show that Urdu oblique causers exhibit the same subject properties as *by*-phrases, indicating that they are in the same structural position, Spec-VoiceP. This provides evidence for the presence of non-active Voice in marked anticausatives. However, this non-active Voice head differs from that in passives, in that it does not assign a θ-role to its specifier, which restricts the interpretation of oblique causers. For the same reason, there is no implicit argument when the oblique causer is not projected.

Investigating these constructions provides insight into the active/non-active dis-

[1]My analysis focuses on the passive auxiliary *jaa* as the main morphological indicator of the passive construction. The perfective morphology seen on the verb is treated as a selectional requirement of the passive Voice head. In future work, an analysis with perfective morphology as a spell-out of non-active Voice and *jaa* as a higher Pass head may be considered.

tinction, and gives us a paradigm of Voice heads found in Urdu. In section 4.5, I conclude with consideration of some of the typological predictions of this Voice paradigm.

An important outcome of this chapter is the emergence of several points of microvariation between Hindi and Urdu. The general assumption in the literature has been that variation between Hindi and Urdu is only superficial at the lexical level, but that the two are underlyingly the same. One instance of lexical variation between the two is found with *by*-phrases. Hindi has two possible *by*-phrases (*X dwaara* and *X=se*), while Urdu only has one (*X=se*). The distribution and properties of *by*-phrases are crucial for my analysis of non-active Voice in this chapter. While I have not been able to systematically compare the behaviour of Urdu *by*-phrases with the two Hindi *by*-phrases, informal discussions with linguists who identify as native speakers of Hindi have indicated some important differences which may be reflective of variation at a structural level. I highlight such differences through the course of this chapter. While this does not provide a full understanding of the variation by any means, it takes important steps towards revealing syntactic variation on the Hindi-Urdu dialectal spectrum.

4.1 Passives

This section begins by describing the basic properties of Urdu passives in section 4.1.1. In section 4.1.2, I evaluate the tests used for subject and object positions in earlier works on Hindi-Urdu passives, and show that only tests related to subjecthood properties are reliable. I then hone in on passives without accusative case, which I propose are canonical passives.[2] In section 4.1.3, I argue that the *by*-phrase is not an adjunct but rather an external argument introduced in Spec-VoiceP. In section 4.1.4, I show that object promotion is possible in Urdu passives (contra Mahajan, 1995), although it is optional. This is due to the optionality of the EPP feature on T. Section 4.1.5 rounds off with a summary of the properties of passive Voice.[3]

4.1.1 Properties of Urdu passives

The active-passive alternation in Urdu is shown in (1). In actives (1a), the agent or subject receives either ergative or nominative case, depending on aspect (sections

[2]See Keenan & Dryer (2007) for common cross-linguistic properties of passives.

[3]Thanks to audiences at *SyntaxLab* (University of Cambridge), *46º Incontro di Grammatica Generativa* (University of Siena, online), and *(Formal) Approaches to South Asian Languages 11* (University of Minnesota, online) for feedback on the analysis of passives and active impersonals presented in sections 4.1 and 4.2, respectively. An earlier version of this analysis was published in the conference proceedings of (F)ASAL-11 (S. Kidwai, 2022b).

1.2.3, 5.2.2), while the patient or object either receives accusative case or remains unmarked, depending on differential object marking conditions (section 3.1). In passives (1b), the agent is optionally realised as a *by*-phrase,[4] and the object remains unmarked.

(1) a. *Rami=ne* *Omar=ko* *pakR-a.* (active)
Rami=ERG Omar=ACC catch-PFV.M.SG

'Rami caught Omar.'

b. *Omar* *(Rami=se)* *pakR-a* *gya.* (passive)
Omar.NOM (Rami=INS) catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught (by Rami).'

As mentioned, Hindi and Urdu express *by*-phrases differently. As shown in (1b), Urdu marks *by*-phrases with instrumental case. In Hindi, however, instrumental case is preferred for agents of (in)abilitative constructions (discussed below, ex.5) (Bhatt, 2003c: p.7), and *by*-phrases of passives are generally expressed as a PP, *X dwaara* 'through X' (2).

(2) ***shikaariyon*** ***dwaara*** *haati* *maar-a* *gya.* (Hindi)
hunters by elephant.NOM kill-PFV.M.SG PASS.PFV.M.SG

'The elephant was killed by the hunters.' (Mahajan, 1995: p.1)

The passive is marked with the auxiliary, *jaa*, seen in its suppletive form, *gya*, in (1b). The passive auxiliary selects verbs in perfective form, regardless of the aspect of the clause. For example, in (3), the clause has imperfective aspect (seen on the passive auxiliary), but the main verb remains perfective due to the selectional requirements of the passive auxiliary. Both the passive auxiliary and the main verb show agreement inflection.

(3) *Omar* ***pakR-a*** ***jaa-ta*** *he.* (passive)
Omar.NOM catch-PFV.M.SG PASS-IPFV.M.SG be.PRS.3SG

'Omar is caught.' / 'Omar gets caught.'

As in many other languages, the passive marker is not unique to passives in Urdu. It is homophonous with the lexical verb 'go' (4a), as well as a light verb

[4]There is a strong preference to omit the *by*-phrase. Early grammars claim that there is no *by*-phrase in Hindi-Urdu at all (see Davison, 1982, for an overview). Bhatt (2003c: p.7) suggests that use of the *by*-phrase has increased as a result of contact with English. A detailed study on the diachronic and synchronic use of *by*-phrases in Hindi and Urdu is needed.

(4b, c). As a lexical verb, *jaa* appears without another lexical verb (4a); on the other hand, as the passive auxiliary (1b, 3) or as a light verb (4b, c), it must be accompanied by a lexical verb, which acts as the main verb describing the event. The passive auxiliary and light verb differ in the form of main verb they select. The former selects perfective forms (1b, 3), as stated above, while the latter selects bare stems, as shown in (4b, c).[5]

(4) a. *Rami* ***jaa*** *rah-a* *he.* (lexical verb)
Rami.NOM go PROG-M.SG be.PRES.3.SG

'Rami is going.'

b. *Rami* *uTH* ***gya.*** (LV)
Rami.NOM get-up go.PFV.M.SG

'Rami got up / woke up.'

c. *Rami* *seb* *kHa* ***gya.*** (LV)
Rami.NOM apple eat go.PFV.M.SG

'Rami ate up an/the apple.'

Moreover, the surface structure of passives is also not unique to them. The same structure with *jaa* and an instrumental agent is used in (in)abilitative constructions (5) (Davison, 1982; Mohanan, 1994: pp.151–64; Bhatt, 2003c; Srishti, 2011: Ch.5), and a similar structure with *jaa* but without an instrumental agent is used for necessity/prohibition readings (6) (Davison, 1982). (The instrumental phrase in ex.6 is a comitative expression, not an agent.)

(5) ***Rami=se*** *Omar* *(nahi)* *pakR-a* ***gya.***
Rami=INS Omar.NOM (not) catch-PFV.M.SG go.PFV.M.SG

'Rami was (not) able to catch Omar.'
(as opposed to 'Omar was (not) caught by Rami.')

(6) *baRon=se* *is* *tarah* *zor=se* *nahi* *bol-a* ***jaa-ta.***
elders=INS this way force=INS not talk-PFV.M.SG go-IPFV.M.SG

'One does not talk loudly with elders like this.' (Davison, 1982: 159)

Little has been said about (in)abilitatives in the literature, and virtually nothing (to my knowledge) about necessity/prohibition readings. Davison (1982) assumes

[5]The reader may notice that, despite perfective aspect, the subject bears nominative case instead of ergative in (4c). See section 4.4.2.3 for discussion on the interaction between light verbs and subject case.

that (in)abilitatives have the same underlying syntax as passives. Conversely, Mohanan (1994: pp.151–64) and Srishti (2011: Ch.5) claim that (in)abilitatives have different syntax from passives because the instrumental argument is obligatory in the former but not the latter. Bhatt (2003c) shows that passives and (in)abilitatives also differ with respect to polarity requirements, finiteness requirements, and object promotion. However, (in)abilitatives do seem to rely on passive syntax to at least some extent, as unaccusative verbs, which cannot passivise, form (in)abilitatives with active morphology, unlike unergative and transitive verbs, which can passivise and form (in)abilitatives with passive morphology (Bhatt, 2003b). I will not be analysing these constructions in this work, and set them aside.

In addition to passives of transitives, Urdu also allows impersonal passives (Davison, 1982; Masica, 1991; Mahajan, 1995; Bhatt, 2003c) of the type found in German and Dutch (Perlmutter, 1978). Impersonal passives are passives of unergative verbs, and are interpreted as having a generic agent. (7a) shows an impersonal passive in Urdu.[6] We can identify that this is indeed passive *jaa*, and not its light verb counterpart, because the main verb, *naach-na* 'to dance' is in perfective form, *naach-a*, rather than bare stem form, *naach*. Passives of unaccusatives are not possible (7b).

(7) a. *kal / shaadi=mein naach-a gya.* (unergative)
yesterday / wedding=LOC dance-PFV.M.SG PASS.PFV.M.SG

'Yesterday/At the wedding, [it] was danced.'

b. **kal / park=mein gir-a gya.* (unaccusative)
yesterday / park=LOC fall-PFV.M.SG PASS.PFV.M.SG

'Yesterday/In the park, [it] was fallen.'

A common property of passives cross-linguistically is that accusative case cannot be assigned to the object (Perlmutter, 1978; Chomsky, 1981; Burzio, 1986: pp.178–88; Jaeggli, 1986; Baker et al., 1989; Roberts, 2019: §6.2). For example, in German,the object is marked with accusative case in the active (8a), but with nominative case in the passive (8b), as seen in the form of the definite article in the example below.

(8) a. *Rami zerbrach* ***den*** *Teller.* (active)
Rami broke the.M.SG.ACC plate

'Rami broke the plate.'

[6]Interestingly, impersonal passives are preferable with a modifier in Urdu, usually a time or place adverbial, similar to English middles, e.g. *Fantasy novels sell *(well).*

b. ***Der*** *Teller wurde zerbrochen.* (passive)
the.M.SG.NOM plate was broken

'The plate was broken.' (p.c. Rami Aly)

However, as mentioned, Urdu passives seem to be able to retain accusative case on objects (Hook, 1979; Davison, 1982; Mohanan, 1994: pp.94–96; Mahajan, 1995; Bhatt, 2007; Srishti, 2011: Ch.5; Montaut, 2018). This is possible both with objects that are obligatorily marked in actives (9), as well as those that are optionally marked (10).[7] The interpretive effects (or lack thereof) of retaining marking are discussed in section 4.2.2.

(9) a. *Rami=ne* ***Omar*(=ko)*** *pakR-a.* (active)
Rami=ERG Omar*(=ACC) catch-PFV.M.SG

'Rami caught Omar.'

b. ***Omar(=ko)*** *pakR-a* *gya.* (passive)
Omar(=ACC) catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught.'

(10) a. *Rami=ne* ***sher(=ko)*** *pakR-a.* (active)
Rami=ERG lion(=ACC) catch-PFV.M.SG

'Rami caught a/the lion.'

b. ***sher(=ko)*** *pakR-a* *gya.* (passive)
lion(=ACC) catch-PFV.M.SG PASS.PFV.M.SG

'The lion was caught.'

The possibility of accusative case in passive-looking constructions has led to two prominent analyses of Hindi-Urdu passives, as mentioned earlier. Mahajan (1995) argues that Hindi does not have a true passive construction at all because there is no agent demotion and no object promotion. He shows that agents in Hindi passives behave like arguments, on the basis of which he argues against agent demotion. For Mahajan, agent demotion must be in the form of adjunction, that is, the agent must be introduced as an adjunct rather than an argument. Consequently, Mahajan proposes that seemingly passive constructions are underlyingly active. This accounts for the availability of accusative case. Conversely, others, such as Davison (1982), Mohanan (1994: pp.183–91) and Bhatt (2003c, 2007), have argued that Urdu does

[7] Objects which are never marked in actives are also never marked in passives (Bhatt, 2007: p.10).

have passives, but with optional object promotion. When the object is not promoted, it can receive accusative case. Under the latter approach, passive Voice can assign accusative case.

What both of these approaches have in common is that they conflate passives with and without accusative case, and propose a single unifying analysis. I depart from this assumption, and, as stated earlier, propose that the construction without accusative case is a canonical passive, while the accusative-preserving construction is an impersonal with active syntax. In the rest of this section, I focus on canonical passives. Accusative-preserving passives or active impersonals are discussed in section 4.2.

4.1.2 Evaluation of past tests

Mahajan (1995) examines Hindi passives in detail, and employs a number of tests to determine whether the *by*-phrase is an argument or adjunct, and whether the object is promoted or not. In this section, I evaluate the tests used by Mahajan, and show that only the subjecthood diagnostics are reliable.[8]

Mahajan uses three tests to establish the status of *by*-phrases: control into argument clauses, extraction out of extraposed clauses, and subjecthood diagnostics. Let us look at each of these tests in turn.

Firstly, Mahajan shows that, like ergative/nominative subjects of actives, Hindi *by*-phrases are able to control into clausal arguments (11), which he takes as evidence in favour of their argument status.

(11) a. *Salma$_i$* [*PRO$_i$* *gHar* *jaa-na*] *chah-ti* *tHi.*
Salma$_i$.NOM [PRO$_i$ house.LOC go-INF] want-IPFV.F.SG be.PST.F.SG

'Salma wanted to go home.'

b. *Salma$_i$=ne* [*PRO$_i$* *gHar* *jaa-na*] *chaah-a.*
Salma$_i$=ERG [PRO$_i$ house.LOC go-INF] want-PFV.M.SG

'Salma wanted to go home.'

c. ***Salma$_i$*** ***dwaara*** [*PRO$_i$* *gHar* *jaa-na*] *chaah-a*
Salma$_i$ through [PRO$_i$ house.LOC go-INF] want-PFV.M.SG
gya.
PASS.PFV.M.SG

'It was wanted by Salma to go home.' (Mahajan, 1995: p.290)

[8] In S. Kidwai (2022b), I also used Mahajan's (1995) tests, although careful examination has now shown that some of those tests should not have been used.

The problem with this data is that, for many speakers, the verb *chaah-na* 'to want' is a lexical exception which cannot passivise, as noted by Bhatt & Embick (2017), and as is also seen in many other languages, such as English (e.g. $^{*/??}$*Donuts were wanted by Rami*). This makes the grammaticality of (11c) questionable. It is also challenging to replace the verb for this test, as many verbs which take infinitival complements in English (e.g. *believe, hope, try*) either have finite complements in Urdu making control irrelevant, or are complex N-V predicates which take a gerund complement. Replicating the test with complex N-V predicates, as in (12), gives the same results as Mahajan, however, this may introduce confounding variables due to a more complex structure, hence, I do not use it moving forward.

(12) a. ***Salma$_i$*** [***PRO$_i$*** *gHar* *jaa-ne*]=*ka* *izHaar* *kar*
Salma$_i$.NOM [PRO$_i$ house.LOC go-INF]=GEN expression do
rah-i *tHi.*
PROG-F.SG be.PST.F.SG

'Salma was expressing [that she wanted] to go home.'

b. ***Salma$_i$=ne*** [***PRO$_i$*** *gHar* *jaa-ne*]=*ka* *izHaar* *ki-ya.*
Salma$_i$=ERG [PRO$_i$ house.LOC go-INF]=GEN expression do-PFV.M.SG

'Salma expressed [that she wanted] to go home.'

c. ***Salma$_i$=se*** [***PRO$_i$*** *gHar* *jaa-ne*]=*ka* *izHaar* *ki-ya*
Salma$_i$ [PRO$_i$ house.LOC go-INF]=GEN expression do-PFV.M.SG
gya.
PASS.PFV.M.SG

'It was expressed by Salma [that she wanted] to go home.'

The second test Mahajan uses is extraction out of extraposed clauses. Clausal objects can appear post-verbally, with an expletive element, *yeh* 'this', in the pre-verbal object position (13).

(13) a. *Salma* *yeh* *soch-ti* *tHi* [*keh* *Mohan=ne*
Salma.NOM this think-IPFV.F.SG be.PST.F.SG [that Mohan=ERG
Ram=ko *maar-a*].
Ram=ACC hit-PFV.M.SG]

'Salma thinks that Mohan hit Ram.'
(Lit.: 'Salma thinks this that Mohan hit Ram.')

b. *Salma yeh soch-ti tHi [keh Mohan=ne*
Salma.NOM this think-IPFV.F.SG be.PST.F.SG [that Mohan=ERG
Ram=ko gHar=mein maar-a].
Ram=ACC house=LOC hit-PFV.M.SG]

'Salma thinks that Mohan hit Ram at home.'
(Lit.: 'Salma thinks this that Mohan hit Ram at home.')

(Mahajan, 1995: p.291–292)

Mahajan claims that arguments incur weak island violations when moved out of extraposed clauses (14a), while adjuncts incur strong island violations (14b). He reports that extraction of *by*-phrases also results in a weak island violation (15b), grouping them with arguments rather than adjuncts.

(14) a.?? ***Mohan=ne*$_1$**, *Salma yeh soch-ti tHi [keh* ***t*$_1$**
Mohan=ERG$_1$ Salma.NOM this think-IPFV.F.SG be.PST.F.SG [that t_1
Ram=ko maar-a].
Ram=ACC hit-PFV.M.SG]

Intended: 'Mohan, Salma thinks that [he] hit Ram.'

b. * ***gHar=mein*$_1$**, *Salma yeh soch-ti tHi [keh*
house=LOC$_1$ Salma.NOM this think-IPFV.F.SG be.PST.F.SG [that
Mohan=ne ***t*$_1$** *Ram=ko maar-a].*
Mohan=ERG t_1 Ram=ACC hit-PFV.M.SG]

Intended: 'At home, Salma thinks that [that's where] Mohan hit Ram.'

(Mahajan, 1995: p.291–292)

(15) a. *Salma yeh soch-ti tHi [keh Mohan=se*
Salma.NOM this think-IPFV.F.SG be.PST.F.SG [that Mohan=INS
Ram maar-a gya].
Ram.NOM hit-PFV.M.SG PASS.PFV.M.SG]

'Salma thinks that Ram was hit by Mohan.'
(Lit.: 'Salma thinks this that Ram was hit by Mohan.')

b.?? ***Mohan=se*$_1$**, *Salma yeh soch-ti tHi [keh* ***t*$_1$**
Mohan=INS$_1$ Salma.NOM this think-IPFV.F.SG be.PST.F.SG [that t_1
Ram maar-a gya].
Ram.NOM hit-PFV.M.SG PASS.PFV.M.SG]

Intended: 'By Mohan, Salma thinks that [by him] Ram was hit.'

(adapted from Mahajan, 1995: 293)

However, the ungrammaticality of extraction in the above examples does not seem to be due to movement out of an island at all, but rather due to intervention effects by the expletive element, *yeh*. A. Kidwai (2022a: p.4) gives the minimal pair below which shows that movement out of an extraposed clause is possible when there is no expletive (16a). The moved element is an argument in these examples.

(16) a. [***vo*** ***kitaab***]$_{\boldsymbol{1}}$ *Sita=ne* *kah-a* [*keh* *Ram* ***t$_{\boldsymbol{1}}$***
[that book.NOM]$_1$ Sita=ERG say-PFV.M.SG [that Ram.NOM t_1
laa-ey *ga*].
bring-FUT.3SG FUT.M.SG]

'That book, Sita said that Ram will bring.'

b. *[***vo*** ***kitaab***]$_{\boldsymbol{1}}$, *Sita=ne* ***yeh*** *kah-a* [*keh* *Ram* ***t$_{\boldsymbol{1}}$***
[that book.NOM]$_1$ Sita=ERG this say-PFV.M.SG [that Ram.NOM t_1
laa-ey *ga*].
bring-FUT.3SG FUT.M.SG] (A. Kidwai, 2022a: p.4)

If we remove *yeh* from Mahajan's examples in (14), then extraction of either an argument or an adjunct is equally acceptable, making this test void in investigating the status of the *by*-phrase.

Finally, with regards to subjecthood diagnostics, one may argue that these properties are associated with agenthood, and show nothing about the argument status of *by*-phrases. However, as I discuss in detail in Chapter 5, these properties are not exclusive to agents, and are associated with structural prominence (or subjecthood, for lack of better terminology). Therefore, I continue to use these tests.

Turning now to Mahajan's argumentation against object promotion, it should first be pointed out that Mahajan only tests promotion of marked objects. As I stated in section 4.1.1, I will argue that marked and unmarked objects occur in two distinct constructions, which both look like passives on the surface, but have different underlying syntax. Mahajan's results from marked objects should, therefore, not be extended to unmarked objects without further testing.

With respect to the tests themselves, Mahajan uses object control constructions and subjecthood diagnostics to test for promotion. We have already discussed the reliability of the latter. Object control constructions involve verbs which take an infinitival complement, the subject of which is controlled by the matrix object. For example, in the English example in (17), the PRO subject of the infinitival clause can only be controlled by the object, *Omar*, and not by the subject, *Rami*, meaning Omar is the one leaving, and not Rami. Such verbs are also found in Urdu (18).

(17) Rami$_i$ told Omar$_j$ [PRO$_{*i/j}$ to leave].

(18) *Ram$_i$=ne Mohan$_j$=ko [PRO$_{*i/j}$ gHar jaa-ne]=ko kah-a.*
Ram$_i$=ERG Mohan$_j$=DAT [PRO$_{*i/j}$ home.LOC go-INF]=ACC say-PFV.M.SG

'Ram told Mohan to go home.' (adapted from Mahajan, 1995: p.294)

Mahajan claims that, like objects in active clauses (18), objects in passives are also able to control into object control constructions (19). Mahajan takes this as evidence that the object is in the same position in passives as it is in actives.

(19) *Ram dwaara* ***Mohan$_j$=ko*** [*PRO$_{*i/j}$ gHar jaa-ne*]=*ko*
Ram$_i$ through Mohan$_j$=ACC [PRO$_{*i/j}$ house.LOC go-INF]=ACC
kah-a gya.
say-PFV.M.SG PASS.PFV.M.SG

'Mohan was told to go home by Ram.' (Mahajan, 1995: p.295)

Under the proposed analysis, the example above with a marked object is an active impersonal, in which the object is expected to be in the same position as in actives. Applying the test to a canonical passive with an unmarked object, we see that the object is unable to control (20).

(20) * ***Mohan$_j$*** [*PRO$_{*j}$ gHar jaa-ne*]=*ko kah-a gya.*
Mohan$_j$ [PRO$_{*j}$ house.LOC go-INF]=ACC say-PFV.M.SG PASS.PFV.M.SG

Intended: 'Mohan was told to go home.'

At first glance, this seems to indicate a positional difference between marked and unmarked objects. However, upon closer examination, the ungrammaticality of (20) is not because of control possibilities but lack of case-marking. Object control verbs have been argued to be ditransitive (Larson, 1991; see Butt & Ramchand, 2001, for Hindi-Urdu). This means that the object which Mahajan tests in (19) is actually an indirect object with dative case. Dative case must be retained in passives (Woolford, 2006, see also section 3.7.1), and adding dative case to the sentence in (20) makes it grammatical, as shown in (21). Hence, the ungrammaticality of (20) is due to missing dative case, and not due to lack of proper control.

(21) *(Ram$_i$=se)* ***Mohan$_j$=ko*** [*PRO$_{*i/j}$ gHar jaa-ne*]=*ko kah-a*
(Ram$_i$=INS) Mohan$_j$=DAT [PRO$_{*i/j}$ house.LOC go-INF]=ACC say-PFV.M.SG
gya.
PASS.PFV.M.SG

'Mohan was told to go home (by Ram).'

Mahajan's test cannot be adapted to test for promotion of direct objects as he intended, because clausal complements which act as object control constructions do not occur lower than direct objects, only in place of them.

Thus, moving forward, I only use the subjecthood diagnostics from Mahajan's tests to investigate the status of the *by*-phrase and promotion of the object. Mohanan (1994: pp.151–64) and Bhatt (2003c), too, use subject properties to do the same.

4.1.3 External argument: *by*-phrase

As mentioned earlier, Urdu passives allow for optional realisation of the agent as a *by*-phrase. This *by*-phrase is marked with instrumental case.

(22) *Omar* ***(Rami=se)*** *pakR-a* *gya.*
Omar.NOM (Rami=INS) catch-PFV.M.SG PASS.PFV.M.SG
'Omar was caught (by Rami).'

The status of the *by*-phrase is much debated in the literature on passives. Its optionality lends itself to an adjunct analysis, as has been proposed for Hindi by Bhatt (2003c). Bruening (2013) shows that the distribution of English *by*-phrases patterns with other adjuncts, namely instruments and comitatives. Alexiadou et al. (2015: Ch.4), and many others, argue that non-active Voice is by definition a Voice head which does not project a specifier, hence, the *by*-phrase must attach as an adjunct. However, several works have challenged the adjunct analysis of *by*-phrases, proposing instead that they are arguments. Roberts (1987: Ch.2) observed that *by*-phrases can have all the same θ-roles as external arguments (EAs) in active clauses. Assuming θ-roles are configurational, in the sense that specific roles are assigned to specific syntactic positions, then the fact that *by*-phrases can have the same θ-roles as EAs of actives indicates that the two are in the same structural position. This logic has also been pursued by Baker et al. (1989), Collins (2005, to appear), and Roberts (2019: §6.2), amongst others, in analysing *by*-phrases as EAs.

The same debate extends to the Urdu *by*-phrase. The strongest reason for thinking of Urdu *by*-phrases as adjuncts comes from their similarity to other adjuncts, similar to Bruening's (2013) argumentation for English *by*-phrases. *By*-phrases are marked with instrumental case which also marks several types of adjuncts, including instruments and even adverbs. Some authors have proposed that instrumental case is reserved for adjuncts in Hindi-Urdu, making all instrumental case-marked phrases modifiers (Ramchand, 2008: Ch.6, 2011; 2014; S. Bhatia, 2016). However, this cannot be entirely correct as sources, which also carry instrumental case, were shown

to be arguments in section 3.7.3.1. Moreover, none of these works on instrumental case examine *by*-phrases themselves.

As discussed in section 4.1.2, Mahajan (1995) uses subjecthood diagnostics to show that the Hindi *by*-phrase, *X dwaara* 'through X', is an EA, like ergative and nominative subjects of active clauses (see also Bhatt, 2003c; Srishti, 2011: Ch.5; Davison, 2015). Crucially, these tests cannot be passed by adjuncts. Subjecthood tests can also be applied to the Urdu *by*-phrase, *X=se* 'X=INS', to arrive at the same conclusion, as I show below. Subjecthood diagnostics are discussed in detail in Chapter 5 (see also Davison, 2015, for an overview).

The first subject property is anaphor binding. The reflexive possessive anaphor, *apna*, can only be bound by subjects. In (23), the direct object contains the anaphor. Despite both the subject and indirect object c-commanding the direct object,[9] the anaphor can only be bound by the subject.

(23) *Rami$_i$=ne* *Omar$_j$=ko* ***apni$_{i/*j}$*** *kitaab* *bHej-i.*
Rami$_i$=ERG Omar$_j$=DAT REFL$_{i/*j}$ book send-PFV.F.SG

'Rami$_i$ sent Omar$_j$ his$_{i/*j}$ book.'

By-phrases are also able to bind reflexive anaphors, as shown in (24). (The behaviour of promoted objects with respect to subject tests is discussed in section 4.1.4).

(24) *Rami$_i$=se* *Omar$_j$* ***apne$_{i/j}$*** *gHar=mein* *pakR-a*
Rami$_i$=INS Omar$_j$.NOM REFL$_{i/j}$ house=LOC catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Omar$_j$ was caught by Rami$_i$ in his$_{i/j}$ own house.'

Secondly, subjects are able to control into participial clauses, while objects are not. The sentences in (25) have only one reading where the subject controls the PRO subject of the embedded clause. *By*-phrases can also control into participial clauses (26).

(25) a. *Rami$_i$=ne* *Omar$_j$=ko* [***PRO$_{i/*j}$*** *hans-te* *hue*]
Rami$_i$=ERG Omar$_j$=ACC [PRO$_{i/*j}$ laugh-IPFV be.PTCP]
pakR-a.
catch-PFV.M.SG

'Rami$_i$ caught Omar$_j$ while he$_{i/*j}$ was laughing.'

[9] C-command relationships in ditransitives are discussed in section 3.7. See also Malhotra (2014).

b. *Rami$_i$=ne* *Omar$_j$=ko* [***PRO$_{i/*j}$*** *kamre=mein* *jaa* *kar*]
Rami$_i$=ERG Omar$_j$=ACC [PRO$_{i/*j}$ room=LOC go do]
pakR-a.
catch-PFV.M.SG

'Upon [Rami/*Omar] going to the room, Rami caught Omar.'

(26) *Omar$_i$* *Rami$_j$=se* [***PRO$_{i/j}$*** *kamre=mein* *jaa* *kar*] *pakR-a*
Omar$_i$.NOM Rami$_j$=INS [PRO$_{i/j}$ room=LOC go do] catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Omar$_i$ was caught by Rami$_j$ when he$_{i/j}$ went into the room.'

So far we have seen that *by*-phrases pattern like EAs of active clauses. There is one subject test where *by*-phrases behave differently: pronoun obviation. Ergative and nominative subjects cannot bind non-reflexive possessive pronouns. In (27), the pronominal possessor can be bound by the indirect object or refer to a contextually salient antecedent, but cannot be bound by the subject. However, *by*-phrases do not show pronoun obviation and are able to bind pronouns (28) (contra Mahajan, 1995; Bhatt, 2003c).

(27) *Rami$_i$=ne* *Omar$_j$=ko* ***us$_{*i/j/k}$=ki*** *kitaab* *bHej-i.*
Rami$_i$=ERG Omar$_j$=DAT 3SG$_{*i/j/k}$=GEN book send-PFV.F.SG

'Rami$_i$ sent Omar$_j$ his$_{*i/j/k}$ book.'

(28) *Omar$_i$* *Rami$_j$=se* ***us$_{i/j/k}$=ke*** *gHar* *bHej-a*
Omar$_i$.NOM Rami$_j$=INS 3SG$_{i/j/k}$=GEN house.LOC send-PFV.M.SG
gya.
PASS.PFV.M.SG

'Omar$_i$ was sent to his$_{i/j/k}$ house by Rami$_j$.'

This pattern of behaviour is similar to dative subjects which also show a subset of subject properties (see section 5.3). They can bind anaphors and control into participial clauses, but do not show pronoun obviation (Davison, 2004b; Bhatia & Poole, 2016; S. Kidwai, 2022a). In Chapter 5, I show that subject properties do not always group together in Urdu, and in particular, that pronoun obviation is only shown by arguments in Spec-TP. I also show that only arguments which Agree with T can move to Spec-TP. The *by*-phrase does not Agree with T, and so does not move

to Spec-TP and show pronoun obviation. Further details are given in section 5.5.2, but what is important here is that while *by*-phrases do not pass all subject tests, they pass enough tests to show that they are EAs, and not adjuncts.

Based on the argument status of *by*-phrases, Mahajan (1995) claims that they are not demoted, and uses this in turn to argue against passivisation in Hindi. However, demotion need not be reduced to adjuncthood alone (see Lyngfelt & Solstad, 2006, for various perspectives on demotion). Under approaches where the active/passive alternation is a featural difference of the same head, Voice, argumenthood of the *by*-phrase does not rule out the possibility of passivisation. Following Baker et al. (1989), Collins (2005, to appear) and Roberts (2019: §6.2), amongst others, I take the *by*-phrase to be generated as an EA in the specifier of a non-active Voice head, which I label as $\text{Voice}_{\text{PASS}}$.

Unlike active Voice, $\text{Voice}_{\text{PASS}}$ does not obligatorily introduce an EA (see section 4.3 on why this might be so), as shown by the optionality of the *by*-phrase. However, when the *by*-phrase is not projected, an implicit agent is still present, as shown by Bhatt & Embick (2017) for Hindi-Urdu.[10] This can be observed in the contrasting truth-conditional semantics of passives (29a) and anticausatives (29b). The passive can only be judged as true if there is an agent boiling the water whereas the anticausative can be judged true regardless (e.g. the water was boiling due to natural conditions as in a hot spring).

(29) a. *paani* *ubaal-a* *jaa* *rah-a* *tHa.* (passive)
water.NOM boil.CAUS-PFV.M.SG PASS PROG-M.SG be.PST.M.SG

'The water was being boiled.'

b. *paani* *ubal* *rah-a* *tHa.* (anticausative)
water.NOM boil PROG-M.SG be.PST.M.SG

'The water was boiling.' (Bhatt & Embick, 2017: pp.106–07)

The implicit agent can also be detected through syntactic diagnostics, such as control. In (30), the implicit agent controls the subject of the participial clause.[11]

[10] I follow Bhatt & Pancheva's (2017) definition of implicit arguments as syntactically active elements with unrealised θ-roles, which participate in grammatical dependencies of the type seen in (30). See also Williams (1985) and Landau (2010).

[11] Although promoted objects can also control into participial clauses (see section 4.1.4), in (30), the action requires a sentient agent, ruling out the object, *peR* 'tree', as a possible controller, regardless of promotion.

(30) [*PRO kHaana kHa kar*] *peR kaaT-a jaa rah-a*
[PRO food eat do] tree cut.CAUS-PFV.M.SG PASS PROG-M.SG
he.
be.PRS.3SG

'The tree is being cut by someone, that someone having eaten food.'
(Bhatt & Embick, 2017: p.107)

A final diagnostic comes from licensing of *by itself*. *By itself* is only licensed in the absence of an agent, explicit or implicit. This is seen through the contrast in its unacceptability in transitives which have an overt agent (31a) versus its acceptability in anticausatives which have no agent (31b).[12] Passives too cannot license *by itself* (31c), showing that they have an implicit agent when the *by*-phrase is not overt.

(31) a. # *Rami=ne kHiRki* ***khud-ba-khud*** *toR-i.* (transitive)
Rami=ERG window self-with-self break.CAUS-PFV.F.SG

Intended: 'Rami broke the window by itself.'
(Acceptable as 'Rami broke the window by himself.')

b. *kHiRki* ***khud-ba-khud*** *TooT gai.* (anticausative)
window.NOM self-with-self broke AC-PFV.F.SG

'The window broke by itself.'

c. # *kHiRki* ***khud-ba-khud*** *toR-i gai.* (passive)
window.NOM self-with-self break.CAUS-PFV.F.SG PASS.PFV.F.SG

'The window was broken by itself.'

To account for the presence of an implicit agent in the absence of a projected EA, I assume that the external θ-role of $\text{Voice}_{\text{PASS}}$ is existentially bound when no specifier is projected (Keenan, 1980: p.339; Roberts, 1987: Ch.3; Williams, 1987; Bruening, 2013; Legate, 2014: Ch.2; Alexiadou et al., 2015: Ch.4; Schäfer, 2017; Sigurðsson, 2017: pp.196–204; Roberts, 2019: §6.2). The interpretation of implicit agents in short passives (as compared to implicit agents in active impersonals) is discussed in section 4.2.2.

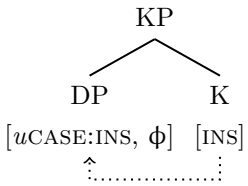
With regards to case, I take instrumental case to be an inherent case. There is good reason to analyse instrumental case on *by*-phrases as a non-structural case. Ergative and nominative case assignment is affected by finiteness and aspect. For example, both cases are ungrammatical in non-finite clauses. Additionally, ergative case is assigned with perfective aspect, while nominative case is assigned elsewhere,

[12] AC = anticausative (ex.31b). See section 4.4 for reanalysis of *jaa* as an anticausative marker in such contexts.

showing that these cases are assigned by specific featural values of T and Asp heads (S. Kidwai, 2019: pp.49–55; see also section 5.2.2). Instrumental case assignment to *by*-phrases is not affected by such factors. In particular, the case of *by*-phrases is unaffected by the value and absence of T and Asp heads. For example, instrumental case continues to be available in non-finite clauses where finite T is absent (see section 5.4). This indicates that instrumental case is not assigned by these higher functional heads. The only factor which determines instrumental case assignment is the type of Voice head present, active or non-active.

Following the assumption that inherent case nominals are selected as KPs (section 2.3), I take $\text{Voice}_{\text{PASS}}$ to select a KP with K valued as instrumental. The DP's case-feature is valued by K through Pesetsky & Torrego's (2007) Feature-Sharing, described in sections 2.3.1 and 3.2.

(32)



In this section, I have shown that the *by*-phrase is an EA generated in the specifier of a non-active Voice head, $\text{Voice}_{\text{PASS}}$. $\text{Voice}_{\text{PASS}}$ optionally projects its specifier. When the specifier is projected, $\text{Voice}_{\text{PASS}}$ selects for an instrumental KP (see section 4.3 for some thoughts on the connection between KP-selection and optional projection). When the *by*-phrase is not projected, the external θ-role is existentially bound. In the next section, we will look at the other half of passivisation, namely object promotion.

4.1.4 Object promotion

Traditionally, passives involve promotion of the object to subject position. Under the assumption that all nominals require case-licensing (Vergnaud, 1977/2008; Rouveret & Vergnaud, 1980; Chomsky, 1981, 2000, 2001), if accusative case is unavailable in passives, then the object must receive case from elsewhere. Since T does not assign case to the subject (either because the *by*-phrase has an oblique case, or because it is an adjunct or a PP argument), T is free to assign case to the object. Thus, T enters into Agree with the object to assign nominative case to it. As a result, the object moves to Spec-TP to satisfy T's optional EPP feature.

There are two processes at work here: nominal licensing via case assignment, and movement to Spec-TP. As we saw in Chapter 3, not all objects require case-licensing in Urdu, an outcome of which is differential object marking. For passives, we predict that objects which require case-licensing (i.e. humans) will always receive

nominative case, while objects which do not require case-licensing (i.e. non-humans) will not always receive nominative case, similar to obligatory and optional accusative case assignment in actives.[13] Once an object enters into Agree with T, it can be promoted to Spec-TP.[14] However, as we shall see in this section (and also section 4.4.1), not all objects which Agree with T move to Spec-TP.

Let us start by looking at case assignment. As mentioned earlier, objects may seemingly retain accusative case in Urdu passives, which has generally been interpreted as the same case(s) being available in passives as in actives (Davison, 1982; Mohanan, 1994: pp.183–91; Mahajan, 1995; Bhatt, 2003c, 2007). There is an important caveat to be made here. Object case does not behave identically in actives and accusative-preserving passives. As discussed in section 3.1, human objects require licensing through either pseudo-noun-incorporation or accusative case assignment. As a result, human objects which cannot be incorporated are obligatorily marked. This is in contrast to non-human objects, which may remain unlicensed, that is, unincorporated and unmarked. The following example of an active sentence is ungrammatical without accusative case on the human proper name (33).

(33) *Rami=ne* ***Omar*(=ko)*** *pakR-a.*
Rami=ERG Omar*(=ACC) catch-PFV.M.SG

'Rami caught Omar.'

However, human objects are grammatical both with and without marking in passives, as shown in (34).

(34) ***Omar(=ko)*** *pakR-a* *gya.*
Omar(=ACC) catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught.'

In the example above, when the object remains unmarked, it has not been licensed through either incorporation or accusative case assignment. The acceptability of such examples shows us that there must be another licensing mechanism

[13] As noted in section 3.4.2 (footnote 17), there is no assumption in my system that a head which *can* assign case, *must* assign case. Where T does not enter into Agree and assign case, its ϕ-features will be valued through Feature-Copying or default valuation at PF (see section 3.6.4).

[14] *Object promotion* and *object shift* are two distinct processes. Object promotion refers to movement of objects to a subject position, Spec-TP, to satisfy T's EPP feature. Object shift refers to movement of objects to a higher position, non-thematic Spec-ApplP, within the verbal domain to escape VP (see section 3.3). My analysis of the two characterises object promotion as movement motivated by Attract (to satisfy T's EPP feature), and object shift as movement motivated by Greed (to satisfy case-valued objects' need to move out of VP). I leave it open as to whether the distinction between Attract and Greed should be collapsed or not.

available in passives, one which is not available in actives. I propose that this licensing mechanism is nominative case assignment from T. Evidence for nominative case assignment comes from the distribution of objects in non-finite passive clauses and from agreement patterns with coordinated objects.

Nominative case is unavailable in non-finite clauses, as shown by the ungrammaticality of nominative subjects in these clauses (35).

(35) [***Rina*** / *Rina=ka* *bazaar=mein* *ho-na*] *sharam=ki* *baat*
[*Rina.NOM / Rina=GEN market=LOC be-INF] shame=GEN talk
he.
be.PRS.3SG

'For Rina to be in the market is a matter of shame.'

If certain objects require licensing via nominative case assignment, then we predict that they too will be ungrammatical in non-finite clauses. Conversely, objects which do not require licensing will be unaffected by the unavailability of nominative case, and will remain grammatical in non-finite clauses. This is borne out. In both sentences in (36), the object of the embedded non-finite passive clause cannot be incorporated as it is a proper name or DP, respectively. The human object, which requires licensing, is ungrammatical (36a), while the non-human object, which does not require licensing, is not (36b).

(36) a. [***Rina*** / *Rina=ka* *bazaar=mein* *dekH-a* *jaa-na*]
[*Rina / Rina=GEN market=LOC see-PFV.M.SG PASS-INF]
sharam=ki *baat* *he.*
shame=GEN talk be.PRS.3SG

'For Rina to be seen in the market is a matter of shame.'

b. [***vo*** ***peR*** / *us* *peR=ka* *is* *tarah=se* *kaaT-a*
[that tree / that tree=GEN this way=INS cut.CAUS-PFV.M.SG
jaa-na] *sharam=ki* *baat* *he.*
PASS-INF] shame=GEN talk be.PRS.3SG

'For that tree to be cut down like this is a matter of shame.'

(adapted from Bhatt, 2007: p.9)

Further evidence for nominative case assignment comes from agreement patterns with coordinated phrases. We saw in section 3.6.4 that coordinated subjects and objects in actives trigger different agreement patterns: subjects trigger resolved agreement, while objects trigger closest conjunct agreement. Following Bhatt &

Walkow (2013), I accounted for this as subject agreement being the result of syntactic Agree, and object agreement being the result of PF Feature-Copying. If objects in passives receive nominative case, that is, they enter into Agree with T, then we predict that coordinated objects in passives should show resolved agreement. This is correct. The examples below (37) have a masculine singular and a feminine singular conjunct but agreement is masculine plural due to the resolved feature set of the entire coordinated phrase. This is regardless of the order of conjuncts.

(37) a. [*Hira* *aur* *Omar*] { ***pakR-ay*** ***gaey*** /
[Hira.F and Omar.M].NOM { catch-PFV.M.PL PASS.PFV.M.PL /
**pakR-a* *gya* }
*catch-PFV.M.SG PASS.PFV.M.SG }

'Hira and Omar were caught.'

b. [*Omar* *aur* *Hira*] { ***pakR-ay*** ***gaey*** /
[Omar.M and Hira.F].NOM { catch-PFV.M.PL PASS.PFV.M.PL /
**pakR-i* *gai* }
*catch-PFV.F.SG PASS.PFV.F.SG }

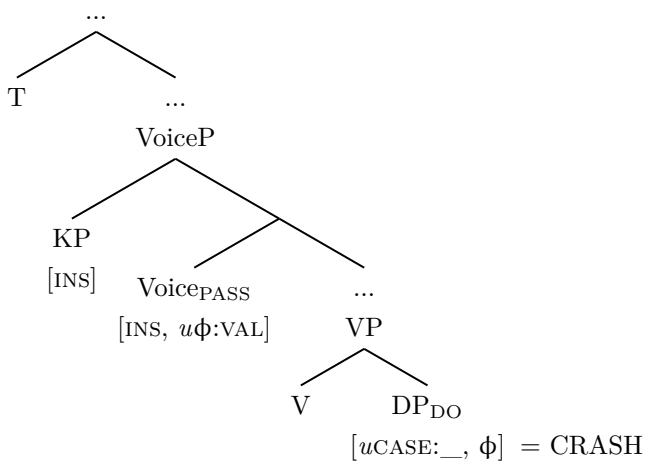
'Omar and Hira were caught.'

In section 3.2.2, I proposed that human objects have an unvalued *uninterpretable* case-feature, [*u*CASE:_], while non-human objects have an unvalued *interpretable* case-feature, [CASE:_]. Unvalued *uninterpretable*, but not unvalued *interpretable* features, cause a derivational crash. Consequently, the case-feature on human objects must be valued, while the case-feature on non-human objects is optionally valued. This leads to differential object marking in actives. In passives, uninterpretable case on human objects must be valued as nominative by T, while interpretable case on non-human objects need only be valued optionally.[15]

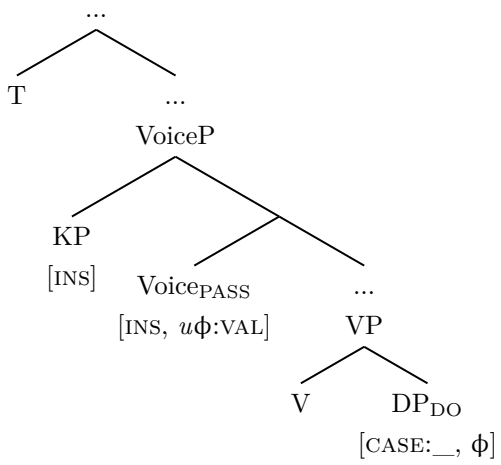
In non-finite passives, T is not able to assign nominative case. Non-finite clauses lack CP (Butt, 1995: pp.58–86, Keine, 2016: pp.77–110). Assuming T inherits its probing features from C via Feature Inheritance (Chomsky, 2008), non-finite T does not probe. This means that the uninterpretable case-feature on human objects will be left unvalued and cause a derivational crash (38a). On the other hand, unvalued interpretable case on non-human objects does not cause a crash, making such objects acceptable in non-finite clauses (38b).

[15]Although it may be possible that nominative objects also undergo object shift, similar to accusative objects, we will see evidence from dative predicates in section 5.3.2 showing that nominative objects can remain inside VP.

(38) a. Human object in non-finite passive:



b. Non-human object in non-finite passive:



What makes licensing of objects via nominative case assignment possible in passives but not in actives? The answer lies in the case of the subject. If the subject's case-feature is unvalued, T will always Agree with it, regardless of whether the object's case-feature has been valued or not, since the subject is higher than the object, and will be probed first. This is what we find in active clauses with ergative and nominative subjects. Conversely, in passives, the EA has inherent case and is selected as a KP with a valued case-feature. T cannot Agree with the EA, thus, is free to probe the object. Nominative case on objects of passives follows the same differential object marking pattern seen in accusative case assignment in actives: it is obligatory on objects that require licensing, and optional on objects that do not require licensing. The same situation arises with dative predicates. In section 5.3.2, I show that dative predicates have an unaccusative structure with no VoiceP (see also Belletti & Rizzi, 1988; Cuervo, 2020; see Subbarao, 2012: Ch.5, for Hindi-Urdu). Absence of (active) Voice means accusative case cannot be assigned to the object. The subject has inherent dative case, once again, leaving T free to probe the object and assign nominative case to it.

We now turn to object promotion. There are two questions at hand. Are objects promoted in passives? And if yes, are objects *always* promoted in passives?

As mentioned in section 4.1.2, Mahajan (1995) uses subjecthood diagnostics to show that there is no object promotion in Hindi passives. However, he only tests marked objects. Here, I show that unmarked objects pass subject tests and can undergo promotion. We will see in section 4.2.1 that marked objects do not undergo object promotion, in line with Mahajan's results.

Recall that the reflexive anaphor, *apna*, can be bound by subjects but not objects in active clauses. The direct object in (39a) c-commands the locative goal of *bHej-na* 'to send' but is unable to bind the anaphor. Conversely, unmarked objects in passives are able to bind anaphors (39b).

(39) a. *Rami$_i$=ne* *Omar$_j$=ko* ***apne$_{i/*j}$*** *gHar* *bHej-a.*
Rami$_i$=ERG Omar$_j$=ACC REFL$_{i/*j}$ house.LOC send-PFV.M.SG
'Rami$_i$ sent Omar$_j$ to his$_{i/*j}$ own house.'

b. *Omar$_i$* ***apne$_i$*** *gHar* *bHej-a* *gya.*
Omar$_i$.NOM REFL$_i$ house.LOC send-PFV.M.SG PASS.PFV.M.SG
'Omar$_i$ was sent to his$_i$ own house.'

On the other hand, objects but not subjects are able to bind non-reflexive pronominal possessors in actives (40a). Unmarked objects of passives are also unable to bind these pronominals (40b).

(40) a. *Rami$_i$=ne* *Omar$_j$=ko* ***us$_{*i/j/k}$=ke*** *gHar* *bHej-a.*
Rami$_i$=ERG Omar$_j$=ACC 3SG$_{*i/j/k}$=GEN house.LOC send-PFV.M.SG
'Rami$_i$ sent Omar$_j$ to his$_{*i/j/k}$ house.'

b. *Omar$_i$* ***us$_{*i/j}$=ke*** *gHar* *bHej-a* *gya.*
Omar$_i$.NOM 3SG$_{*i/j}$=GEN house.LOC send-PFV.M.SG PASS.PFV.M.SG
'Omar$_i$ was sent to his$_{*i/j}$ house.'

Finally, while objects in actives are unable to control into participial clauses (41a), unmarked objects in passives are able to do so (41b).[16]

[16] A counterexample is found in Srishti (2011: Ch.5):

(i) **Sita$_i$* [*PRO$_{*i}$* *ro* *kar*] *gHar=se* *bHej-i* *gai.*
Sita$_i$ [PRO$_{*i}$ cry do] house=INS send-PFV.F.SG PFV.PASS.F.SG
Intended: 'Having cried, Sita was sent home.' (Srishti, 2011: p.96)

(41) a. *Rami$_i$=ne* *Omar$_j$=ko* [***PRO$_{i/*j}$*** *kamre=mein* *jaa* *kar*]
Rami$_i$=ERG Omar$_j$=ACC [PRO$_{i/*j}$ room=LOC go do]
pakR-a.
catch-PFV.M.SG

'Rami went into the room and caught Omar.'
≠ 'Rami caught Omar when Omar went into the room.'

b. *Omar$_i$* [***PRO$_{i/j}$*** *kamre=main* *jaa* *kar*] *pakR-a*
Omar$_i$.NOM [PRO$_{i/j}$ room=LOC go do] catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Omar$_i$ was caught when he$_i$ went into the room.'

The results from subject tests show us that objects in passives can occupy a higher position than objects in actives. The results from the pronoun obviation test are particularly important, as pronoun obviation is only exhibited by subjects in Spec-TP (discussed in section 5.5). We now look at whether this promotion is obligatory. Evidence from idioms and binding relations shows us that it is not.

Elements inside idioms resist movement.[17] This is shown for an Urdu idiom below. Topicalising the object from the idiom, as in (43b), loses the idiomatic reading.

(42) *bHains=ke* *aagay* *biin* *baj-a-na*
buffalo=GEN front flute play-CAUS-INF

Literal: 'to play the flute in front of a buffalo'
Idiomatic: 'to do something futile'

(43) a. *Raam=ne* *bHains=ke* *aagay* ***biin*** *baj-a-ii.*
Raam=ERG buffalo=GEN front flute.F play-CAUS-PFV.F.SG

Literal: 'Raam played the flute in front of a buffalo.'
Idiomatic: 'Raam did something futile.'

b. ***biin$_1$*** *Raam=ne* *bHains=ke* *aagay* ***t$_1$*** *baj-a-ii.*
flute.F$_1$ Raam=ERG buffalo=GEN front t_1 play-CAUS-PFV.F.SG

Literal: 'The flute, Raam played in front of a buffalo.'
*Idiomatic: 'Raam did something futile.' (Keine, 2017: p.178–179)

[17] This is of course a simplification, as many works have shown that idioms vary in the extent of their internal compositionality (Nunberg, Sag & Wasow, 1994, and subsequent).

If object promotion always occurred in passives, then we would expect the idiomatic meaning to be impossible in passives. This is not so. The passive sentence in (44) can have the idiomatic meaning.

(44) *government-office* *jaa* *kar,* *sirf* *bHains=ke* *aagay* *biin*
government-office.LOC go do, only buffalo=GEN front flute
baj-a-i *gai.*
play-CAUS-PFV.F.SG PASS.PFV.F.SG

Literal: 'Upon going to the government office, only the flute was played in front of a buffalo.'
Idiomatic: 'Upon going to the government office, only time was wasted.'

Additional evidence comes from binding relations between the *by*-phrase and the object. Consider the example below.

(45) *Rami$_i$=se* ***apna$_i$*** ***bHai*** *pakR-a* *gya.*
Rami$_i$=INS REFL$_i$ brother.NOM catch-PFV.M.SG PASS.PFV.M.SG

'His$_i$ own brother was caught by Rami$_i$.'

In (45), the object is a human DP, *apna bHai* 'self's brother', which requires licensing. DPs cannot be incorporated; consequently, this object must be licensed by nominative case assignment. Yet this object is not promoted. The *by*-phrase binds the anaphor in the object, showing that the object must be lower than the *by*-phrase. Binding is not due to scrambling of the *by*-phrase over the landing site for object promotion, as scrambling does not create new binding possibilities (A. Kidwai, 2000; contra Mahajan, 1990: Ch.1; Bhatt & Keine, 2017). Lack of promotion is confirmed by testing for subject properties. When the *by*-phrase c-commands the object, as in (45), the object no longer passes subject tests. For example, in (46), the object cannot control into the participial clause.

(46) *Rami$_i$=se* *apna$_i$* *bHai$_j$* [***PRO$_{i/*j}$*** *gHar* *jaa* *kar*]
Rami$_i$=INS REFL$_i$ brother$_j$.NOM [PRO$_{i/*j}$ house.LOC go do]
pakR-a *gya.*
catch-PFV.M.SG PASS.PFV.M.SG

'Upon [Rami/his$_i$ own brother] going home, his$_i$ own brother was caught by Rami$_i$.'

I follow Bhatt (2007) in attributing optional promotion in passives to an optional EPP feature on T. Bhatt gives two supporting pieces of evidence for an optional EPP

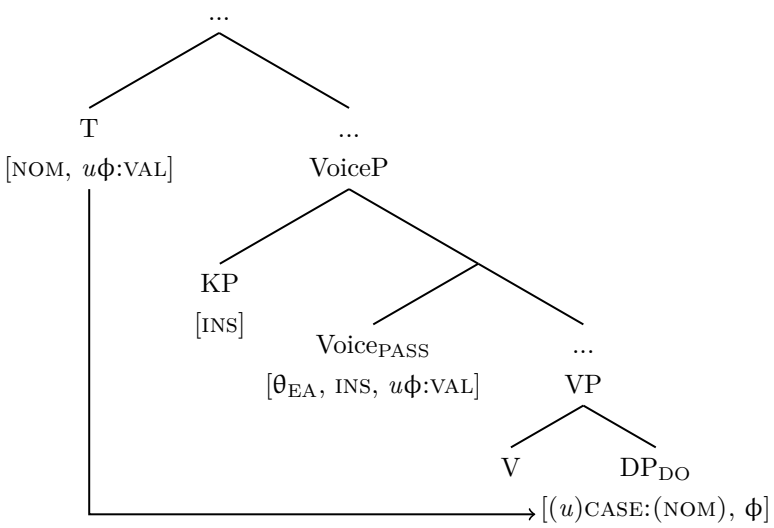
feature in Hindi-Urdu. Firstly, Hindi-Urdu does not have overt expletive subjects, such as *there* and *it* in English. Expletives contribute minimal independent semantic information, and simply act as 'dummies' to satisfy formal requirements, namely, T's EPP feature, in English (Chomsky, 1981: pp.323–25; Svenonius, 2002b; Deal, 2009). Lack of expletives in a language shows that T's EPP feature can remain unsatisfied. Secondly, Hindi-Urdu has inherent case subjects, which as we shall see in Chapter 5, do not move to Spec-TP, showing again, that T's EPP feature does not always need to be satisfied. Thus, nominative case assignment does not always result in object promotion.[18]

4.1.5 Analysis: $\text{Voice}_{\text{PASS}}$

In this section, I illustrate passive derivations, based on our findings from the previous sections.

In long passives (i.e. passives with *by*-phrases), $\text{Voice}_{\text{PASS}}$ projects a specifier, and assigns the external θ-role to it (47). $\text{Voice}_{\text{PASS}}$ selects an instrumental KP. $\text{Voice}_{\text{PASS}}$'s ϕ-features are valued under a Spec-Head relationship (see Koopman, 1996, and subsequent, on Spec-Head agreement, and Schütze, 2016, on the need for both Agree and Spec-Head agreement). When T probes, it cannot access the DP inside KP, and hence, does not Agree with the EA. Consequently, the EA does not move to Spec-TP, as Agree with T is a prerequisite for this movement (as we shall see in Chapter 5). T continues probing. The DO's case-feature is unvalued as $\text{Voice}_{\text{PASS}}$ cannot assign accusative case. T Agrees with the DO. T's ϕ-features are valued, resulting in object agreement. The DO's case-feature may or may not be valued as nominative, depending on the interpretability of its case-feature. Finally, the DO may undergo object promotion to Spec-TP (not shown), as a result of Agree with T.

(47)

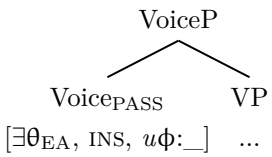


[18]Note that although object promotion is optional, movement of ergative/nominative subjects to Spec-TP in actives is obligatory. In section 5.5.3, I suggest the obligatory movement may be due to discourse requirements.

There is the question of how the object moves over the EA without violating Relativised Minimality (Rizzi, 1990). As we shall see in section 5.3.2, object promotion over the subject is also possible in dative predicates. I attribute this to the KP-status of the *by*-phrase/dative subject. KPs are not possible goals for Agree, as they do not have unvalued case-features. This means that T is able to probe past them and Agree with the object. Since Agree is a prerequisite for moving to Spec-TP, KP does not intervene in the object moving over it.

In short passives (i.e. passives without *by*-phrases), $\text{Voice}_{\text{PASS}}$ does not project a specifier (48). Here, the external θ-role is existentially bound (Keenan, 1980: p.339; Roberts, 1987: Ch.3; Williams, 1987; Bruening, 2013; Legate, 2014: Ch.2; Alexiadou et al., 2015: Ch.4; Schäfer, 2017; Sigurðsson, 2017: pp.196–204; Roberts, 2019: §6.2), shown with the existential operator, ∃, on the tree. $\text{Voice}_{\text{PASS}}$'s ϕ-features presumably receive default values at PF, although these are not seen in morphology. Agree between T and the DO proceeds as above.

(48)



4.2 Active Impersonals

In the previous section, we examined passives with unmarked objects. We now turn to accusative-preserving 'passives', which have been extensively reported in the literature (Hook, 1979; Davison, 1982; Mohanan, 1994: pp.94–96; Mahajan, 1995; Bhatt, 2007; Srishti, 2011: Ch.5; Montaut, 2018). I call these active impersonals, as termed by Blevins (2003). An example is given in (49a). Marked objects are also possible in passives of ditransitives (49b). (The instrumental phrase in ex.49b is a source and not a *by*-phrase.)

(49) a. ***Omar=ko*** *pakR-a* *gya.*
Omar=ACC catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught.'

b. ***kitaab(=ko)*** *Hira=se* *li-ya* *gya.*
book(=ACC) Hira=INS take-PFV.M.SG PASS.PFV.M.SG

'The book was taken from Hira.'

Cross-linguistically, active impersonals bear passive morphology,[19] allow accusative case, and tend to have a silent subject (or an impersonal pronoun in languages that have one) (Cinque, 1988; Maling, 1993; Maling & Sigurjónsdóttir, 2002, 2015; Blevins, 2003; Laszakovits, 2017; Roberts, 2019: §6.2; Legate et al., 2020; Šereikaitė, 2020: Ch.2). In the following sections, I present evidence illustrating that accusative-preserving passives in Urdu show the same set of properties. Accusative-marked objects in active impersonals exhibit no signs of being promoted (section 4.2.1). This, in conjunction with the impossibility of a *by*-phrase, suggests that they are underlyingly active. In section 4.2.2, I show that although no overt subject is possible, there is a silent *pro* present. This impersonal pronoun is obligatorily interpreted as human. Section 4.2.3 presents the analysis of $\text{Voice}_{\text{ACT-IMP}}$. The findings reported here are similar to those presented by Mohanan (1994: pp.183–91), although the formal analysis differs significantly.

4.2.1 Lack of object promotion

All previous analyses of Urdu passives assume that accusative objects do not undergo promotion (Davison, 1982; Mohanan, 1994: pp.183–91; Mahajan, 1995; Bhatt, 2003c, 2007). We can show this using subjecthood diagnostics.

Like objects in actives, marked objects do not show pronoun obviation (50a) nor control into participial clauses (50b).

(50) a. Pronoun obviation:

Omar$_i$=ko ***us$_{i/j}$=ke*** *gHar* *bHej-a* *gya.*
Omar$_i$=ACC 3SG$_{i/j}$=GEN house.LOC send-PFV.M.SG PASS.PFV.M.SG

'Omar$_i$ was sent to his$_{i/j}$ house.'

b. Control into participial clauses:

Omar$_i$=ko [***PRO$_{*i/j}$*** *kamre=mein* *jaa* *kar*] *pakR-a*
Omar$_i$=ACC [PRO$_{*i/j}$ room=LOC go do] catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Upon [the catcher/*Omar] going into room, Omar was caught.'

However, objects of active impersonals are unexpectedly able to bind anaphors (51). As mentioned in section 4.1.3, anaphor binding is usually reserved for subjects.

[19] Despite the proposed analysis, I continue to gloss the shared morphology between active impersonals and passives as PASS in this section. See section 4.5 for discussion on the spell-out of Voice heads.

(51) *Sita$_i$=ko* ***apne$_i$*** ***gHar=ke*** *paas dekH-a* *gya.*
Sita$_i$=ACC REFL$_i$ house=GEN near see-PFV.M.SG PASS.PFV.M.SG

'Sita$_i$ was seen near her$_i$ own house.' (Bhatt, 2003c: p.11)

Nonetheless, anaphor binding is possible here not because of object promotion, but rather because of the characteristics of *pro*. As we shall see in section 4.2.2, *pro* is unable to bind anaphors. In section 5.5, I show that some subject properties, including anaphor binding, are not associated with a specific position, but rather with relative structural prominence. Given that *pro* cannot bind anaphors, the object is the most prominent available binder in active impersonals. Thus, the possibility of anaphor binding is not evidence for promotion in this case.

Therefore, we can safely conclude that objects in active impersonals do not undergo promotion, and are in the same position as objects in actives.

4.2.2 External argument: *pro*

Two key properties of non-active Voice in Urdu are that it optionally projects a specifier, and that it assigns instrumental case to its EA. We have seen this for passives in the previous section, and we will see additional evidence from anticausatives in section 4.4. Active impersonals, however, never allow a *by*-phrase (52) (see also Mohanan, 1994: p.183).[20]

(52) ***(*Rami=se)*** *Omar=ko* *pakR-a* *gya.*
(*Rami=INS) Omar=ACC catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught (*by Rami).'

A large camp of previous analyses of Urdu passives claim that accusative case is retained because object promotion is optional (Davison, 1982; Mohanan, 1994: pp.183–91; Bhatt, 2003c, 2007). When the object is not promoted, it is assigned accusative case. Under these analyses, the impossibility of the *by*-phrase is unexpected – the accusative-preserving construction is a passive, and as such, Voice should be able to introduce a *by*-phrase, just as it does in passives with unmarked objects.

On the other hand, if the accusative-preserving construction is underlyingly active, as I have suggested, an ergative or nominative subject should be possible here. More accurately, an ergative or nominative subject should be obligatory, as in other

[20] An instrumental subject is possible with an (in)abilitative reading as shown below.

(i) *Rami=se* *Omar=ko* *nahi* *pakR-a* *gya.*
Rami=INS Omar=ACC not catch-PFV.M.SG PASS.PFV.M.SG
'Rami was unable to catch Omar.' (≠ 'Omar was not caught by Rami.')

active constructions. However, ergative and nominative subjects are not possible here (53).

(53) * ***Rami=ne*** / ***Rami*** *Omar=ko* *pakR-a* *gya.*
Rami=ERG / Rami.NOM Omar=ACC catch-PFV.M.SG PASS.PFV.M.SG

Intended: 'Rami caught Omar.'

Despite the impossibility of an overt subject, there is an implicit agent present. This can be detected through both truth-conditional semantics, and syntactic diagnostics. Anticausatives can be judged true regardless of whether an agent is part of the event or not, as they do not have an implicit agent (54a) (Bhatt & Embick, 2017). Conversely, active impersonals are only true if an agent is present (54b).

(54) a. *Omar* *gir* *rah-a* *tHa.* (anticausative)
Omar.NOM fall PROG-M.SG be.PST.M.SG

'Omar was falling.'

b. *Omar=ko* *gir-a-ya* *jaa* *rah-a* *tHa.* (AI)
Omar=ACC fall-CAUS-PFV.M.SG PASS PROG-M.SG be.PST.M.SG

'Omar was being made to fall.'

The implicit argument can also be detected through syntactic diagnostics. It can license agentive adverbs. In both examples below (55), the adverb modifies the catcher (the implicit agent), and not the person being caught (the object).

(55) a. *Omar=ko* ***jaan-buujH-kar*** *pakR-a* *gya.*
Omar=ACC deliberately catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught on purpose.'
(Not available: 'Omar got caught on purpose.')

b. *Omar=ko* ***ghalti=se*** *pakR-a* *gya.*
Omar=ACC mistake=INS catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught by mistake.'
(Not available: 'Omar got caught by mistake.')

The implicit agent can also control PRO (56, 57), showing that it is syntactically active.

(56) a. *Omar$_i$=ko* [***PRO$_{*i/j}$*** *bHaag kar*] *pakR-a* *gya.*
Omar$_i$=ACC [PRO$_{*i/j}$ run do] catch-PFV.M.SG PASS.PFV.M.SG

'Omar was caught by someone who was running.'
(Not available: 'Omar was caught while Omar was running.')

b. *Omar$_i$=ko* [***PRO$_{*i/j}$*** *Dar-te hue*] *pakR-a*
Omar$_i$=ACC [PRO$_{*i/j}$ fear-IPFV be.PTCP] catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Omar was caught by someone who was afraid.'
(Not available: 'Omar was caught while Omar was afraid.')

(57) *Sita$_i$=ko* [*PRO$_{i/j}$* *ro-te ro-te*] *gHar=se* *bHej-a*
Sita$_i$=ACC [PRO$_{i/j}$ cry-IPFV cry-IPFV] house=INS send-PFV.M.SG
gya.
PASS.PFV.M.SG

'Sita was sent from home while she/the sender was crying.'
(Bhatt, 2003c: p.11)

Finally, the phrase *by itself* is ungrammatical in active impersonals. As mentioned, *by itself* is only acceptable in the absence of an agent, as seen through its contrasting acceptability in active transitives (58a) versus anticausatives (58b). In active impersonals too, *by itself* is infelicitous (58c), showing that there is an implicit agent present.

(58) a. # *Rami=ne* *kHiRki* ***khud-ba-khud*** *toR-i.* (transitive)
Rami=ERG window self-with-self break.CAUS-PFV.F.SG

'Rami broke the window by itself.'
(Acceptable as 'Rami broke the window by himself.')

b. *kHiRki* ***khud-ba-khud*** *TooT gai.* (anticausative)
window.NOM self-with-self broke AC.PFV.F.SG

'The window broke by itself.'

c. # *kHiRki=ko* ***khud-ba-khud*** *toR-a* *gya.* (AI)
window=ACC self-with-self break.CAUS-PFV.M.SG PASS.PFV.M.SG

'The window was broken by itself.'

So far all the properties we have seen for implicit agents in active impersonals are the same as the properties we saw for implicit agents in short passives (section 4.1.3). The main distinguishing property is the interpretation of the implicit agent. (59) provides a minimal pair with a short passive and an active impersonal.[21] The implicit argument in the passive (59a) can be interpreted as either an agent or causer. This results in two interpretations: (i) the earthquake caused Ali to die, or (ii) someone caused Ali to die/someone killed Ali during the earthquake. The implicit argument of the active impersonal, on the other hand, can only be interpreted as a human agent. Thus, (59b) only has the second interpretation, and not the interpretation where the earthquake is the cause of death.

(59) a. *Ali* *zalzale=mein* *maar-a* *gya.*
Ali.NOM earthquake=LOC kill.CAUS-PFV.M.SG PASS.PFV.M.SG

'Ali died/was killed during the earthquake.'

b. *Ali=ko* *zalzale=mein* *maar-a* *gya.*
Ali=ACC earthquake=LOC kill.CAUS-PFV.M.SG PASS.PFV.M.SG

'Ali was killed during the earthquake.' (Peter Hook)

In fact, the difference in interpretation of the implicit argument in short passives versus active impersonals seems to be the main factor governing the choice in usage between the two constructions.[22] Bhatt (2003c) notes that the event in the active impersonal is interpreted as more intentional than in the passive. This is likely because the implicit agent can only be interpreted as human in the active impersonal, but can also be interpreted as a causing event in the passive. In addition, one may also expect a difference in interpretation of the object in active impersonals versus passives, given the optionality between structures with and without a marked object. However, there does not seem to be much interpretive difference between the objects of the two constructions, as far as I can tell. Accusative case is associated with definiteness effects in certain contexts, which may lend objects of active impersonals a definite interpretation. However, definiteness effects can also be achieved by other means. For example, unmarked objects in actives can also be interpreted as definite, as described in section 3.1. More importantly, nominative subjects are always interpreted as definite. This means that, despite the absence of accusative case, unmarked objects in passives can also be interpreted as definite, making it

[21] Thanks to an anonymous reviewer from (F)ASAL-11 for providing this example from Peter Hook's early work. I have not been able to access the work to locate the exact reference.

[22] Bhatt (2003c: p.14) also states that Magier (1990) and Hook (1985) report that the implicit agent in the active impersonal is associated with more definiteness than the the implicit agent in short passives.

difficult to identify any semantic difference between objects of active impersonals and passives.

I propose that the EA position in an active impersonal is occupied by a silent impersonal pronoun, which I call *pro*$_{\text{IMP}}$. In some languages, such as Icelandic, active impersonals have an overt impersonal pronoun (60).

(60) ***Það*** *var lamið stúlkuna í klessu.*
it$_{\text{EXPL}}$ was hit the-girl in a-mess

'The girl was badly beaten.' (Maling & Sigurjónsdóttir, 2002: p.98)

However, Urdu does not have any overt impersonal pronouns. For example, in a context where the English *one* may be used, Urdu has no overt element at all (61). The exact syntactic nature of the silent element in (61) is not important here, only that it is common in the language to express impersonal meanings through silent elements, making *pro*$_{\text{IMP}}$ in active impersonals not unusual for the language.

(61) __ *baRon=se battameezi nahi kar-te.*
__ elders=INS misbehaviour not do-IPFV.M.PL

'One does not misbehave with elders.'

Pro$_{\text{IMP}}$ has a [+human] feature but is not specified for ϕ-features. It is interpreted as generic without any context, and given context, it may refer to an agent with any combination of ϕ-features. Additionally, I propose that *pro*$_{\text{IMP}}$ lacks a D feature, [D]. Landau (2010) shows that implicit arguments differ in whether they can bind anaphors which he accounts for through the presence/absence of a D feature necessary for binding. He classifies *pro* as a *strong implicit argument* which has [D] and can bind anaphors. This is in contrast to the implicit agent in passives which Landau classifies as a *weak implicit argument*, lacking [D] and unable to bind anaphors. As we saw, *pro*$_{\text{IMP}}$ can act as a controller (56, 57), but it cannot bind anaphors (62). Consequently, it lacks [D], making it a weak implicit argument in Landau's terms and more underspecified than the usual *pro*.

(62) * ***apne*** *bHai=ko pakR-a gya.*
REFL brother=ACC catch-PFV.M.SG PASS.PFV.M.SG

'One's own brother was caught.'

This gives us the minimal feature set below (63). *pro*$_{\text{IMP}}$ is specified as [+human] but has no ϕ or D features.[23]

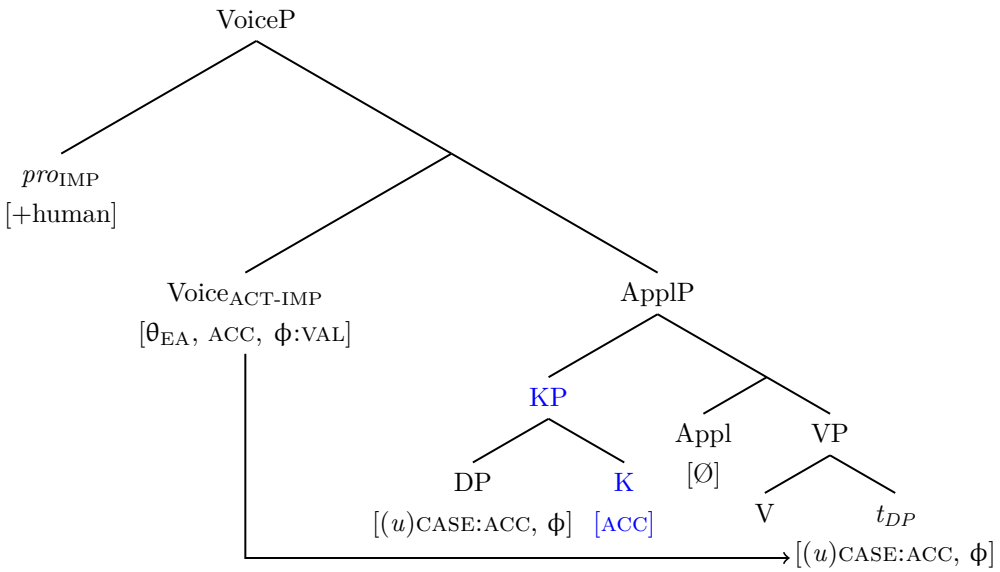
[23]This is similar to Egerland's (2003) characterisation of Swedish *man*, French *on* and Italian *si*.

(63) pro_{IMP}: [+human]

4.2.3 Analysis: $\text{Voice}_{\text{ACT-IMP}}$

I call the Voice head in active impersonals, $\text{Voice}_{\text{ACT-IMP}}$. As an active Voice head, $\text{Voice}_{\text{ACT-IMP}}$ obligatorily projects a specifier. It selects for pro_{IMP}, to which it assigns the external θ-role. Moreover, $\text{Voice}_{\text{ACT-IMP}}$ assigns accusative case to the object via Agree.[24] Following the analysis of differential object marking presented in section 3.2, human objects have uninterpretable case-features which must be valued, while non-human objects have interpretable case-features which are optionally valued. Accusative case assignment triggers object shift to non-thematic HApplP. K is Merged with the moved object, resulting in projection of KP. The derivation is illustrated in (64).

(64)



The need for object shift in active impersonals can be demonstrated through dative intervention. As we saw in section 3.7, the DO cannot receive accusative case in the presence of a dative IO, as dative IOs prevent object shift (65a). In active impersonals of ditransitives too, the DO cannot be marked with accusative case (65b).[25]

[24] I have used pro_{IMP} to motivate the presence of an active Voice head, which assigns accusative case. Baker & Vinokurova (2010) also propose that accusative-preserving passives in Sakha (Turkic) have a *pro* subject, and Baker (2019) proposes the same for Hindi. They argue that the presence of *pro* allows for dependent case assignment to the object, hence, accusative case is possible in these passives. They account for the optionality of preserving accusative case as optionality in the presence of *pro*.

[25] The impossibility of accusative case obscures the distinction between canonical passives and active impersonals of dative ditransitives, but the distinction is visible in ditransitives with sources (ex.49b).

(65) a. *Omar=ne* *Rami=ko* ***London(*=ko)*** *dikH-a-ya.*
Omar=ERG Rami=DAT London(*=ACC) see-CAUS-PFV.M.SG

'Omar showed Rami London.'

b. *Rami=ko* ***London(*=ko)*** *dikH-a-ya* *gya.*
Rami=DAT London(*=ACC) see-CAUS-PFV.M.SG PASS.PFV.M.SG

'Rami was shown London.'

Finally, the same differential object marking conditions seem to apply to objects in active impersonals as in regular actives. Active impersonals without accusative case are identical to passives but seem to be identifiable through the generic interpretation of the implicit agent in examples such as (66).

(66) *wahaan* *kutte* *paal-ey* *jaa-te* *hein.*
there dogs nurture-PFV.M.PL PASS-IPFV.M.PL be.PRS.3PL

'Dogs are raised there.'

To summarise, $\text{Voice}_{\text{ACT-IMP}}$ obligatorily projects a specifier and selects an impersonal pronoun to occupy this position. $\text{Voice}_{\text{ACT-IMP}}$ also assigns the external θ-role to its specifier. Like $\text{Voice}_{\text{ACT}}$, $\text{Voice}_{\text{ACT-IMP}}$ assigns accusative case to the direct object.

4.2.4 A note on accusative-preserving passives in Hindi

My analysis of accusative-preserving passives in Urdu as active impersonals relies on the crucial data point that the *by*-phrase is ungrammatical in these constructions (section 4.2.2, ex.52). If these were truly passives, one would expect *by*-phrases to be possible just as in canonical passives. Interestingly, the Hindi *by*-phrase, *X dwaara* 'through X', is grammatical in this construction (67).

(67) a. ***piita-jii*** ***dwaara*** *Sita=ko* *gHar=se* *bHej-a*
father-HON through Sita=ACC house=INS send-PFV.M.SG
gya.
PASS.PFV.M.SG

'Sita was sent from home by Father.'

b. ***Mina dwaara*** *Sita=ko* *pakR-a* *gya.*
Mina through Sita=ACC catch-PFV.M.SG PASS.PFV.M.SG

'Sita was caught by Mina.' (Bhatt, 2003c: pp.11–12)

The possibility of the *by*-phrase suggests that accusative-preserving passives are truly passives in Hindi, and that $\text{Voice}_{\text{PASS}}$ is able to assign accusative case. In section 4.3, I attribute $\text{Voice}_{\text{PASS}}$'s inability to assign accusative case in Urdu to the fact that it assigns inherent case. This follows from the assumption that each functional head is only able to assign case once. In Hindi, the *by*-phrase is not case-marked; it is a PP.[26] This means that $\text{Voice}_{\text{PASS}}$ does not assign an inherent case, unlike $\text{Voice}_{\text{PASS}}$ in Urdu, making it less surprising that it may be able to assign accusative case.

Although more work is needed on the differences between Urdu and Hindi passives, this brief foray suggests that seemingly superficial lexical differences between the two *by*-phrases are actually reflective of a difference in the Voice heads available in the two languages.

4.3 Interim Summary

In the above sections, I have shown that Urdu has two passive-like constructions. The first is a canonical passive with a passive Voice head, $\text{Voice}_{\text{PASS}}$, which optionally projects an EA in its specifier. The *by*-phrase has inherent case due to $\text{Voice}_{\text{PASS}}$ selecting a KP. The object receives nominative case from T, conditioned by the same licensing requirements as differential object marking in actives. Upon Agreeing with T, the object is eligible for promotion to Spec-TP to satisfy T's EPP feature. In this position, it then shows subject rather than object properties. This promotion is optional due to the optionality of T's EPP feature. Active impersonals, on the other hand, have a different Voice head, $\text{Voice}_{\text{ACT-IMP}}$, which is a type of active Voice head. $\text{Voice}_{\text{ACT-IMP}}$ obligatorily projects a specifier, and selects for a silent impersonal pronoun, pro_{IMP}, to occupy that specifier. Additionally, $\text{Voice}_{\text{ACT-IMP}}$ assigns accusative case to the object. The object does not undergo promotion.

I suggested earlier that lack of accusative case assignment by $\text{Voice}_{\text{PASS}}$ can be attributed to the fact that it assigns inherent case. We saw in section 4.2 that although active impersonals appear to be accusative-preserving passives superficially, they cannot have an instrumental case-marked argument. Where there is an instrumental case-marked argument, in what I have argued to be canonical passives, there is no accusative case. Accusative case and instrumental case are thus in complementary distribution. Complementary distribution between accusative case and oblique cases in Voice-related constructions is also reported by Kallulli & Roberts (2022). Looking at a range of constructions with non-active morphology in pri-

[26] Interestingly, *dwaara* optionally assigns genitive case to the nominal it occurs with, unlike other postpositions in the language: *Rami dwaara* 'Rami through' vs. *Rami=**ke** dwaara* 'Rami=GEN through'. This flexibility does not, however, extend to pronominal complements: **mein dwaara* '1SG through' vs. *mere dwaara* '1SG.GEN through'.

marily Albanian, Italian and English, they show that anticausatives, middles and passives all have similar oblique phrases which they argue receive case from non-active Voice heads. Such complementary patterns can be explained if we assume that each variant of Voice can assign one and only one case, as also stated by Kallulli & Roberts. Functional heads are generally associated with assigning a single case, be that structural or non-structural (Chomsky, 1981: p.171).[27] In split-systems too, it is different variants of the same head which assign different cases, not a single variant. Similarly, we can expect variants of Voice to either assign accusative or oblique case (instrumental in Urdu), but not both.[28]

Table 4.1 summarises the properties of active and non-active Voice heads.

Active Voice ($\text{Voice}_{\text{ACT}}$, $\text{Voice}_{\text{ACT-IMP}}$)	**Non-active Voice** ($\text{Voice}_{\text{PASS}}$)
Obligatory specifier	Optional specifier
Selects DP	Selects KP (K=INS)
Assigns external θ-role	Assigns external θ-role
Assigns ACC to DO	Does not assign ACC to DO

Table 4.1: Properties of active and non-active Voice in Urdu.

The two key differences that have emerged between active and non-active Voice heads are (i) obligatory versus optional projection of the specifier, and (ii) accusative versus instrumental case assignment. We must now ask ourselves whether there are really two properties which differ between active and non-active Voice, or whether there is one underlying difference which is observable in two ways. Here, I briefly consider one way in which the latter option may be pursued: by attributing obligatoriness versus optionality to the selection of DPs versus KPs.

As discussed in section 2.3.2, although KP is the highest projection in the extended nominal domain, it has some PP-like qualities (Bayer et al., 2001; McFadden, 2004: Ch.3; Asbury, 2008: Ch.2; Řezáč, 2008). I suggested that there is a DP-KP-PP size continuum (68), and that KP can be decomposed further, in line with Caha's (2009) split-KP hypothesis. Nominals with nominative case lack KP and behave like DPs. Locative case corresponds to the highest KP layer, and therefore, shows more PP-like behaviour.

[27] Some accounts of case assignment in Hindi-Urdu posit that the same head assigns inherent ergative case to its specifier, as well as structural accusative case to the direct object (e.g. Bhatt, 2005: p.767). Sigurðsson (2017) also proposes that Voice is involved in both accusative case assignment and quirky case assignment in Icelandic.

[28] Proponents of dependent case may argue that this is a roundabout way of capturing the same intuition, that the case of the higher argument affects case-assigning possibilities of the lower argument. Indeed, I do not deny this, as the intuition itself seems correct to me, and one that any approach to case should try to capture.

(68) Case size hierarchy:
$PP > KP_{LOC} > KP_{inherent} > KP_{structural} > DP/NOM$

We may speculate that the optionality of *by*-phrases arises from the closeness of inherent KPs to PPs, which are often optional even as arguments. McFadden (2004: p.55) also draws a connection between the similarity of inherent case to adpositions, and optional positions (although he explicity argues for these being adjuncts). However, it must be kept in mind that inherent case arguments are not always optional; for example, instrumental subjects of (in)abilitatives (section 4.1.1, ex.5), and dative subjects of dative predicates (see section 5.3) are obligatory. Therefore, more must still be said about what makes inherent case nominals optional with non-active Voice specifically.

4.4 Anticausatives

In this section, I examine the Urdu construction consisting of an unaccusative verb with the light verb *jaa* 'go'. I propose a reanalysis of this construction as a marked anticausative, with *jaa* as an anticausative marker. The term *anticausatives* refers to unaccusative verbs which participate in the causative alternation, and have a transitive counterpart. An English example is given in (69a).

(69) a. The window broke. (anticausative)

b. John broke the window. (transitive)

c. The window was broken. (passive)

Unaccusatives or anticausatives have a single argument which originates as the internal argument and surfaces in subject position (Perlmutter, 1978; Burzio, 1986: Ch.1). In this respect, anticausatives are similar to short passives (69c). Another similarity emerges with the unavailability of accusative case, shown in the German examples below (70).

(70) a. *Der* / ***Den*** *Teller zerbrach.* (anticausative)
the.M.SG.NOM / *the.M.SG.ACC plate broke

'The plate broke.'

b. *Rami zerbrach* ***den*** *Teller.* (transitive)
Rami broke the.M.SG.ACC plate

'Rami broke the plate.'

c. *Der* / ***Den*** *Teller wurde zerbrochen.* (passive)
the.M.SG.NOM / *the.M.SG.ACC plate was broken

'The plate was broken.' (p.c. Rami Aly)

Yet, a long line of literature has shown that anticausatives and passives are not the same (Levin & Rappaport Havov, 1995; Chierchia, 2004; Alexiadou et al., 2006, 2015; Bhatt & Embick, 2017). Passives have an EA, seen overtly as the *by*-phrase, and also present implicitly in the interpretation of short passives, as we saw in section 4.1.3. Anticausatives, on the other hand, do not have an EA. It cannot appear overtly as a *by*-phrase (71b), nor is it implicit in interpretation.

(71) a. The window was broken **(by John)**. (passive)

b. The window broke **(*by John)**. (anticausative)

The lack of an EA has led many to argue that anticausatives lack the relevant functional projection needed to introduce the EA (Chomsky, 1995: p.346; Folli & Harley, 2005; Ramchand, 2008: §4.3; Alexiadou et al., 2006, 2015: Ch.2; Schäfer, 2008: Ch.4). In our framework, this is VoiceP.

The challenge for these analyses comes from the fact that in many languages, marked anticausatives are indistinguishable from passives. The two share morphology (as do other non-active constructions, such as middles and reflexives), and additionally, introduce a similar-looking event participant. *Oblique causers* (OCs) can be expressed with anticausatives as PPs or oblique nominals. Although in some languages, like English, OCs are distinct in form from *by*-phrases (72), in others, such as Greek (73) and Albanian (74), OCs are identical to *by*-phrases.

(72) English:

a. The window was broken **by John**. (passive)

b. The window broke **from the pressure**. (anticausative)

(73) Greek:

a. *To hirografo* ***katastrafike*** ***apo*** *tin ipalilo.* (passive)
the manuscript destroyed-NACT by the employee

'The manuscript was destroyed by the employee.'

b. *To hirografo* ***katastrafike*** ***apo****/me tin pirkagia.* (anticausative)
the manuscript destroyed-NACT by/with the fire

'The manuscript got destroyed by the fire.'

(Alexiadou et al., 2006: pp.12–13)

(74) Albanian:

a. *Dritarju* ***u*** *kris* ***nga*** *Xhoni.* (passive)
window NACT crack from/by John

'The window was cracked by John.'

b. *Dritarju* ***u*** *kris* ***nga*** *presioni.* (anticausative)
window NACT crack from/by pressure

'The window cracked from the pressure.' (Kallulli, 2006: pp.172–73)

In languages where anticausatives both share morphology with passives and allow an OC identical to the *by*-phrase, the distinction between anticausatives and passives is blurred, weakening arguments against the presence of VoiceP in anticausatives. As a result, several works have argued that while *unmarked* anticausatives lack VoiceP, *marked* anticausatives do have a non-active Voice head present (Alexiadou et al., 2006, 2015: Ch.4; Kallulli, 2006, 2007; Schäfer, 2008: Ch.5, 2009b; Wood, 2015: Ch.3). The Urdu construction with the light verb *jaa* is one such example of blurred lines between anticausatives and passives. *Jaa* is homophonous with passive morphology, and as I will show in this section, also introduces an OC, identical to the *by*-phrase.

I begin by giving a brief overview of unaccusativity in Urdu (section 4.4.1). I then discuss the properties of light verb *jaa* and show that it exhibits more functional properties than other light verbs in the language (section 4.4.2).[29] Based on this, I propose a reanalysis of *jaa* as an anticausative marker, and a spell-out of Voice. In section 4.4.3, I examine the behaviour of the OC and show that it is an EA in Spec-VoiceP, and therefore, marked anticausatives must have a Voice head, which I call Voice_{AC}. Section 4.4.4 presents an analysis of Voice_{AC}. Like $\text{Voice}_{\text{PASS}}$, Voice_{AC} is a non-active Voice head: it optionally projects a specifier. and, when it does, it assigns instrumental case to it. However, unlike $\text{Voice}_{\text{PASS}}$, Voice_{AC} is non-thematic, in the sense of Schäfer (2008: Ch.7) and Alexiadou et al. (2015: Ch.4), in that, it does not assign an external θ-role (see also Wood, 2015: Ch.3). This has two effects. Firstly, it restricts the type of EAs that can Merge in the specifier of Voice_{AC} to causers. Causers do not receive a θ-role (Solstad, 2009) but are licensed in Spec-VoiceP (Schäfer, 2008: Ch.7; Wood, 2015: Ch.3). Secondly, when the OC is not projected, there is no implicit argument, as there is no θ-role to existentially bind

[29]Parts of the analysis presented in this section were developed as joint work with Frances Sobolak, and presented at (F)ASAL-13 (Kidwai & Sobolak, 2023). A version of this analysis will also appear as a co-authored paper in the conference proceedings of (F)ASAL-13. Thanks to audiences at the *Syntax and Semantics Circle* (University of California, Berkeley) and *(Formal) Approaches to South Asian Languages 13* (University of Michigan) for feedback at varying stages of this analysis.

at LF, in contrast to passives.

4.4.1 Unaccusatives in Urdu

Nearly all unaccusative verbs in Urdu participate in the causative alternation. In the NULL class, as labeled by Bhatt & Embick (2017), the intransitive is derived from the causative root by vowel simplification (75). In the -AA class, the causative is formed from the intransitive by adding a causative morpheme, *-a* (76).

(75)

	Unaccusative		**Causative**		**Gloss**
a.	*bigaR-na*	[bɪgəɽ-na]	*bigaaR-na*	[bɪgaːɽ-na]	'to spoil'
b.	*ubal-na*	[ʊbəl-na]	*ubaal-na*	[ʊbaːl-na]	'to boil'
c.	*gHul-na*	[gʰʊl-na]	*gHol-na*	[gʰol-na]	'to dissolve'
d.	*kHul-na*	[kʰʊl-na]	*kHol-na*	[kʰol-na]	'to open'

(76)

	Unaccusative		**Causative**		**Gloss**
a.	*bah-na*	[beh-na]	*bah-a-na*	[bəh-a-na]	'to flow'
b.	*jal-na*	[dʒəl-na]	*jal-a-na*	[dʒəl-a-na]	'to burn'
c.	*pigal-na*	[pɪgəl-na]	*pigl-a-na*	[pɪgl-a-na]	'to melt'
d.	*chamak-na*	[tʃəmək-na]	*chamk-a-na*	[tʃəmk-a-na]	'to shine'

Bhatt & Embick (2017) show that Hindi-Urdu unaccusatives do not have any syntactic representation of agentivity. This is despite the fact that Hindi-Urdu allows unaccusatives with encylopaedically agentive roots. Such roots are semantically associated with agentivity in their encyclopaedic entry, and in many languages, like English, do not form unaccusatives (77a). In Hindi-Urdu, however, encyclopaedically agentive roots are perfectly acceptable as unaccusative verbs. For example, the root 'cut' appears as an unaccusative, *kaT* [kʌʈ], in (78a) and as a causative/transitive, *kaaT* [kaːʈ], in (78b). Note the difference in vowel length which indicates the alternation in causativity.

(77) a. *Trees are cutting. (unaccusative)

b. The company is cutting trees. (causative)

(78) a. *peR* ***kaT*** *rah-e* *hein.* (unaccusative)
trees.NOM cut PROG-M.PL be.PRS.3PL

'Trees are being cut.' (Lit.: 'Trees are cutting.')

b. *company peR **kaaT** rah-i he.* (causative)
company.NOM trees cut.CAUS PROG-F.SG be.PRS.3SG

'The company is cutting trees.' (Bhatt & Embick, 2017: p.106)

Although it is difficult to see the difference in interpretation between unaccusatives and passives of encyclopaedically agentive roots, the lack of EA in unaccusatives is seen clearly through syntactic diagnostics. As we saw in section 4.1, short passives have an implicit agent, which can be seen through control into non-finite adverbials (79a). Such adverbials are ungrammatical in unaccusative constructions (79b), showing that there is no implicit argument to act as a controller.

(79) a. [*PRO kHaana kHa kar*] *peR kaaT-a jaa*
[PRO food eat do] tree.NOM cut.CAUS-PFV.M.SG PASS
rah-a he.
PROG-M.SG be.PRS.3SG

'The tree is being cut by someone, that someone having eaten food.'

b. *[*PRO kHaana kHa kar*] *peR kaT jaa rah-a he.*
[PRO food eat do] tree.NOM cut PASS PROG-M.SG be.PRS.3SG

Intended: 'The tree is cutting, [by someone] having eaten food.'
(Bhatt & Embick, 2017: p.107)

Further evidence is found with the licensing of agentive adverbials and *by itself*. Agentive adverbials are possible in short passives (80a), but not in unaccusatives (80b). Conversely, the phrase *by itself*, which is only licensed in contexts where there is no agent, is not possible in passives (81a) but is acceptable in unaccusatives (81b).[30, 31]

(80) a. *peR **ghalti=se** kaaT-a jaa rah-a he.*
tree mistake=INS cut.CAUS-PFV.M.SG PASS PROG-M.SG be.PRS.3SG

'The tree is being cut by mistake.'

[30] *By itself* is not possible with encyclopaedically agentive roots. This is presumably due to a clash in semantics rather than the presence of a syntactic agent.

[31] For Hindi, another diagnostic comes from the fact that passives but not unaccusatives can have the *by*-phrase, *X dwaaraa* 'through X'. See section 4.4.3 on Urdu *by*-phrases in anticausatives.

(i) a. *paani **(Ram dwaaraa)** ubaal-a jaa rah-a tHa.*
water.NOM (Ram through) boil.CAUS-PFV.M.SG PASS PROG-M.SG be.PST.M.SG
'The water was being boiled (by Ram).'

b. *paani **(*Ram dwaaraa)** ubal rah-a tHa.*
water.NOM (*Ram through) boil PROG-M.SG be.PST.M.SG
'The water was boiling (*by Ram).' (Bhatt & Embick, 2017: p.107)

b. **peR* ***ghalti=se*** *kaT jaa rah-a he.*
tree mistake=INS cut PASS PROG-M.SG be.PRS.3SG

'The tree is cutting by mistake.'

(81) a. **paani* ***khud-ba-khud*** *ubaal-a jaa rah-a*
water.NOM self-with-self boil.CAUS-PFV.M.SG PASS PROG-M.SG
tHa.
be.PST.M.SG

'The water was being boiled by itself.'

b. *paani* ***khud-ba-khud*** *ubal rah-a tHa.*
water.NOM self-with-self boil PROG-M.SG be.PST.M.SG

'The water was boiling by itself.'

The absence of an EA leads Bhatt & Embick (2017) to conclude that, like unaccusatives cross-linguistically, Hindi-Urdu unaccusatives also lack the EA-introducing functional head. For us, this means Hindi-Urdu unaccusatives lack VoiceP.

With respect to case, the single argument of unaccusatives does not have accusative case, despite originating as the direct object.

(82) ***Rami(*=ko)*** *gir rah-a he.*
Rami(*=ACC) fall PROG-M.SG be.PRS.3SG

'Rami is falling.'

We can identify that object licensing can take place through nominative case assignment via T by looking at non-finite clauses. The example below (83a) has a human object which requires licensing (section 3.2). Licensing via pseudo-noun-incorporation is also not possible as the object is a proper name. Since nominative case is not available in non-finite clauses, this DP must surface with genitive case, the default in non-finite clauses. In contrast, non-human objects, which do not require licensing and can remain caseless, are acceptable in non-finite clauses (83b).[32]

[32] Bhatt (2007) argues that unaccusative *v* can license objects in non-finite clauses, and assign a null case to them. Bhatt's supporting examples only have non-human objects, whose case-feature I have proposed may remain unvalued (section 3.2). The contrast between human and non-human objects (83a vs. b) is an indication that differences in licensing requirements are in play.

(83) a. [***Rami*** / *Rami=ka* *gir-na*] *sharam=ki* *baat* *he.*
[*Rami.NOM / Rami=GEN fall-INF] shame=GEN talk be.PRS.3SG

'For Rami to fall is a matter of shame.'

b. [***peR*** / *peR=ka* *gir-na*] *sharam=ki* *baat* *he.*
[tree / tree=GEN fall-INF] shame=GEN talk be.PRS.3SG

'For a/the tree to fall is a matter of shame.'

Additional evidence for nominative case assignment comes from agreement patterns with coordinated phrases. As discussed in section 3.6.4, coordinated subjects in actives trigger resolved agreement because they enter into Agree with T. Conversely, coordinated objects in actives trigger closest conjunct agreement because they do not Agree with T nor receive case from it. Agreement with objects comes about due to Feature-Copying at PF instead. In section 4.1.4, we saw that objects in passives also trigger resolved agreement, as they receive nominative case from T. We can show the same for objects of unaccusatives (84).

(84) a. [*Hira* *aur* *Omar*] { ***gir-te*** ***reh-te***
[Hira.F and Omar.M].NOM { fall-IPFV.M.PL PROG-IPFV.M.PL
hein / **gir-ta* *reh-ta* *he* }.
be.PRS.3PL / *fall-IPFV.M.SG PROG-IPFV.M.SG be.PRS.3SG }

'Hira and Omar keep falling.'

b. [*Omar* *aur* *Hira*] { ***gir-te*** ***reh-te***
[Omar.M and Hira.F].NOM { fall-IPFV.M.PL PROG-IPFV.M.PL
hein / *gir-ti* *reh-ti* *he* }.
be.PRS.3PL / *fall-IPFV.F.SG PROG-IPFV.F.SG be.PRS.3SG }

'Omar and Hira keep falling.'

In addition to having nominative case, objects of unaccusatives also show signs of promotion to subject position in Urdu. Like ergative and nominative subjects of transitives, objects of unaccusatives pass subject tests like anaphor binding (85a) and control into participial clauses (85b).

(85) a. *peR*$_i$ ***apni***$_i$ *jaga=se* *gir* *rah-a* *he.*
tree$_i$.NOM REFL$_i$ place=INS fall PROG-M.SG be.PRS.3SG

'The tree$_i$ is falling from its$_i$ own place.'

b. *peR$_i$* [***PRO$_i$*** *hawa=se hil kar*] *gir rah-a he.*
tree$_i$.NOM [PRO$_i$ wind=INS move do] fall PROG-M.SG be.PRS.3SG

'The tree is falling, having moved because of the wind.'

As with passives, object promotion is optional in unaccusatives. We can show this through binding between the oblique causer (which I argue in section 4.4.3 is in Spec-VoiceP) and the object. In (86), the quantifier in the oblique causer binds the pronoun in the object, showing that the object is c-commanded by the causer, and hence, is in a lower position.

(86) *har aurat$_i$=se us$_i$=ka bacha gir rah-a he.*
every woman$_i$=INS 3SG$_i$=GEN child.NOM fall PROG-M.SG be.PRS.3SG

'Her$_i$ child is falling because of every woman$_i$.'
('Every woman$_i$ is causing her$_i$ child to fall.')

We can attribute optional object promotion in unaccusatives to the optionality of EPP on T, as we did for passives (Bhatt, 2007).

Thus, Urdu unaccusatives behave quite standardly. They do not have a syntactically projected EA nor VoiceP, and they do not have accusative case. The object receives nominative case and moves to Spec-TP. Movement to Spec-TP is optional.

4.4.2 Reanalysing light verb *jaa*

Urdu has a number of highly productive light verbs (LVs) (Mohanan, 1994: Ch.8; Butt, 1995, 2003, 2010; Butt & Geuder, 2001; Butt & Ramchand, 2005; Butt et al., 2008; Butt & Lahiri, 2013). LVs share form with main verbs but are 'bleached', in that, they do not usually add to the event structure but rather contribute some aspectual information to the event (see Butt, 2003, 2010, for an overview). For example, the verb *give* in English is ditransitive and introduces a goal argument, *Jack* (87a). As a light verb, *give* does not have an argument structure, hence, a goal argument is ungrammatical (87b).

(87) English:

a. Fran **gave** a book to Jack. (lexical V)

b. Fran **gave** a sigh (*to Jack). (LV)

The same contrast can be seen in Urdu. The verb *le-na* 'to take' introduces a source argument as a lexical verb (88a), but not as a LV (88b). Instead, the LV adds a sense of completion to the event (88b vs. 89).

(88) a. *Nadya=ne* ***Ahmed=se*** *khat* ***li-ya.*** (lexical V)
Nadya=ERG Ahmed=INS letter take-PFV.M.SG

'Nadya took a letter from Ahmed.'

b. *Nadya=ne* ***(*Ahmed=se)*** *khat likH* ***li-ya.*** (LV)
Nadya=ERG (*Ahmed=INS) letter write take-PFV.M.SG

'Nadya wrote a letter (*from Ahmed) [completely].'

(89) *Nadya=ne khat likH-a.*
Nadya=ERG letter write-PFV.M.SG

'Nadya wrote a letter.'

The LV which is the focus of this section is *jaa* (90a). LV *jaa* is identical to the lexical verb 'go' (90b) and to the passive auxiliary (90c). As mentioned in section 4.1, both the LV and passive uses of *jaa* co-occur with another verb, which acts as the main verb describing the event. The main verb is in its root form with LV *jaa* (90a), and in its perfective form with passive *jaa* (90c).

(90) a. *baraf pigal* ***gai.*** (LV)
ice.NOM melt JAA.PFV.F.SG

'The ice melted [completely].'

b. *Rami* ***gya.*** (lexical)
Rami go.PFV.M.SG

'Rami went.'

c. *baraf pigl-a-i* ***gai.*** (passive)
ice.NOM melt-CAUS-PFV.F.SG PASS.PFV.F.SG

'The ice was melted.'

Jaa has been labelled as a LV in contexts like (90a) (Butt, 1995: pp.152–53). However, when we look at *jaa* through the lens of causativisation, constructions with unaccusative verbs plus *jaa* resemble and behave like marked anticausatives. As mentioned earlier, there is a cross-linguistic tendency for marked anticausatives to share morphology with passives. Taking the shared form of LV *jaa* and the passive auxiliary as a starting point, I examine the properties of LV *jaa*, and show that it exhibits more functional behaviour than other LVs in Urdu. I propose that this is so because *jaa* occupies a non-active Voice head found in anticausatives, Voice_{AC}.[33]

[33]A LV-analysis and a Voice-analysis of *jaa* are not mutually exclusive. In several languages,

4.4.2.1 Distribution

LVs in Urdu have several constraints on their combinatorial possibilities. Some of these constraints seem to be structural. For example, agentive or transitive LVs, like *le* 'take', do not combine with unaccusative verbs, like *gir-na* 'to fall' (91) (Butt, 2010: p.56).

(91) a. *Nadya ro lii.*
Nadya.NOM cry take.PFV.F.SG
'Nadya cried [and has finished].'

b. * *Nadya gir lii.*
Nadya.NOM fall take.PFV.F.SG
'Nadya fell [completely].' (adapted from Butt, 2010: p.56)

Other restrictions are idiosyncratic and unpredictable, likely due to the nuanced semantics of individual LVs (Butt, 2010). For example, LV *le* 'take' and *de* 'give' are both ditransitive and have similar syntactic structure but combine with different sets of lexical verbs (Table 4.2). This is different from the distribution of purely functional items, which do not show idiosyncratic variation in the lexical verbs with which they combine. For example, the passive auxiliary shows structural constraints on the types of verbs it occurs with, but not lexical constraints.[34]

		le	***de***
kHa-na	'to eat'	✓	×
pak-a-na	'to cook'	✓	✓
pHenk-na	'to throw'	×	✓

Table 4.2: Combinatorial possibilities of LVs *le* 'take' and *de* 'give'.

LV *jaa* has a mixed distribution. It occurs with all unaccusative verbs (Table 4.3), but is far more limited with unergatives (Table 4.4) and transitives (Table 4.5). There do not seem to be any syntactic or semantic factors conditioning the distribution of *jaa* with unergatives and transitives. For example, lexical class (shown on Tables 4.4 and 4.5) is not a useful predictor of which verbs *jaa* can combine with.

Moreover, the set of unergative and transitive verbs which can combine with *jaa* varies from dialect to dialect. For example, the causative form of run, *bHag-a-na*

including Urdu, LVs can stack which suggests that LVs within a language may occupy multiple and different positions. Butt & Ramchand (2005) and Butt, King & Ramchand (2008) propose that Hindi-Urdu LVs occupy functional heads roughly corresponding to Voice and *v* in my framework.

[34]There is one lexical exception which cannot be passivised, *chaah-na* 'to want', discussed in section 4.1.2.

	Verb	***jaa***
i.	*mar-na* 'to die'	✓
ii.	*kHul-na* 'to open'	✓
iii.	*kaT-na* 'to be cut'	✓
iv.	*pigal-na* 'to melt'	✓
v.	*gir-na* 'to fall'	✓
vi.	*nikal-na* 'to come out'	✓

Table 4.3: Distribution of *jaa* with unaccusatives (Kidwai & Sobolak, 2023: p.2).

	Verb	**Lexical Class**	***jaa***
i.	*bHaag-na* 'to run'	Activity	✓
ii.	*jaa-na* 'to go'	Activity	×
iii.	*naach-na* 'to dance'	Activity	×
iv.	*ro-na* 'to cry'	Activity	×
v.	*uTH-na* 'to get up'	Achievement	✓
vi.	*so-na* 'to sleep'	State	✓

Table 4.4: Distribution of *jaa* with unergatives (Kidwai & Sobolak, 2023: p.5).

	Verb	**Lexical Class**	***jaa***
i.	*kHa-na* 'to eat'	Activity	✓
ii.	*pii-na* 'to drink'	Activity	✓
iii.	*chakH-na* 'to taste'	Activity	×
iv.	*sun-na* 'to listen'	Activity	×
v.	*pakaR-na* 'to catch/hold'	Activity/Achievement	×
vi.	*le-na* 'to take'	Achievement	✓
vii.	*de-na* 'to give'	Achievement	✓
viii.	*bHag-a-na* 'to cause to run'	Achievement	×
ix.	*maar-na* 'to kill'	Achievement	×

Table 4.5: Distribution of *jaa* with transitives (Kidwai & Sobolak, 2023: p.5).

'to cause to run', cannot combine with *jaa* in Urdu (Table 4.5, row viii), but can do so in Hindi (*bHag-a jaa-na*) to mean 'to cause/convince to elope' (p.c. Sakshi Bhatia). However, no differences have been found with unaccusative verbs; that is, all unaccusative verbs in Hindi seem to be able to combine with *jaa* as in Urdu.

As I will show in the rest of this section, *jaa* with unaccusatives is unselective because it spells out a functional head, Voice_{AC}. On the other hand, *jaa* with unergatives and transitives shows more random distribution like other LVs in the language.

4.4.2.2 Semantic contribution

LVs modify the event specified by the main verb or eventive noun by adding aspectual information (e.g. telicity, durativity, directionality, agentivity, inception). For example, the choice of LV in (92) determines whether the predicate is agentive or non-agentive, which is also reflected in the case of the subject. This is in contrast to auxiliaries which only add information related to tense, aspect and modality. For example, tense auxiliaries can be added to the sentences in (92) to express temporality, without changing the nature of the predicate (93).

(92) a. *Nadya=ne kahani yaad* ***ki.***
Nadya=ERG story memory do.PFV.F.SG

'Nadya recalled/memorised the story.'

b. *Nadya=ko kahani yaad* ***aa-i.***
Nadya=DAT story.NOM memory come-PFV.F.SG

'Nadya remembered the story.' / 'The memory of the story came to Nadya.' (Butt, 2010: p.52)

(93) a. *Nadya=ne kahani yaad ki* ***he*** / ***tHi.***
Nadya=ERG story memory do.PFV.F.SG be.PRS.3SG / be.PST.F.SG

'Nadya has/had recalled/memorised the story.'

b. *Nadya=ko kahani yaad aa-i* ***he*** /
Nadya=DAT story.NOM memory come-PFV.F.SG be.PRS.3SG /
tHi.
be.PST.F.SG

'Nadya has/had remembered the story.' / 'The memory of the story has/had come to Nadya.'

Here again, we see mixed results with *jaa*. Looking first at unaccusatives, like other LVs, *jaa* adds aspectual information, specifically telicity, to the event (Butt, 1995: pp.152–54). The example below shows a minimal pair with the same question formed with and without the LV. The version without the LV (94a) can be answered with a quantified response, however, the same response is infelicitous for the question with the LV (94b).

(94) a. Q: *baraf* ***pigl-i?*** A: *thoRi-si.*
Q: ice.NOM melt-PFV.F.SG A: little-like

'Did the ice melt? A little.'

b. Q: *baraf* ***pigal gai?*** A: *#thoRi-si.*
Q: ice.NOM melt JAA.PFV.F.SG A: #little-like

'Did the ice melt [completely]? #A little.'

LVs are generally optional and only included to add relevant semantic information. This is the case for LVs such as *le* 'take', as we saw in (88b) versus (89). However, optionality is seen only to some extent with *jaa*. In neutral contexts, *jaa* is almost obligatory with unaccusative verbs; the version of (95) without *jaa* is highly marked.

(95) *Ahmed* { *mar gya* / ??? ***mar-a*** }.
Ahmed.NOM { die JAA.PFV.M.SG / ??? die-PFV.M.SG }

'Ahmed died.'

However, this preference does not hold in non-veridical or polar-type contexts, like questions (94a), conditionals (96a), focus clauses (96b), negation (96c), and so on.[35] Additionally, in some of these contexts, namely, focus clauses and negation, *jaa* is not possible at all.[36] I do not have an explanation for why this might be so.[37]

(96) a. *agar Ahmed* ***mar-a*** *to...* [conditional]
if Ahmed.NOM die-PFV.M.SG then...

'If Ahmed dies then...'

b. *Ahmed* ***mar-a*** *hii tHa keh...* [focus]
Ahmed.NOM die-PFV.M.SG FOC be.PST.M.SG that...

'Ahmed had only just died when...'

[35] Progressive aspect also allows for unaccusatives unaccompanied by LV *jaa* (see examples in section 4.4.1).

[36] Negation with narrow scope over the main verb is possible in contrastive contexts.

(ii) *baraf pigal nahi, JAM gai.*
ice.NOM melt not FREEZE JAA.PFV.F.SG
'The ice did not melt, it FROZE [completely].'

[37] It is interesting to note that the same set of contexts also give rise to (in)ability readings of the passive construction (Srishti, 2011: Ch.5), suggesting that there is something common to all these contexts which interacts with Voice or *jaa*.

c. *Ahmed* *nahi* ***mar-a.*** [negation]
Ahmed.NOM not die-PFV.M.SG

'Ahmed did not die.'

The fact that unaccusative verbs are strongly preferred with *jaa* suggests that it is a necessary functional item. This is similar to passive *jaa* which is required in the passive and is not optional.

Turning to *jaa* with unergatives and transitives, here adding *jaa* often changes the meaning of the predicate (97).

(97)

bHaag-na	'to run'	vs.	*bHaag jaa-na*	'to run away'
so-na	'to sleep'	vs.	*so jaa-na*	'to fall asleep / to go to sleep'
kHa-na	'to eat'	vs.	*kHa jaa-na*	'to eat up / to gobble'
pii-na	'to drink'	vs.	*pii jaa-na*	'to drink up / to gulp'

Unergative and transitive verbs are equally acceptable with and without LV *jaa*, likely due to the fact that the lexical verb on its own has a different meaning from the complex predicate with *jaa*.

Differences in semantic properties are further evidence that *jaa* with unaccusatives is different from *jaa* with unergatives and transitives, in that it has more functional than lexical properties.

4.4.2.3 Case

Some LVs affect the case of the subject (Butt, 1995: Ch.4; Butt, 2003, 2010; Butt & Geuder, 2001; Butt & Lahiri, 2013). Subjects of unergative verbs expressing bodily functions can have ergative case to express volitionality of the agent (see section 5.2.2). The verb *ro-na* 'to cry' is one such verb (98).

(98) a. *Nadya* *ro-i.*
Nadya.NOM cry-PFV.F.SG

'Nadya cried.'

b. ***Nadya=ne*** *ro-ya.*
Nadya=ERG cry-PFV.M.SG

Nadya cried [on purpose].'

In (99) and (100), the choice of LV affects the availability of ergative case on the subject. Transitive LV, *le* 'take' allows an ergative subject while unaccusative LV, *paR* 'fall(en)', requires a nominative subject and is ungrammatical with an ergative subject (100b).

(99) a. *Nadya ro li.*
Nadya.NOM cry take-PFV.F.SG

'Nadya cried [completed].'

b. ***Nadya=ne*** *ro li-ya.*
Nadya=ERG cry take.PFV.M.SG

'Nadya cried [completely] [on purpose].'

(adapted from Butt, 2010: p.56)

(100) a. *Nadya ro paR-i.*
Nadya.NOM cry fall-PFV.F.SG

'Nadya cried [spontaneously, involuntarily].'

b. * ***Nadya=ne*** *ro paR-a.*
Nadya=ERG cry fall-PFV.M.SG

'Nadya cried [spontaneously, involuntarily] [on purpose].'

(adapted from Butt, 2010: p.56)

LV *jaa* behaves like unaccusative LVs, in that it prohibits ergative case on the subject.[38] Transitive subjects which require ergative case in perfective aspect (101a) are ungrammatical with ergative case when *jaa* is added (101b).

(101) a. *Rami*****(=ne)*** *seb kHa-ya.*
Rami*(=ERG) apple eat-PFV.M.SG

'Rami ate an apple.'

b. *Rami****(*=ne)*** *seb kHa gya.*
Rami(*=ERG) apple eat JAA.PFV.M.SG

'Rami ate [up] an apple.'

With regards to object case, *jaa* does not have any effect. Objects of transitives are either marked or unmarked, depending on differential object marking conditions (section 3.1). The same options are available when *jaa* is added to a transitive verb (102). Objects of unaccusatives (i.e. the surface subject) cannot have accusative case, regardless of whether *jaa* is present.

[38]It may be striking to the reader that *jaa* behaves like an unaccusative, considering the lexical verb *go* is generally classified as unergative. However, *go* has been labelled as an unaccusative verb for Urdu (Butt, 1995: pp.152–54). Moreover, the distinction between unaccusative and unergative verbs in Urdu is tenuous at best with few clear diagnostics (see Ahmed, 2010, for a detailed discussion on the challenges of distinguishing unaccusatives and unergatives in Urdu).

(102) *Rami* ***seb=ko*** *kHa gya.*
Rami.NOM apple=ACC eat JAA.PFV.M.SG

'Rami ate [up] the apple.'

The fact that *jaa* does not affect object case with transitives shows that it is not an exponent of non-active Voice here. If this were true, we would expect accusative case to be unavailable when *jaa* is added to transitives.[39]

4.4.2.4 Two types of LV *jaa*

The data presented in the above sections shows that LV *jaa* has two behavioural patterns. When accompanying unergatives and transitives, it behaves like other LVs in the language: it has an unpredictable distribution with respect to which verbs it can occur with; it is optional; its presence adds semantic information; and it affects subject case. On the other hand, when found with unaccusative verbs, *jaa* behaves more functionally than other LVs: it occurs with all unaccusatives; it is not optional; and it does not affect subject case. I propose that constructions with an unaccusative verb and LV *jaa* are marked anticausatives, while unergatives/transitives plus *jaa* are canonical LV constructions. To reflect this, moving forward, I will gloss *jaa* with unaccusatives as AC (anticausative) and *jaa* with unergatives and transitives as 'go'.

Before moving on, I would like to mention one potential challenge for this analysis of LV *jaa* with unergatives and transitives. In general, LV constructions can be passivised in Urdu, shown with LVs *le* 'take' and *de* 'give' below (103). However, LV *jaa* cannot be passivised (104b).

(103) a. *khat* *likH* *li-ya* *gya.*
letter.NOM write take-PFV.M.SG PASS.PFV.M.SG

'The letter was written [completely].'

b. *makaan* *ban-a* *di-ya* *gya.*
house.NOM make-CAUS give-PFV.M.SG PASS.PFV.M.SG

'The house was made [completely, for somebody else].'

(104) a. *Rami* *seb* *kHa* *gya.*
Rami.NOM apple eat go.PFV.M.SG

'Rami ate [up] an/the apple.'

[39]Note that this does not rule out the possibility that *jaa* with transitives (and unergatives) may occupy active Voice (see footnote 33). I do not explore this possibility here.

b. **seb* *kHa* *gya* *gya.*
apple.NOM eat JAA.PFV.M.SG PASS.PFV.M.SG

Intended: 'The apple was eaten [up].'

This is not due to a constraint on consecutive identical forms (perfective LV *jaa* followed by perfective passive *jaa*). Imperfective aspect on the passive auxiliary is also ungrammatical (105).

(105) **seb* *kHa* *gya* *jaa-ta* *he.*
apple.NOM eat go.PFV.M.SG PASS-IPFV.M.SG be.PRS.3SG

Intended: 'The apple gets eaten [up].'

The fact that LV *jaa* cannot passivise suggests that it occupies a Voice head itself. As suggested in footnote 39, this may be active Voice. I do not expand on this further and set unergative/transitive plus *jaa* constructions aside for the rest of the discussion.

4.4.3 External argument: Oblique causer

We have seen that *jaa* behaves like a functional item with unaccusative verbs but we have seen little evidence so far that it is specifically an anticausative marker, as I have suggested. It is syncretic with the passive marker, as is common cross-linguistically, but this is not enough to propose an anticausative analysis. Here, I discuss a second piece of evidence: the introduction of an oblique causer. I show that this oblique causer behaves like an EA and, therefore, must occupy Spec-VoiceP. This provides evidence for the presence of Voice in marked anticausative constructions.

As we saw at the beginning of this chapter, many languages allow a causer with anticausatives, which is interpreted as being non-volitional. This causer is either a PP or an oblique case-marked nominal, and is thus called an *oblique causer* (OC). In some languages, like English, the OC is distinct from *by*-phrases found in passives (ex.72, repeated), while in others, such as Albanian, the OC is identical to the *by*-phrase (ex.74, repeated).

(72) English:

a. The window was broken **by John**. (passive)

b. The window broke **from the pressure**. (anticausative)

(74) Albanian:

a. *Dritarju* ***u*** *kris* ***nga*** *Xhoni.* (passive)
window NACT crack from/by John

'The window was cracked by John.'

b. *Dritarju* ***u*** *kris* ***nga*** *presioni.* (anticausative)
window NACT crack from/by pressure

'The window cracked from the pressure.' (Kallulli, 2006: pp.172–73)

Urdu anticausatives also allow OCs (106).[40] The OC is marked with instrumental case in the same way as *by*-phrases in passives are.

(106) ***garmi=se*** / ***Rami=se*** *baraf* *pigal gai.*
heat=INS / Rami=INS ice.NOM melt AC.PFV.F.SG

'The ice melted from the heat / because of Rami.'

Such instrumental causers cannot be added outside of anticausatives.[41]

(107) a. *guRiya* *(*****Rami=se****)* *naach-i.* (unergative)
doll.NOM (*Rami=INS) dance-PFV.F.SG

'The doll danced (*because of Rami).'

b. *Rami=ne* *(*****Omar=se****)* *baraf* *pigl-a-i.* (causative)
Rami=ERG (*Omar=INS) ice.NOM melt-CAUS-PFV.F.SG

'Rami melted the ice (*because of Omar).'

Recall that there is a strong preference to include LV *jaa* with unaccusative verbs in neutral contexts (section 4.4.2.2). *Jaa* is only dropped in polar-like environments, such as questions, conditionals, focus clauses, negation, and so on. The OC can be included in these contexts even when *jaa* is absent (108).[42]

[40] Interestingly, it is not possible to add an OC with an animate internal argument.

(i) ***(*Bilal=se)*** *Ahmed* *mar* *gya.*
(*Bilal=INS) Ahmed.NOM die AC.PFV.M.SG
Intended: 'Ahmed died by Bilal.' / 'Bilal caused Ahmed to die.'

[41] (107b) is acceptable in some dialects as an indirect causative with the reading 'Rami made Omar melt the ice' (Saksena, 1980, 1982). Here too, *Omar* is not an oblique causer but rather a causee.

[42] Thanks to an anonymous reviewer for (F)ASAL-13 for this example.

(108) ***Ahmed=se*** *glass* *gir-a* ***hii*** *tHa* *keh* *Mina*
Ahmed=INS glass.NOM fall-PFV.M.SG only be.PST.M.SG that Mina.NOM
chiikh-ne *lag-i.*
scream-INF hit-PFV.F.SG

'The glass had just dropped because of Ahmed, when Mina started screaming.'

One possible conclusion from examples such as (108) is that the OC is not correlated with *jaa* at all, and hence, examining the properties of the OC to analyse *jaa* is misguided. An alternative interpretation of these facts is that the OC *is* correlated with *jaa*, and that the absence of *jaa* in cases like (108) is due to independent factors allowing the LV to be dropped. Given the general preference for *jaa* with unaccusative verbs, and the fact that the OC cannot occur freely in other contexts, I take the latter approach. I do not explore why *jaa* may only be dropped under certain conditions, as that is beyond the scope of this dissertation.

4.4.3.1 Previous analyses

Theoretically, OCs have played an important role in determining the structure of anticausatives. In particular, their status as either EAs or adjuncts is taken as evidence for the presence or absence, respectively, of a Voice head.

Schäfer (2008: Ch.2, 2009b) and Alexiadou et al. (2006, 2015: Ch.2) argue that OCs do not show any EA properties, and hence are PP-adjuncts licensed by v_{CAUS}.[43] The bulk of their evidence comes from agentivity tests, such as control into purpose clauses, licensing of agentive adverbs, and licensing of instrumental PPs. OCs are not able to pass any of these tests (109–111), in contrast to *by*-phrases of passives (and EAs of active clauses).

(109) Control into purpose clauses:

a. The window was broken by John [PRO to enter the house].

b. *The window broke from the pressure [PRO to enter the house].

(110) Licensing of agentive adverbs:

a. The window was broken deliberately by John.

b. *The window broke deliberately from the pressure.

[43] See Alexiadou et al. (2006) and Alexiadou et al. (2015: Ch.2) for argumentation showing anticausatives involve v_{CAUS}, contra Pylkkänen (2002, 2008: Ch.3), who claimed that v_{CAUS} is only found in causatives.

(111) Licensing of instrumental PPs:

a. The window was broken by John with a hammer.

b. *The window broke with a hammer. (Alexiadou et al., 2015: p.20)

As Schäfer (2008: pp.54–57) and Alexiadou et al. (2015: pp.20–22) note, these diagnostics have received criticism because they only test for the presence of intentional (human) agents, and not other types of EAs. OCs, however, tend to be non-human or unintentional human causers, and thus, are not expected to pass these diagnostics regardless of whether they are EAs. Kallulli (2006, 2007), in particular, argues that, for languages where passives and anticausatives share morphology, and *by*-phrases and OCs are introduced by identical prepositions (or marked with identical case), given that the diagnostics for detecting EAs are flawed, there is no good reason to posit that passives are formed using a different operation than anticausatives. She proposes that both passives and anticausatives are formed using the same operation (of which non-active morphology is a reflex), but differ with respect to the type of *v*. Anticausatives have v_{BECOME} while passives have v_{CAUS}. This leads to different interpretations of *by*-phrases and OCs. In our model, this would mean that both passives and anticausatives have the same non-active Voice head, built on top of different *v*Ps.

To counter such criticism, Schäfer and Alexiadou et al. show that in the absence of an OC, anticausatives are able to license *by itself*. Anticausatives can be contrasted with short passives, which do not have an explicit EA, and yet, still do not license *by itself*, showing that there is an implicit argument present. The fact that anticausatives without OCs do license *by itself* shows that there is no implicit argument. Together with the agentivity tests, Schäfer and Alexiadou et al. take this as evidence that there is no EA in anticausatives. They propose that Voice in marked anticausatives does not project a specifier, and that the OC is an adjunct. Moreover, they propose that unlike passive Voice, anticausative Voice does not assign a θ-role, making it a non-thematic Voice head.

I apply various tests to Urdu OCs and show that, like *by*-phrases, they are EAs and not adjuncts. This leads me to propose that marked anticausatives have a non-active Voice head, Voice_{AC}, which optionally projects a specifier. However, while OCs pattern with *by*-phrases with regards to their argument-status, the two differ in interpretation. OCs are obligatorily interpreted as non-volitional. Additionally, when not overt, there is no implicit argument present, syntactically or semantically. I propose that the differences between *by*-phrases and OCs arise due to differences in the type of non-active Voice head that is present in anticausatives and passives respectively. As we saw in section 4.1.5, $\text{Voice}_{\text{PASS}}$ assigns a θ-role, which is existentially bound when no specifier is projected, leading to an implicit agent in

interpretation. Following Schäfer (2008: Ch.4) and Alexiadou et al. (2015: Ch.4), I propose that Voice_{AC} is a non-thematic Voice head, which does not assign a θ-role. This accounts for the causer interpretation of OCs and the lack of implicit agent when there is no overt argument (see Wood, 2015: Ch.3, for a similar proposal).

4.4.3.2 Behaviour of Urdu OCs

Bhatt & Embick (2017: fn.22) categorise Hindi-Urdu OCs as 'manner/means adjunct[s] and not related to a syntactically present agent'. This is based on the non-volitionality of OCs and their lack of control into participial clauses (one of the key subject tests in Hindi-Urdu; see section 5.1). Here, I demonstrate that even though OCs are obligatorily interpreted as non-volitional, they pass subject tests, including control into participial clauses, showing that they are EAs.

OCs pass subject tests in the same way as *by*-phrases. They are able to bind anaphors (112b) and control into participial clauses (113b) (contra Bhatt & Embick, 2017: fn.22).

(112) a. ***Rami$_i$=se apni$_i$*** *kHiRki* *toR-i* *gai.*
Rami$_i$=INS REFL$_i$ window.NOM break.CAUS-PFV.F.SG PASS.PFV.F.SG

'His$_i$ own window was broken by Rami$_i$.'

b. ***Rami$_i$=se apni$_i$*** *kHiRki* *TooT* *gai.*
Rami$_i$=INS REFL$_i$ window.NOM break AC.PFV.F.SG

'His$_i$ own window broke because of Rami$_i$.'

(113) a. ***Rami$_i$=se*** [***PRO$_i$*** *zor* *laga kar*] *kHiRki* *toR-i*
Rami$_i$=INS [**PRO$_i$** force put do] window.NOM break.CAUS-PFV.F.SG
gai.
PASS.PFV.F.SG

'Upon [Rami] applying force, the window was broken by Rami.'

b. ***Rami$_i$=se*** [***PRO$_i$*** *ball maar kar*] *kHiRki* *TooT* *gai.*
Rami$_i$=INS [**PRO$_i$** ball hit do] window.NOM break AC.PFV.F.SG

'Upon [Rami] hitting the ball, the window broke because of Rami.'

Like *by*-phrases, and unlike ergative/nominative subjects of active clauses, OCs do not pass the third subject test, pronoun obviation. OCs are able to bind non-reflexive pronominal possessors (114b).

(114) a. ***Rami$_i$=se*** ***us$_i$=ki*** *kHiRki* *toR-i*
Rami$_i$=INS 3SG$_i$=GEN window.NOM break.CAUS-PFV.F.SG
gai.
PASS.PFV.F.SG

'His$_i$ window was broken by Rami$_i$.'

b. ***Rami$_i$=se*** ***us$_i$=ki*** *kHiRki* *TooT* *gai.*
Rami$_i$=INS 3SG$_i$=GEN window.NOM break AC.PFV.F.SG

'His$_i$ window broke because of Rami$_i$.'

As I will show in section 5.5.2, this is because *by*-phrases and OCs remain in Spec-VoiceP and do not move to Spec-TP, unlike ergative/nominative subjects of active clauses. This is due to the fact that *by*-phrases and OCs do not Agree with T as they have inherent case (see section 4.1.3 for *by*-phrases; see below for OCs). Consequently, *by*-phrases and OCs show a subset of subject properties.

Despite their EA-status, Urdu OCs are obligatorily interpreted as being non-volitional, as causers but not as agents. To illustrate, the anticausative construction in (115) can be used to describe the situation in (115a) but not (115b).

(115) *Rami=se* *vase* *TooT* *gya.*
Rami=INS vase.NOM break AC.PFV.M.SG

'The vase broke because of Rami.'

a. Context: Rami bumps into a vase causing it to fall and break. ✓

b. Context: Rami picks up a vase and smashes it on the ground. ×

The non-volitionality of OCs is also seen by applying agentivity tests. OCs are not able to license purpose clauses (116a), unlike *by*-phrases (116b). Furthermore, OCs can only license those agentive adverbs which express non-volitionality, such as *by mistake* (117).

(116) a. **kHiRki* *Rami=se* [*gHar=mein* *daakhil* *ho-ne*]*=ke* *liye*
Window.NOM Rami=INS [house=LOC enter be-INF]=GEN for
TooT *gai.*
break AC.PFV.F.SG

Intended: 'The window broke because of Rami so that he could enter the house .'

b. *kHiRki* *Rami=se* [*gHar=mein* *daakhil* *ho-ne*]=*ke* *liye*
window.NOM Rami=INS [house=LOC enter be-INF]=GEN for
toR-i *gai.*
break.CAUS-PFV.F.SG PASS.PFV.F.SG

'The window was broken by Rami to enter into the house.'

(117) *Rami=se* *kHiRki* ***ghalti=se*** / ***#jaan=ke*** *TooT* *gai.*
Rami=INS window.NOM mistake=INS / #know=GEN break AC.PFV.M.SG

'The window broke because of Rami by mistake / #on purpose.'

Additionally, OCs are able to license adverbial clauses (118) which require an EA licensor but are insensitive to agentivity.

(118) *Rami=se* [*kHa-te* *kHa-te*] *ice-cream* *pigal* *gai.*
Rami=INS [eat-IPFV eat-IPFV] ice-cream.NOM melt AC.PFV.F.SG

'The ice cream melted because of Rami as he was eating.'

Similarly, OCs are able to license instruments, although only in contexts which support non-volitional readings. For example, the sentence in (119) is felicitous with the context in (119a) but not (119b) because the former but not the latter allows for an unintentional reading of the OC.[44]

(119) *Omar=se* *kHiRki* *baT=se* *TooT* *gai.*
Omar=INS window.NOM bat=INS break AC.PFV.F.SG

'The window broke because of Omar with a bat.'

a. Context: Omar is playing cricket. He swings the bat and it smashes into the window behind him. ✓

b. Context: Omar is trying to break into a house. He picks up a bat and smashes the window. ×

So far we have seen that OCs pattern consistently like EAs, specifically *by*-phrases, with the exception that they must be interpreted as unintentional causers. A key difference between anticausatives and passives emerges in the absence of the EA. In passives, when the *by*-phrase is not projected, there is both semantic and syntactic evidence for an implicit agent (section 4.1). In anticausatives, however, when the OC is not overt, there is no evidence for the presence of an implicit argument.

[44] Schäfer (2008: pp.98–99) makes the same observation for OCs in German anticausatives.

Firstly, anticausatives are judged as true in contexts where there is no agent or causer present; (120a) is true even when there is no agent/causer to cause the event (e.g. if the ice cream melted due to general weather conditions). In contrast, the short passive in (120b) is only true if there is an agent/causer which causes the event (i.e. the ice cream melted due to the actions of an agent or due to an event, not simply from the heat of the sun).

(120) a. *ice-cream* *dHoop=mein* *pigal* *gai.*
ice-cream.NOM sun=LOC melt AC.PFV.M.SG

'The ice cream melted in the sun.'

b. *ice-cream* *dHoop=mein* *pigl-a-i* *gai.*
ice-cream.NOM sun=LOC melt-CAUS-PFV.F.SG PASS.PFV.M.SG

'The ice cream was melted in the sun [by someone/something].'

Turning to syntactic diagnostics, participial clauses with PRO subjects are possible in short passives, as we saw earlier (ex.30, repeated), but are not possible in anticausatives without OCs (121). This is because there is an implicit agent in short passives to control the PRO subject of such clauses but not in anticausatives.

(30) [***PRO*** *kHaana* *kHa* *kar*] *peR* *kaaT-a* *jaa* *rah-a*
[PRO food eat do] tree cut.CAUS-PFV.M.SG PASS PROG-M.SG
he.
be.PRS.3SG

'The tree is being cut [by someone], [that someone] having eaten food.'
(Bhatt & Embick, 2017: p.107)

(121) #[***PRO*** *kHaana* *kHa* *kar*] *peR* *kaT* *gya.*
[PRO food eat do] tree cut AC.PFV.M.SG

'The tree was cut, [the tree] having eaten food.'

Similarly, anticausatives without OCs cannot have agentive adverbs, even non-volitional ones as in (122), since there is no agent to license such adverbs.

(122) * *baraf* ***ghalti=se*** *pigal* *gai.*
ice mistake=INS melt AC.PFV.F.SG

'The ice melted by mistake.'

Finally, anticausatives but not short passives can license *by itself* (123a vs. b), again showing that there is no implicit agent present.

(123) a. *kHiRki* ***khud-ba-khud*** *TooT gai.*
window.NOM self-with-self broke AC.PFV.F.SG

'The window broke by itself.'

b. #*kHiRki* ***khud-ba-khud*** *toR-i* *gai.*
window.NOM self-with-self break.CAUS-PFV.F.SG PASS.PFV.F.SG

'The window was broken by itself.'

Thus, we can see that when there is no OC projected, there is no implicit argument in anticausatives. This is contrary to passives, which retain an implicit agent even when the *by*-phrase is not projected. I propose that these differences arise due to differences in the respective Voice heads present in these two constructions, detailed in section 4.4.4.

A note on unergatives and transitives

At this point, it is worth revisiting unergative/transitive plus *jaa* constructions to see if an OC-type argument is also possible with those predicates. If yes, then this would be strong evidence in favour of a non-active Voice analysis of LV *jaa* with unergatives/transitives, contrary to what I suggested earlier. However, this is not the case. Most complex predicates with an unergative/transitive verb and LV *jaa* do not allow an OC. When an instrumental phrase is possible, it is either interpreted as a source (124) or as a means adjunct (125).

(124) a. *Rami* ***Omar=se*** *bHaag gya.*
Rami.NOM Omar=INS run AC.PFV.M.SG

'Rami ran away from Omar.'
≠ 'Rami ran away because of Omar.' / 'Omar caused Rami to run away.'

b. *Rami* ***Omar=se*** *maths seekH gya.*
Rami.NOM Omar=INS maths learn AC.PFV.M.SG

'Rami learnt maths from Omar.'
≠ 'Rami learnt maths because of Omar.' / 'Omar caused Rami to learn maths.'

(125) *Rami* ***Omar=se*** *so* *gya.*
Rami.NOM Omar=INS sleep AC.PFV.M.SG

'Rami went to sleep because of Omar.' / 'Omar put Rami to sleep.'

Additionally, the instrumental phrase does not pass subject tests the way OCs do, showing it is not an EA. This is demonstrated with anaphor binding (126a) and control into participial clauses (126b) below.

(126) a. * ***Rami$_i$=se apna$_i$*** *beTa so gya.*
Rami$_i$=INS REFL$_i$ son.NOM sleep AC.PFV.M.SG

'His$_i$ own son went to sleep because of Rami$_i$.' / 'Rami$_i$ put his$_i$ own son to sleep.'

b. Control into participial clause:

* ***Rami$_i$=se*** [***PRO$_i$*** *gaana gaa kar*] *Omar so gya.*
Rami$_i$=INS [PRO$_i$ song sing do] Omar.NOM sleep AC.PFV.M.SG

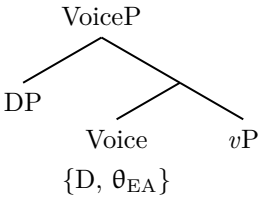
'Upon [Rami] singing a song, Omar went to sleep.'

Thus, there is no evidence for the addition of an argument, especially an EA, in uses of LV *jaa* with unergatives and transitives. This further corroborates that uses of *jaa* with unaccusatives are distinct from uses of *jaa* with unergatives and transitives.

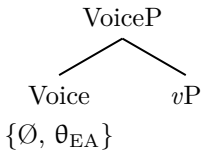
4.4.4 Analysis: Voice$_{AC}$

Alexiadou et al. (2015: Ch.4) propose that Voice may be either thematic or non-thematic. Thematic heads assign a θ-role, in contrast to non-thematic heads which do not. Both thematic and non-thematic Voice may or may not project a specifier, which Alexiadou et al. encode as D. These two properties of Voice heads lead to a four-way typology, shown in (127).

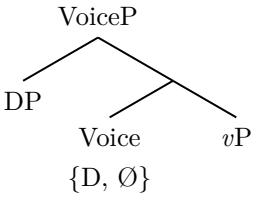
(127) a. thematic with specifier



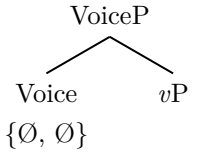
b. thematic without specifier



c. non-thematic with specifier



d. non-thematic without specifier



(Alexiadou et al., 2015: p.109)

According to Alexiadou et al., active clauses have the structure in (127a). Voice both projects a specifier and assigns a θ-role. (127b) is the structure for passives. Voice assigns a θ-role, but does not project a specifier. The *by*-phrase is an adjunct. When a thematic Voice head does not project a specifier, its θ-role is existentially bound. Alexiadou et al. argue that (127c) is found in certain types of reflexives, and that the lack of θ-role assignment causes the element in Spec-VoiceP to be interpreted as a reflexive (see also Schäfer, 2008: Ch.5). Finally, (127d) is the structure Alexiadou et al. propose for anticausatives. No specifier is projected – OCs are adjuncts – and no θ-role is assigned, hence, there is no implicit argument in the absence of an OC.

The crucial difference between active and non-active Voice for Alexiadou et al. is that active Voice projects a specifier and non-active Voice does not. This is not what has been observed in the data I have presented in this chapter. As we saw in section 4.1.3, Urdu *by*-phrases are EAs situated in Spec-VoiceP. I proposed that active Voice heads, $\text{Voice}_{\text{ACT}}$ and $\text{Voice}_{\text{ACT-IMP}}$, *obligatorily* project a specifier, while non-active Voice, $\text{Voice}_{\text{PASS}}$, does so *optionally*. Additionally, active and non-active Voice heads differ in their case assignment properties. $\text{Voice}_{\text{PASS}}$ selects a valued KP, while active Voice heads do not. This allows active Voice heads to assign accusative case to the direct object via Agree. Therefore, I do not distinguish active and non-active Voice heads in the same way as Alexiadou et al.

I do, however, retain Alexiadou et al.'s distinction between thematic and non-thematic Voice heads.[45] All the Voice heads we have considered so far, $\text{Voice}_{\text{ACT}}$, $\text{Voice}_{\text{ACT-IMP}}$ and $\text{Voice}_{\text{PASS}}$, are thematic, that is, they assign a θ-role. When a thematic Voice head does not project its specifier, its θ-role is existentially bound. This is the case when $\text{Voice}_{\text{PASS}}$ does not project its specifier, leading to the presence of an implicit agent in short passives.

I propose that marked anticausatives have a non-active Voice head, but that unlike $\text{Voice}_{\text{PASS}}$, Voice_{AC} is non-thematic (see Wood, 2015: Ch.3, for a similar analysis of marked anticausatives). As a non-active Voice head, Voice_{AC} selects an instrumental KP for its specifier, which is optionally projected. This accounts for the optionality of OCs and their form-identity with *by*-phrases. As a non-thematic Voice head, however, Voice_{AC} does not assign a θ-role.

I follow Wood (2015: Ch.3) in assuming that while causers are Merged and licensed in Spec-VoiceP, they do not require a θ-role. This follows from argumentation by Solstad (2009). Solstad argues that while agents introduce a new variable or participant to the semantic representation of the event, causers do not introduce

[45]The thematic/non-thematic distinction is not exclusive to Voice. As we saw in section 3.3, Appl also has thematic and non-thematic variants. Wood (2015) also discusses different types of thematic and non-thematic heads, including Voice and Appl.

any new variables, but only identify the causing event, which is already present in the semantic denotation (see also Pylkkänen, 2002, 2008: §3.2). As Solstad states, 'the relation [the causer] is assumed to introduce is introduced independently by the causative predicate.' This leads Solstad to conclude that causers act as semantic modifiers to the event, rather than true EAs. Schäfer (2012) makes a similar proposal. He argues that while causers are formally licensed in Spec-VoiceP (i.e. introduced in syntax in Spec-VoiceP), they are not thematically licensed in this position. Instead, the causer role arises from or is licensed through the resultative event structure itself.[46, 47]

The lack of θ-role assignment by Voice_{AC} accounts for two facts. Firstly, it explains the non-volitional interpretation of OCs: OCs can only be causers because only causers are compatible with the lack of θ-role. Secondly, the lack of θ-role directly accounts for the absence of an implicit agent or causer when there is no OC; since Voice_{AC} does not have a θ-role to assign, no θ-role is existentially bound when no specifier is projected.

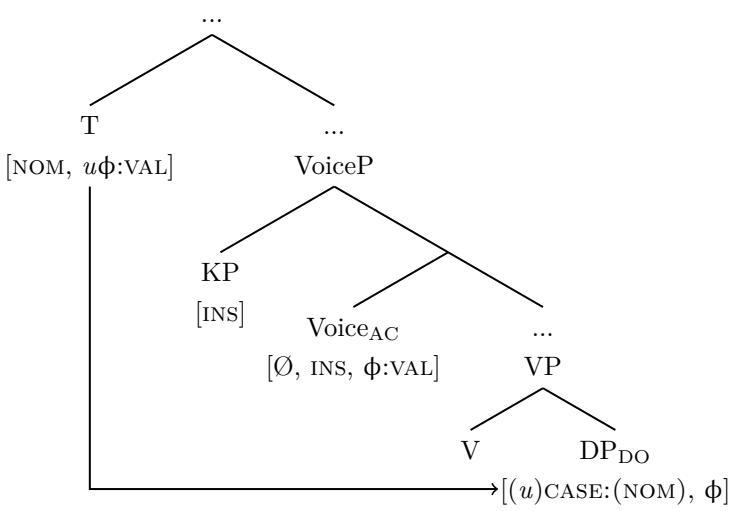
As stated earlier, as a non-active Voice head, I take Voice_{AC} to assign inherent case to its specifier (i.e. select an instrumental KP). Schäfer (2008: p.291, fn.48) states that non-thematic heads should not be able to assign inherent case, since inherent case is associated with θ-roles. However, inherent case is more accurately associated with the *positions* in which θ-roles are usually assigned, not θ-roles themselves. Both inherent case and θ-roles are assigned to arguments First-Merged in the specifier of a given functional head. Moreover, in my model, inherent case assignment is c-selection of valued KPs. Thus, although OCs do not receive a θ-role, they are still First-Merged in Spec-VoiceP, and can therefore be selected as instrumental KPs by Voice_{AC}.

The two possible derivations for anticausatives are given below. In marked anticausatives with an OC (128), Voice_{AC} projects a specifier and selects an instrumental KP. Voice_{AC}'s ϕ-features are valued via a Spec-Head relationship. No external θ-role is assigned, enoced on the tree as Ø. Voice_{AC} cannot assign accusative case, hence, the DO is active for Agree with T. T Agrees with the object and assigns nominative case (depending on differential object marking conditions). Having Agreed with T, the object may optionally move to Spec-TP, not shown.

[46] This conceptualisation of the causer role contrasts with works which take all external θ-roles to be formally identical, in that they are all assigned by the same functional head (usually the highest head of the verbal phase). For example, Ramchand (2008: p.172) proposes that the external θ-role ('initiator', in her terms) is underspecified, and can encompass causers, agents, experiencers, etc. See also Folli & Harley (2005) and Harley (2013), amongst others, for work on different types of external θ-roles.

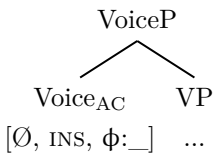
[47] This analysis places causers as intermediaries between canonical arguments and adjuncts. Many works have suggested that the distinction between arguments and adjuncts is less clear-cut than initially believed (see McInnerney, 2022, for a recent discussion). This type of analysis gives us a way of capturing this in formal terms.

(128)

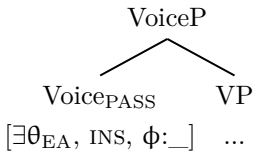


On the other hand, in marked anticausatives without an OC, Voice$_{AC}$ does not project a specifier (129). There is no θ-role to existentially bind. This is in contrast to short passives (ex.48, repeated). As in short passives, Voice$_{AC}$'s ϕ-features presumably receive default values at PF, although these are not seen in morphology. Object case assignment by T proceeds as above.

(129)



(48)



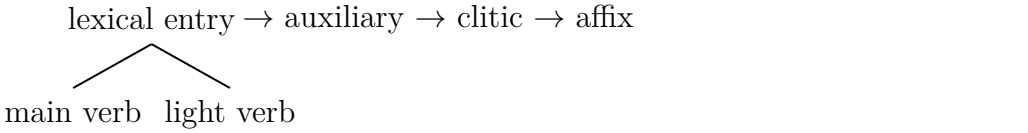
4.4.5 Summary

In this section, I have proposed an analysis of marked anticausatives in Urdu. I began by showing that the light verb *jaa* behaves differently with unaccusatives than with unergatives/transitives. I proposed a reanalysis of the former use of *jaa* as an anticausative marker. I then examined the properties of oblique causers which can optionally occur with marked anticausatives. I showed that oblique causers are external arguments which occupy Spec-VoiceP and must be interpreted as non-volitional. In the absence of an oblique causer, there is no implicit argument. This is in contrast to passives which retain an implicit argument even when the *by*-phrase is not projected. I proposed that both anticausatives and passives have non-active Voice, but that the former have a non-thematic Voice head which does not assign

a θ-role. This accounts for the interpretation of oblique causers. The lack of θ-role also means that when the specifier is not projected, no θ-role is existentially bound, hence, there is no implicit argument.

One consequence of my analysis of *jaa* is that we are left with two light verbs with the same form (one with unaccusatives and one with unergatives/transitives), but differing functionality. As ever, this begs the question as to whether the two forms signal different lexical entries, or are different uses of a single lexical entry. *Jaa* with unaccusatives occupies a non-active Voice head, but no evidence of non-active Voice is found in unergative/transitive plus *jaa* constructions. I mentioned in section 4.4.2 (footnote 39) that it may be possible that *jaa* still occupies Voice with unergatives/transitives, but this would necessarily be active Voice. While I do not have concrete answers, I would like to point out that *jaa* occurs in many different guises in Urdu. As we saw in section 4.1.1, *jaa* marks passives as well as inabilitatives and prohibitative readings (Davison, 1982; Srishti, 2011: Ch.5), in addition to its light verb uses. The future auxiliary, *ga*, is also said to have been derived from the lexical verb *jaa* 'go' (Butt, 2010: p.53; Butt & Lahiri, 2013: p.21). In a detailed study of Urdu LVs, Butt (2010) and Butt & Lahiri (2013) propose that a single underspecified lexical entry gives rise to both main and light verb uses, and that grammaticalisation of this single lexical entry has led to additional uses (130).

(130)



(adapted from Butt, 2010: p.67)

On this type of schema, different uses of *jaa* are simply at different levels of grammaticalisation. Given also that the language has many highly grammaticalised uses of *jaa*, it may be that less grammaticalised uses of *jaa* are more susceptible to being grammaticalised than other verbs and light verbs are. Additionally, we can speculate that *jaa*, the anticausative marker, is less grammaticalised than *jaa*, the passive marker, which is why the former adds semantic content (i.e. telicity; section 4.4.2) while the latter does not.[48]

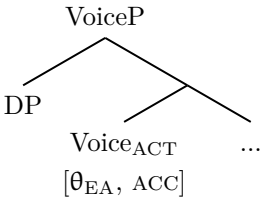
4.5 Towards a Typology of Voice

In this chapter, we have looked at various Voice-related constructions. We began by looking at passives. I argued that Urdu has a canonical passive, with the agent

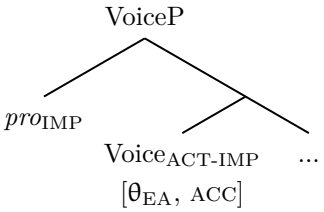
[48]To capture this formally, we may suggest that anticausative *jaa* starts of as a LV in v and moves into Voice_{AC}. This would account for why it adds aspectual information, and selects for the root form of the main verb, similar to other LVs. I leave this open to future research, in particular, why it would be possible for *jaa* to move at all.

optionally expressed as a *by*-phrase and no accusative case available for the object. Object promotion is possible but optional. I also showed that accusative-preserving 'passives' are underlyingly active. No *by*-phrase is possible; instead, a silent impersonal pronoun occupies subject position. Additionally, the object receives accusative case and cannot be promoted. Lastly, we looked at marked anticausatives, which share morphology with passives. Crucially, this shared morphology allows for the introduction of an argument, identical to the *by*-phrase, known as an oblique causer. Oblique causers show the same external argument properties as *by*-phrases. However, unlike *by*-phrases, there are restrictions on the interpretation of oblique causers, and furthermore, there is no implicit agent in the absence of an overt agent. $\text{Voice}_{\text{ACT-IMP}}$ is a type of active Voice head which specifically selects for pro_{IMP} in its specifier. Non-active Voice heads, $\text{Voice}_{\text{PASS}}$ and Voice_{AC}, select an instrumental KP. KP is projected optionally, indicated on the trees through parentheses. $\text{Voice}_{\text{PASS}}$ and Voice_{AC} are inherent case-assigners, and therefore, cannot assign accusative case to the direct object. $\text{Voice}_{\text{PASS}}$ assigns a θ-role to its specifier, however, Voice_{AC} is a non-thematic head, which does not assign a θ-role. This typology of Voice heads not only illustrates the structural difference between active and non-active Voice heads, but also reveals different 'flavours' of active and non-active Voice.

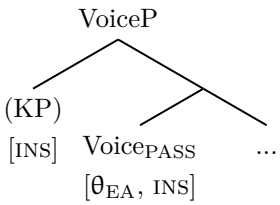
(131) a. active:



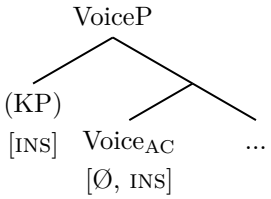
b. active impersonal:



c. passive:



d. anticausative:



There are two types of Voice heads which our typology predicts, but we have not found in our data. The first are non-thematic active Voice heads: Voice heads which obligatorily project a specifier but do not assign a θ-role to it, and are able to assign accusative case to the object.[49] This is the type of Voice head proposed for some

[49]Such a Voice head contradicts Burzio's Generalisation, according to which accusative case can only be assigned in the presence of the external θ-role (Burzio, 1986: p.178). Depending on how accurate one takes Burzio's Generalisation to be, the lack of such a Voice head may or may not be surprising. Note, however, that there is nothing intrinsic to case theories themselves that prevents non-thematic Voice from assigning accusative case. In dependent case theory, it is

reflexive constructions by Alexiadou et al. (2015: Ch.4) (see section 4.4.4, ex.127b). I have not looked at reflexive constructions here but they bear investigation. Another potential construction where such Voice heads may be found are constructions with causer subjects, assuming causers do not receive θ-roles (Solstad, 2009; Wood, 2015: Ch.3).

The second type of Voice head we have not found is one that never projects a specifier. We have active Voice heads which obligatorily project specifiers and non-active Voice heads which optionally do so, but we do not have any Voice heads which do not project a specifier at all. Such Voice heads form an important part of typologies such as Alexiadou et al.'s (2015: Ch.4); in particular, the lack of specifier is usually given as the defining property of non-active Voice heads, as discussed in section 4.4.4.[50] A driving force behind such analyses of non-active Voice heads is the status of the *by*-phrase as an adjunct rather than an argument. It is likely that *by*-phrases do not have a universal status as argument or adjunct, but rather vary from language to language. This may also relate to whether *by*-phrases are PPs (more likely to be adjuncts) or case-marked DPs (more likely to be arguments). Variation in the structural position of *by*-phrases may reflect variation in the featural make-up of non-active Voice heads, where in some languages, non-active Voice heads can project a specifier (as in my typology), but not in others (as in Alexiadou et al.'s typology).

Finally, there is the matter of spell-out. As mentioned, in many languages, phenomena like passives, anticausatives, reflexives and middles share morphology. Many works attribute the shared morphology to some shared property of Voice in each of these constructions. For example, Alexiadou et al. (2015: Ch.4) propose that non-active morphology is the spell-out of Voice heads without specifiers (i.e. non-active Voice). In Urdu, too, we saw that passives and anticausatives share morphology (132a, b). Both these constructions have non-active Voice heads (optional specifier, non-structural case assignment). However, active impersonals are also marked with the same marker (132c), which I proposed have an active Voice head.

(132) a. *khiRki* *(Rami=se)* *toR-i* ***gai.*** (passive)
window.NOM (Rami=INS) break.CAUS-PFV.F.SG PASS.PFV.F.SG

'The window was broken (by Rami).'

the case, not θ-role, of the higher argument that is relevant for accusative case assignment, so a causer-type argument without a θ-role but with the right case may still trigger dependent case rules. In my implementation of Agree-based case assignment, a Voice head may assign accusative case, provided it does not select a valued KP, regardless of whether it assigns a θ-role or not. Therefore, the absence of such a Voice head still needs to be explained somehow.

[50]Similarly, Kastner's (2020) trivalent Voice typology makes a distinction between Voice heads which require specifiers, ban specifiers, or permit specifiers (i.e. optionally project specifiers). Again, my typology only covers this paradigm partially.

b. *khiRki (Rami=se) TooT* ***gai.*** (anticausative)
window.NOM (Rami=INS) break AC.PFV.F.SG

'The window broke (because of Rami).'

c. *khiRki=ko toR-a* ***gya.*** (active impersonal)
window=ACC break.CAUS-PFV.M.SG PASS.PFV.M.SG

'The window was broken.'

d. *Rami=ne khiRki=ko toR-a.* (active)
Rami=ERG window=ACC break.CAUS-PFV.M.SG

'Rami broke the window.'

This means that three out of four of our Voice heads have the same spell-out (Table 4.6).

$\text{Voice}_{\text{ACT}}$	Ø
$\text{Voice}_{\text{ACT-IMP}}$	*jaa*
$\text{Voice}_{\text{PASS}}$	*jaa*
Voice_{AC}	*jaa*

Table 4.6: Spell-out of Voice heads.

While it may initially seem that *jaa* is the default spell-out for Voice heads in Urdu, and that it is $\text{Voice}_{\text{ACT}}$, which has a unique exponent, I would like to suggest that the pattern in Table 4.6 is more likely a coincidence. It has been argued for several languages which exhibit active impersonals that the active impersonal is a reanalysis of the canonical passive (Maling, 1993, for Polish and Irish; Maling & Sigurjónsdóttir, 2002, 2015, Maling, 2006, for Icelandic; Roberts, 2019: Ch.6, generally). The Icelandic construction, in particular, has been surveyed extensively. Maling & Sigurjónsdóttir (2002, 2015) show that the Icelandic active impersonal is far more widespread in younger generations than in older ones, providing evidence for language change in progress.[51] Although no such study has been conducted for Urdu, one may speculate that passive morphology is seen in active impersonals due to similar reanalysis. This is especially appealing given that *jaa* is a lexical item which is prone to grammaticalisation in the language (see discussion in section 4.4.5), and is also used to mark other constructions, such as (in)abilitatives and prohibition readings (section 4.1). I leave this open to future study.

[51] In Icelandic, implicit agents in short passives are interpreted as human. Maling & Sigurjónsdóttir (2002: pp.131–33) suggest that the grammar has been simplified by encoding the interpretation of implicit agents in short passives as a grammatical feature on a pronominal, and reanalysing passive morphology, resulting in active impersonals. Implicit agents in Urdu short passives, however, can be interpreted as non-human (see section 4.2.2, ex.59), leaving open the question as to what may motivate a reanalysis from passives to active impersonals.

Setting aside active impersonals, one may propose a spell-out rule as in (133) for the two non-active Voice heads, $\text{Voice}_{\text{PASS}}$ and Voice_{AC}. A Voice which selects an instrumental KP is spelled out as *jaa*.[52]

(133) $\text{Voice}\{\text{select: } \text{KP}_{\text{INS}}\} \rightarrow$ *jaa*

This chapter has also shown that accusative case assignment does not depend on the presence of the external argument, but rather on the properties of Voice. We saw that both active and non-active Voice heads have an external argument, yet the latter do not assign accusative case. Moreover, we have seen that Voice, through its selectional requirements, affects the interpretation of the external argument. Voice is also responsible for assigning case to the external argument in non-active constructions. The next chapter investigates the behaviour of different types of arguments, with respect to subjecthood diagnostics, looking in particular at the effect of case.

[52] Additional rules may also exist for the spell out of (non-active) Voice in more specific contexts. For example, Bhatt & Embick (2017) propose that indirect causatives in Hindi-Urdu have a passive Voice head embedded under an active Voice head. Indirect causatives do not have the *jaa* morpheme, but instead are marked with the affix, *-vaa*, for which Bhatt & Embick propose a contextual spell-out rule targeting an embedded passive Voice. More specific rules of this type will take precedence over the general rule in (133).

Chapter 5

Subjecthood and Case

A general assumption of the VP-internal subject hypothesis is that the external argument (EA) moves out of its base position to Spec-TP (or an equivalent position) to satisfy T's EPP feature (Sportiche, 1990, and subsequent). Many works have argued that there are in fact multiple potential specifiers which EAs can move to (Bobaljik & Jonas, 1996; Kiss, 1996; McCloskey, 1997; Svenonius, 2002b; Cardinaletti, 2004; Poole, 2016). Quirky case subjects, in particular, have received significant attention in this regard, and it has been proposed that these subjects are lower than nominative or structurally case-marked subjects (Chomsky, 1995: p.282–84; Preminger, 2014: Ch.8; Poole, 2016; Bošković, 2019). This has also been argued for Hindi by Davison (2004a) and Poole (2016). Chomsky (1995: p.282–84) claims that only arguments which trigger agreement can move to Spec-TP. I make a similar proposal in this chapter, although I argue that it is Agree with T, not agreement, which is necessary for movement to Spec-TP. (Agree does not always result in agreement; see section 3.6.4.)

In this chapter, I examine the behaviour of EAs, as well as derived subjects (i.e. promoted objects), including agents and non-agents, structural and inherent case subjects.[1] I show three things. Firstly, non-structurally case-marked subjects are in a lower position than structurally case-marked subjects. I argue this is so because only arguments which enter into Agree with T, and receive structural case from it, are able to move to Spec-TP and satisfy T's EPP feature. Secondly, subject properties in Urdu track structural prominence. Some diagnostics are stricter, in that only arguments in a specific structural position show these properties, while others are looser, in that an argument in any position, as long as it is structurally highest in a given domain, is able to pass these tests. Finally, the domain in which relative height is determined for passing subject diagnostics is itself contextually defined. This highlights and formally captures the fact that 'subject' is a relative

[1]Thanks to audiences at *SyntaxLab* (University of Cambridge) and *LELPGC-2022* (University of Edinburgh) for feedback at varying stages of this work. A preliminary analysis has been published as a working paper in *The Cambridge Occasional Papers in Linguistics* (S. Kidwai, 2022a).

notion.

I begin by providing some background on subject properties in Urdu in section 5.1, in particular showing that nominative subjects pass these diagnostics while objects do not. In section 5.2, I apply these diagnostics to ergative subjects. Firstly, I show that despite ergative case having properties of both structural and non-structural case, ergative subjects behave exactly like nominative ones in Urdu, as has also been shown by others (Mohanan, 1994: Ch.6; Davison, 2004a; Anand & Nevins, 2006; Subbarao, 2012: Ch.5; contra Poole, 2016). Secondly, I propose a case-assignment mechanism for ergative case to account for its mixed properties. I propose that ergative case is the result of probing by perfective Asp and T. Asp is only able to probe base-generated EAs, hence, ergative case is never found on derived subjects. In section 5.3, I look at dative predicates, and show that while dative subjects show a subset of subject properties, nominative objects of dative predicates can show the full set. I propose a structure of dative predicates as unaccusative ditransitives (as argued by Belletti & Rizzi, 1988, and subsequent), in which the dative subject is introduced in Spec-ApplP, and no VoiceP is projected. Having inherent case, dative subjects cannot move to Spec-TP. Objects of dative predicates, on the other hand, may Agree with T, and optionally move to Spec-TP (as also shown for passives in section 4.1.4). When the object is promoted, it shows subject properties; when the object is not promoted, the dative subject does so instead. I then turn to non-active constructions, specifically passives and marked anticausatives, in section 5.4. We have already seen in Chapter 4 that *by*-phrases and oblique causers show some subject properties, as do promoted objects in these constructions. I recap the relevant facts, and extend the analysis of arguments in dative predicates to those in non-active constructions. In section 5.5, I discuss the locus of different subject properties. Throughout this chapter, the term subject is used descriptively; section 5.6 tackles the issue of defining subjecthood formally.

5.1 Subject Properties

In this section, I compare nominative subjects with direct (DOs) and indirect objects (IOs) to establish a baseline of subject properties. As already mentioned in section 4.1.3, there are three properties most commonly used as diagnostics for subjecthood in Urdu: anaphor binding, pronoun obviation or lack of pronoun binding, and control into participial clauses (Mohanan, 1994: Ch.6; Davison, 2015: pp.1485–86). I describe each of these in turn here, as well as replacement by PRO, which is proposed by Poole (2016) as a subject property. These are the four properties I will be using as subject diagnostics in this chapter. In section 5.1.5, I discuss other subject properties that have been proposed in the literature, and my reasons for

setting them aside.

5.1.1 Anaphor binding

Urdu has a reflexive possessive anaphor, *apna* 'self's'. Like English *self*-anaphors (e.g. *myself, himself, herself, themselves*), *apna* must have a c-commanding antecedent. In addition, it is generally agreed that *apna* is subject-oriented, in that it can only be bound by subjects and not by objects (Mohanan, 1994: Ch.6; Davison, 2001, 2015: pp.1485–86; Bhatia & Poole, 2016; Poole, 2016). In (1), only the nominative subject, *Rami*, is able to bind the anaphor. The IO, *Omar*, in (1a) cannot bind the anaphor in the DO despite c-commanding it, nor can the DO, *Hira*, in (1b) bind the anaphor in the locative goal.[2]

(1) a. *Rami$_i$* *Omar$_j$=ko* ***apni$_{i/*j}$*** *kitaab* *bHej-ay* *ga.*
Rami$_i$.NOM Omar$_j$=DAT REFL$_{i/*j}$ book send-FUT.3SG FUT.M.SG

'Rami$_i$ will send Omar$_j$ his$_{i/*j}$ own book.'

b. *Rami$_i$* *Hira$_j$=ko* ***apne$_{i/*j}$*** *gHar* *bHej-ay* *ga.*
Rami$_i$.NOM Hira$_j$=ACC REFL$_{i/*j}$ house.LOC send-FUT.3SG FUT.M.SG

'Rami$_i$ will send Hira$_j$ to his$_i$/*her$_j$ own home.'

Bhatia & Poole (2016) show that these are true cases of binding, and not simply co-referentiality, through the availability of quantifier binding, as in (2).

(2) ***har*** ***larka$_i$*** *Anu$_j$=ko* ***apni$_{i/\%j/*k}$*** *kitaab* *de* *ga.*
every boy$_i$.NOM Anu$_j$=DAT REFL$_{i/\%j/*k}$ book give.FUT.3SG FUT.M.SG

'Every boy$_i$ will give Anu his$_i$ book.'

(adapted from Bhatia & Poole, 2016: p.63)

Scrambling does not create new possibilities for anaphor binding, as also noted by Bhatia & Poole (2016: pp.63–64). In (3), the IO has been scrambled to sentence-initial position, however, it is still not able to bind anaphors.

(3) ***har*** ***laRki$_i$=ko*** *Rami$_j$* *apni$_{*i/j}$* *kitaab* *de* *ga.*
every girl$_i$=DAT Rami$_j$.NOM REFL$_{*i/j}$ book give.FUT.3SG FUT.M.SG

'To every girl$_i$, Rami$_j$ will give his$_j$/*her$_i$ own book.'

[2] C-command relationships in ditransitives are discussed in section 3.7. See also Malhotra (2014).

There is some speaker-variation regarding the subject-orientation of *apna*. Mohanan (1994: p.125, fn.4) reports that some speakers allow anaphor binding by IOs, as do Bhatia & Poole (2016: p.63). This is seen in the judgement marks on the indices in (2). I also collected judgements for anaphor binding from native speakers; 9 out of 13 speakers accepted anaphor binding by IOs.[3] It may be that anaphor binding is not a subject property for these speakers, and that c-command alone is sufficient (see section 5.3, footnote 25, for why IOs might be able to bind anaphors for some speakers).

5.1.2 Lack of pronoun binding

In contrast to anaphors, pronominal possessors are anti-subject-oriented. Subjects are not able to bind pronominal possessors, while objects can bind pronouns freely (Mohanan, 1994: Ch.6; Bhatia & Poole, 2016). This is shown through the contrast between nominative subjects, and IOs and DOs in (4). Unlike anaphors, pronouns do not require a syntactic antecedent and can also refer to discourse-salient individuals, as indicated by the indices in the example below.

(4) a. *Rami$_i$* *Omar$_j$=ko* ***us$_{*i/j/k}$=ki*** *kitaab* *bHej-ay* *ga.*
Rami$_i$.NOM Omar$_j$=DAT 3SG$_{*i/j/k}$=GEN book send-FUT.3SG FUT.M.SG

'Rami$_i$ will send Omar$_j$ his$_{*i/j/k}$ book.'

b. *Rami$_i$* *Omar$_j$=ko* ***us$_{*i/j/k}$=ke*** *gHar* *bHej-ay*
Rami$_i$.NOM Omar$_j$=ACC 3SG$_{*i/j/k}$=GEN house.LOC send-FUT.3SG
ga.
FUT.M.SG

'Rami$_i$ will send Omar$_j$ to his$_{*i/j/k}$ home.'

Quantifier binding from the subject over a pronominal in a lower position is also unavailable (5a) (Bhatia & Poole, 2016). Moreover, quantifier binding by the IO is possible (5b), showing that the co-indexation between the IO and pronominal is due to binding and not co-referentiality.

(5) a. ***har*** ***larke$_i$=ne*** *Anu$_j$=ko* ***us$_{*i/j/k}$=ki*** *kitaab* *di.*
every boy$_i$=ERG Anu$_j$=DAT 3SG$_{*i/j/k}$=GEN book give.PFV.F.SG

'Every boy$_i$ gave Anu his$_{*i/k}$/her$_{j/k}$ book.'

[3]The speakers were told a short story, and then asked to mark different binding possibilities as true or false. Some speakers reported afterwards that they felt that the context in the story could only be true if the IO were to bind the anaphor. Thus, their judgements may be a result of confounding variables, although it is still interesting to note that they found binding by the IO to be possible at all.

b. *Ram$_i$=ne* ***har*** ***larke$_j$=ko*** ***us$_{*i/j/k}$=ki*** *kitaab di.*
Ram$_i$=ERG every boy$_j$=DAT 3SG$_{*i/j/k}$=GEN book give.PFV.F.SG

'Ram$_i$ gave every boy$_j$ his$_{*i/j/k}$ book.' (Bhatia & Poole, 2016: p.63)

The behaviour of anaphoric and pronominal possessors in (di)transitive contexts initially suggests that the two are in complementary distribution. However, as has been shown in several works (Davison, 2004a; Subbarao, 2012: Ch.5; Bhatia & Poole, 2016; Poole, 2016), the complementary distribution does not hold in dative predicates, and, as we shall see later in this chapter, in several other constructions as well (namely, passives, marked anticausatives, and indirect causatives).

5.1.3 Control into participial clauses

Participial clauses can be formed in Urdu using the participial *kar* 'do' with either an intransitive or transitive verb (6).

(6) a. *gHar* ***jaa*** *kar*
house.LOC go do

'having gone home'

b. *(seb)* ***kHa*** *kar*
(apple) eat do

'having eaten (an/the apple)'

These clauses have a PRO subject which can be controlled only by subjects in the matrix clause (7) (Mohanan, 1994: Ch.6; Davison, 2015: p.1486). Objects cannot control into participial clauses.

(7) *Rami$_i$* *Omar$_j$=ko* [***PRO$_{i/*j}$*** *gHar* *jaa kar*] *kitaab bHej-ay*
Rami$_i$.NOM Omar$_j$=DAT [PRO$_{i/*j}$ house.LOC go do] book send-FUT.3SG
ga.
FUT.M.SG

'Upon [Rami/*Omar] going home, Rami will send Omar a/the book.'

Poole (2016: p.7, fn.4) states that controlling PRO is not a subject property as objects can also control PRO. This is partially correct. Objects are able to control the PRO subject of some clauses (e.g. infinitival clauses, ex.8) but are not able to control the PRO subject of participial clauses in particular, as seen through the contrast in (7). It is control into these specific clauses that I take to be a subject property.

(8) *hum=ne un$_i$=ko* [***PRO$_i$*** *wahaan jaa-ne*]*=ke liye majbur nahi*
1PL=ERG 3PL$_i$=ACC [PRO$_i$ there go-INF]=GEN for forced not
ki-ya.
do-PFV.M.SG

'We did not force them to go.' (Davison, 2008: p.30)

5.1.4 Being PRO

PRO can only occur in subject position in a given clause (Chomsky, 1981: pp.55–64). Objects cannot be PRO, as seen in (9). It follows then that an argument that can be PRO must be a subject (Poole, 2016: pp.6–7).

(9) a. *Rami=ne Omar$_i$=ko* [*Hira=ka us$_i$=ko* / ****PRO$_i$*** *mall=mein*
Rami=ERG Omar$_i$=DAT [Hira=GEN 3SG$_i$=ACC / *PRO$_i$ mall=LOC
dekH-na] *yaad dila-ya.*
see.CAUS-INF] memory buy.for-PFV.M.SG

'Rami reminded Omar$_i$ about Hira seeing him$_i$ in the mall.'

b. *Rami=ne Omar$_i$=ko* [*Hira=ka us$_i$=ko* / ****PRO$_i$*** *kitaab*
Rami=ERG Omar$_i$=DAT [Hira=GEN 3SG$_i$=ACC / *PRO$_i$ book
de-na] *yaad dila-ya.*
give-INF] memory buy.for-PFV.M.SG

'Rami reminded Omar$_i$ about Hira giving him$_i$ a/the book.'

It has been shown that inherent case assignment prevents arguments from being PRO in some languages, such as German (10), but not others, such as Icelandic (11).

(10) German:

a. *Sie halfen* ***dem Metallurgen.***
they.NOM helped the.DAT metallurgist

'They helped the metallurgist.' (p.c. Rami Aly)

b. **Der Metallurge$_i$ hofft* [***PRO$_i$*** *geholfen zu werden*].
the.NOM metallurgist hopes [PRO helped to become]

'The metallurgist hopes to be helped.' (McFadden, 2018: p.3)

(11) Icelandic:

a. ***Henni*** *leiðist bókin.*
her.DAT bores book.the.NOM

'She finds the book boring.'

b. *Hún$_i$ vonast til [að* ***PRO***$_i$ *leiðast ekki bókin].*
she.NOM hopes for [to PRO bore not book.the.NOM]

'She hopes not to find the book boring.' (McFadden, 2018: p.3)

Davison (2008) shows that Hindi patterns like German, providing evidence from dative subjects. Poole (2016) shows the same, although he also extends this to ergative subjects, which Davison categorically groups with structurally case-marked arguments. I discuss the data for ergative subjects in section 5.2.1 and for dative subjects in section 5.3.1.

5.1.5 Other candidates for subject properties

Firstly, let us note that verb agreement, a common subject property cross-linguistically, is not so in Urdu, and has never been suggested as such. As mentioned previously, agreement is with the highest argument without overt case-marking. This means that (unmarked) objects trigger agreement when the subject is non-nominative, as in (12). Thus, agreement is not a diagnostic for subjecthood.

(12) *hum=ne eik* ***mosambi*** *kHa-i tHi.*
1PL=ERG one orange.F.SG eat-PFV.F.SG be.PST.F.SG

'We ate an orange.'

In addition to the subject properties discussed earlier in this section, three others have been suggested in the literature: heading reduced relative clauses (Poole, 2016: p.7), being in the semantic scope of a subject-oriented auxiliary (Davison, 2004a, 2015: p.1486), and gapping in coordinate constructions with a subject antecedent (Mohanan, 1994: pp.131–34). Let us look at each of these in turn.

Poole (2016) claims that only nominative subjects are able to head reduced relative clauses. He shows that dative subjects cannot do so (13b), and takes this to be a crucial difference between nominative and inherent case subjects.

(13) a. *laRke=ko choT lag-i.*
boy=DAT hurt.NOM contact-PFV.F.SG

'The boy got hurt.'

b. *[__$_1$ *choT* *lag-a*] *laRka*
[__.DAT$_1$ hurt.NOM contact-PFV.M.SG] boy$_1$

Intended: 'the boy who was hurt' / 'the hurt boy' (Poole, 2016: p.10)

Firstly, it is not clear to what extent the difference between nominative and dative subjects reported by Poole holds. Poole's example of a reduced relative with dative subjects can be improved by adding participial *be* (14), and the same pattern with and without participial *be* is also seen with nominative subjects (15).

(14) [__$_1$ *choT* *lag-a* ***hua***] *laRka*
[__.DAT$_1$ hurt.NOM contact-PFV.M.SG be.PRT.M.SG] boy$_1$

'the boy who was hurt' / 'the hurt boy'

(15) a. *laRka* *seb* *kHa-ta* *he.*
boy.NOM apple eat-IPFV.M.SG be.PRS.3SG

'The boy eats apples.'

b. *[__$_1$ *seb* *kHa-ta*] *laRka*
[__.NOM$_1$ apple eat-IPFV.M.SG] boy$_1$

Intended: 'the boy who eats apples' / 'the apple-eating boy'

c. [__$_1$ *seb* *kHa-ta* ***hua***] *laRka*
[__.NOM$_1$ apple eat-IPFV.M.SG] boy$_1$

'the boy who eats apples' / 'the apple-eating boy'

Secondly, and more importantly, DOs are also able to head reduced relatives (16b), as shown by Bárány (2018: pp.113–14).

(16) a. *us* *mahila=ko* *kitaab* *di* *gai.*
that woman=DAT book give.PFV.F.SG PASS.PFV.F.SG

'That woman was given a book.'

b. [*us* *mahila=ko* __$_1$ *di* *gai*] *kitaab$_1$*
[that woman=DAT __$_1$ give.PFV.F.SG PASS.PFV.F.SG] book$_1$

'the book given to the woman.' (Bárány, 2018: p.17)

Therefore, in light of the fact that DOs are able to do head reduced relatives, I reject heading reduced relatives as a subject property.

Davison (2004a, 2015: p.1486) observes that only subjects can appear in the semantic scope of what she calls subject-oriented auxiliaries, such as *baiTh-na* 'to do something inadvertently' (lit. 'to sit') and *paa-na* 'to manage to do something' (lit. 'to gain'). In other words, these verbs can only add aspectual information to the actions of the subject, and not the object.

(17) a. *mein* *(*=ne)* *aap=ki* *Daak* *paRh* ***baiTh-a***.
1SG.NOM (*=ERG) 2HON=GEN mail read sit-PFV.M.SG

'I inadvertently read your mail (by mistake).'

b. *coast-guard=ko* *yeh* *naaNw* *dikH* *nahi* ***pa-i***.
coast-guard=DAT this ship.NOM see not manage-PFV.F.SG

'The coast guard did not manage to spot this ship.'

(Davison, 2015: p.1486)

What Davison calls subject-oriented auxiliaries are most likely light verbs instead. In fact, *baiTh-na* has been explicitly labelled as such by Butt (1995: p.89) and subsequent work. A telling sign is the form of the main verb: light verbs require main verbs to be in root form, as in (17), while auxiliaries allow inflection on the main verb. The light verb characterisation of these elements also explains the ban on ergative case seen in (17a), as many light verbs disallow ergative case on subjects (Butt, 1995: Ch.4; see also discussion in section 4.4.2). While Davison's observation is certainly interesting and worth exploring, it hinges on how complex predicates are built, and specifically the role of light verbs in building argument structure. A study of light verbs is outside the scope of this dissertation, hence, I set this aside for present purposes.

Finally, Mohanan (1994: pp.131–34) uses gapping in coordinate constructions as a diagnostic for identifying subjects. As she describes, gapping in coordinate constructions requires matching in both case and grammatical function between the gapped element and its antecedent. For example, in (18), the gapped element must be both nominative and a subject to match the antecedent, *Ravi*.

(18) ***Ravi*** *gHar* *gya* *aur* __ *so-ya.*
Ravi.NOM house.LOC go.PFV.M.SG and __ sleep-PFV.M.SG

'Ravi went home and <Ravi> slept.' (Mohanan, 1994: p.132)

Although this is a useful diagnostic for determining the grammatical function of certain case-marked arguments, I exclude it because I am not interested in the distribution of subjects, but rather their behaviour where they do occur.

This leaves us with four subject properties that will be central to the rest of this chapter: anaphor binding, pronoun obviation, control into participial clauses, and being PRO.

5.2 Ergative Subjects

This section looks into ergative subjects. In section 5.2.1, I apply the subject diagnostics identified in section 5.1 to ergative subjects, and show that they pattern like nominative subjects with respect to all four properties. This is in contrast to Poole's (2016) findings, which group ergative subjects with inherent case subjects. In particular, the fact that ergative subjects can be replaced by PRO, which is case-sensitive, suggests that, like nominative case, ergative case is structural. Yet, ergative case also has non-structural properties. I discuss the mixed status of ergative case in section 5.2.2, and propose a composite case-assignment process to account for this.

5.2.1 Applying subjecthood diagnostics

As has been noted in several places in the literature, like nominative subjects, ergative subjects in Urdu can bind anaphors, but not pronominal possessors (19), and can also control into participial clauses (20) (Mohanan, 1994: Ch.6; Davison, 2004a; Anand & Nevins, 2006; Subbarao, 2012: Ch.5; contra Poole, 2016).

(19) *Rami$_i$=ne Omar$_j$=ko* ***apni$_{i/*j}$*** / ***us$_{*i/j}$=ki*** *kitaab bHej-i.*
Rami$_i$=ERG Omar$_j$=DAT REFL$_{i/*j}$ / 3SG$_{*i/j}$=GEN book send-PFV.F.SG

'Rami$_i$ sent Omar$_j$ his$_{i/*j}$ own / his$_{*i/j}$ book.'

(20) *Rami$_i$=ne Omar=ko* [***PRO$_i$*** *gHar jaa kar*] *kitaab bHej-i.*
Rami$_i$=ERG Omar=DAT [PRO$_i$ house.LOC go do] book send-PFV.F.SG

'Upon [Rami] going home, Rami sent Omar a/the book.'

The final diagnostic, being PRO, is less straightforward to test. Ergative subjects are generally found with perfective aspect, while nominative subjects are found elsewhere. Infinitival morphology masks aspect marking in non-finite clauses (Table 5.1). This makes it unclear whether PRO has replaced a nominative or ergative subject in (21).

(21) *Rami$_i$* [***PRO$_i$*** *seb kHa-na*] *chah-ta he.*
Rami$_i$.NOM [PRO$_i$ apple eat-INF] want-IPFV.M.SG be.PRS.3.SG

'Rami wants to eat an apple.'

	FIN		INF
	PFV	IPFV	
M.SG	*-ya*	*-ta*	*-na*
M.PL	*-ey*	*-te*	*-na*
F.SG	*-i*	*-ti*	*-na*
F.PL	*-iin*	*-tiin*	*-na*

Table 5.1: Aspect morphology in finite and non-finite forms.

The case of the antecedent cannot be used as an indicator either. This is because case-matching (i.e. identical case-marking) between the controller and PRO is not a requirement for control.[4] In (22), the embedded verb is unaccusative and must have a nominative subject. Yet, the controller in the matrix clause has ergative case.

(22) *Rami$_i$=ne* [*PRO$_i$* ***gir=ne***]*=ki* *kahani* *sun-a-i.*
Rami$_i$=ERG [PRO$_i$ fall=INF]=GEN story hear-CAUS-PFV.F.SG
'Rami told the story of [his] falling.'

Instead, the argument in favour of PRO replacing ergative subjects comes from the overall distribution of PRO. One pattern which will emerge as we look at the control data throughout this chapter is that arguments which can receive case in non-finite clauses, such as dative subjects, must be overt and cannot be substituted by PRO (Davison, 2008). In contrast, arguments which cannot receive case in non-finite clauses cannot be overt and must be substituted by PRO.[5] This is shown with a nominative subject in (23).

(23) *Rami$_i$* [***PRO$_i$*** / ****Omar*** *seb* *kHa-na*] *chah-ta*
Rami$_i$.NOM [PRO$_i$ / *Omar.NOM apple eat-INF] want-IPFV.M.SG
he.
be.PRS.3.SG
'Rami wants (*Omar) to eat an apple.'

Ergative subjects too cannot be overt in non-finite clauses (24). Following the general distribution of PRO, I take this to mean that PRO can replace ergative subjects in non-finite clauses.

[4] I use case-matching to mean matching between the case of the antecedent and the case that *might* be assigned to PRO. I do not commit to whether PRO has case or not (although see section 5.5.2, footnote 36, for reasons in favour of the latter).

[5] McFadden & Sundaresan (2011) argue that the apparent unavailability of nominative case in non-finite clauses is in fact a restriction on overt subjects. This may also be extended to ergative subjects. However, the availability of overt non-structurally case-marked subjects in non-finite clauses (see section 5.5.2) suggests that, in Urdu, this is indeed a restriction on case assignment and not overtness.

(24) *Rami$_i$=ko* [***PRO$_i$*** / ****Omar=ne*** *seb* *kHa-na*] *pasand aa-ya.*
Rami$_i$=DAT [PRO$_i$ / *Omar=ERG apple eat-INF] like come-PFV.M.SG

'Rami liked (*Omar) having eaten an apple.'

Thus, ergative subjects behave exactly like nominative ones.[6] In particular, ergative subjects pass the case-sensitive diagnostic of being PRO which distinguishes structural case from non-structural case. The following section discusses the mixed status of ergative case as a structural and non-structural case in Urdu.

5.2.2 Ergative case assignment

The status of ergative case in Urdu is much debated.[7] Some have proposed that ergative case is an inherent case assigned by EA-introducing v or lexical V (Mahajan, 1990: p.90, 2012; Mohanan, 1994: pp.69–78; Butt, 1995: Ch.2, 4; Anand & Nevins, 2006). Conversely, others have argued that ergative case shows mixed properties and is checked by higher functional heads, in addition to v/V, giving it both a structural and non-structural flavour (Davison, 1999, 2004a, 2008; Butt & King, 2003, 2004: pp.158–60; Bhatt, 2003a: p.6, 2005: p.767; Butt, 2017; S. Kidwai, 2019: pp.49–51).[8] I argue that ergative case is assigned in conjunction by Asp and T via Agree. The case sub-feature valued by Asp is found only on EAs, thus, restricting ergative case to base-generated subjects.

Ergative case is generally found on transitive subjects, as described in section 1.2.3. Subjects must have ergative case in perfective aspect (25), and nominative case otherwise (26).[9]

(25) ***Rami=ne*** *seb* *kHa-ya* *tHa.*
Rami=ERG apple eat-PFV.M.SG be.PST.M.SG

'Rami ate an apple.'

[6] Anand & Nevins (2006) show differences between ergative and nominative subjects with respect to scope possibilities. Under their analysis, this has to do with the reconstruction possibilities of ergative and nominative subjects, and not the syntactic position(s) these subjects occupy, as such, I leave these facts aside.

[7] The debate extends to ergative case more generally. See Coon, Massam & Travis (2017) for various approaches to ergativity.

[8] Purely structural accounts of ergative case have gained little traction for reasons that will become clear through the course of this section. See Davison (2004b) for a purely structural account of ergative case in Hindi.

[9] I take progressive to be type of imperfective aspect (Comrie, 1976: §1.2). Future tense does not have an Asp projection, as shown for Hindi-Urdu by Bhatt & Embick (2017: p.102).

(26) a. ***Rami*** *seb* *kHa-ta* *tHa.* (habitual)
Rami.NOM apple eat-IPFV.M.SG be.PST.M.SG

'Rami used to eat apples.'

b. ***Rami*** *seb* *kHa rah-a* *tHa.* (progressive)
Rami.NOM apple eat PROG-M.SG be.PST.M.SG

'Rami was eating an apple.'

c. ***Rami*** *seb* *kHa-ey* *ga.* (future)
Rami.NOM apple eat-FUT.3SG FUT.M.SG

'Rami will eat an apple.'

In addition, there is a finiteness condition on ergative case, as shown in section 5.2.1. The relevant example is repeated below.

(24) *Rami$_i$=ko* [***PRO$_i$*** / ****Omar=ne*** *seb* *kHa-na*] *pasand aa-ya.*
Rami$_i$=DAT [PRO$_i$ / *Omar=ERG apple eat-INF] like come-PFV.M.SG

'Rami liked (*Omar) eating an apple.'

Ergative case can also occur on subjects of a sub-class of intransitive verbs, specifically verbs related to bodily functions, as well as subjects of deontic modals. In both these constructions, use of ergative case emphasises volitionality (Mohanan, 1994: pp.69–78; Butt & King, 2004: pp.158–60; Davison, 2015: p.1482). This is shown for intransitives below.

(27) a. *Ram* *kHaans-a.*
Ram.NOM cough-PFV.M.SG

'Ram coughed.'

b. ***Ram=ne*** *kHaans-a.*
Ram=ERG cough-PFV.M.SG

'Ram coughed [purposefully].' (Butt & King, 2004: p.158)

Deontic modality is expressed through the verb *be* with an infinitival complement. The subject may have either dative or ergative case (see Butt & King, 1993, for an overview of the alternation).[10] As indicated in the translations below, use of the ergative leads to a 'wants to' interpretation while use of the dative leads to a 'must

[10]Dative case is preferred in this context, with many speakers rejecting ergative case altogether. However, ergative case is possible, as seen in Bashir's (1999) documentation of several examples from Urdu TV.

do' interpretation (Masica, 1976; Butt & King, 1993, 2004: pp.6–7; Bashir, 1999; Ahmed, 2006: pp.8–9; Subbarao, 2012: Ch.5).

(28) a. ***Nadya=ko*** [*zoo jaa-na*] *he.*
Nadya=DAT [zoo go-INF] be.3SG

'Nadya has to go to zoo.'

b. ***Nadya=ne*** [*zoo jaa-na*] *he.*
Nadya=ERG [zoo go-INF] be.3SG

'Nadya wants to go to zoo.' (Butt & King, 2004: p.159)

The link between ergative case and volitionality has led to the ergative being analysed as an inherent case associated with agents (Mohanan, 1994: pp.69–78; Butt & King, 2004: pp.158–60). However, this analysis runs into an immediate challenge with transitives. As Davison (2004a: note 5) points out, ergative case can occur on many non-volitional, experiencer-type subjects too. For example, perception verbs, like *dekH-na* 'to see', do not have any presupposition of volitionality, and yet can have ergative subjects (29a). We can also extend this to causers, which do not bear an agent θ-role, but can be marked with ergative case (29b). Moreover, Davison shows that some complex predicates, whose subject is categorically non-agentive, also take ergative subjects (30).

(29) a. ***Rami=ne*** *ek kutta dekH-a.*
Rami=ERG one dog see-PFV.M.SG

'Rami saw a dog.'

b. ***baarishon=ne*** *shaher barbaad kar di-ya.*
rain=ERG city destroy do give-PFV.M.SG

'The rain destroyed the city.'

(30) ***Rami=ne*** *dHoka kHa-ya.*
Rami=ERG deception eat-PFV.M.SG

'Rami got deceived.'

It seems then that ergative case is required by structural conditions in transitives, and, therefore, is not associated with any particular semantics or θ-role. On the other hand, ergative case is not obligatory in any of the other contexts in which it appears, and its optional use leads to interpretive effects. Bashir (1999) and Butt & King (2004: p.7) reach the same conclusion.

A purely structural account of ergative case assignment is challenged by the fact that derived subjects, such as promoted objects of passives, never receive ergative case, although they may receive nominative case (as discussed in section 4.1.4). This also holds for passives of indirect causatives, like *bHag-a-na* 'to cause to run', where the object is an agent (in the doer sense) in its event (31b).

(31) a. *Rami=ne gHoRe=ko bHag-a-ya.* (active)
Rami=ERG horse=ACC run-CAUS-PFV.M.SG

'Rami made the horse run.'

b. ***gHoRa(*=ne)*** *bHag-a-ya* *gya.* (passive)
horse(*=ERG) run-CAUS-PFV.M.SG PASS.PFV.M.SG

'The horse was made to run.'

Before setting out the proposal for ergative case assignment, let us recap some of the assumptions that were made about case in section 2.3. Case corresponds to KP, the highest nominal projection. Valued case-features with morphological exponents are hosted in K. Inherent case nominals are selected as valued KPs, while structural case nominals are selected as DPs, with subsequent projection of KP upon case-valuation via Agree. KP-insertion occurs counter-cyclically, and respects Safir's (2019) Peak Novelty Condition, constraining how deep counter-cyclic Merge can occur. As a result, K Merges with the Moved DP. KPs act as phases, and block access to the DP within. Additionally, following Caha (2009) and others, I take case-features to be bundles of sub-features, each of which projects a KP layer. This means that individual cases may consist of one or more KP layers. Conceptualising case-features as bundles of sub-features means that while probes are generally able to value the entire bundle, there may be some probes which can value only some sub-features, leaving the nominal active for further Agree. I propose that this is exactly what occurs in ergative case assignment in Urdu.

I propose that perfective Asp, Asp_{PFV}, is a case-assigning probe in Urdu. However, it can only partially value a given case-feature. The idea of partial probes has been implemented in other places in the literature too. For example, to account for multiple heads probing ergative case in Basque, Řezáč (2004: §2.3) assumes that some functional heads may only probe certain ϕ-features, such as number or person, leaving other features unvalued, and therefore, making the goal active for probing by other functional heads. He provides evidence from split-agreement patterns, where some heads show agreement inflection for some features, and other heads for other features. In Urdu, split-agreement patterns are not seen because all morphological agreement is parasitic on T (Bhatt, 2005), but there is evidence from agreement

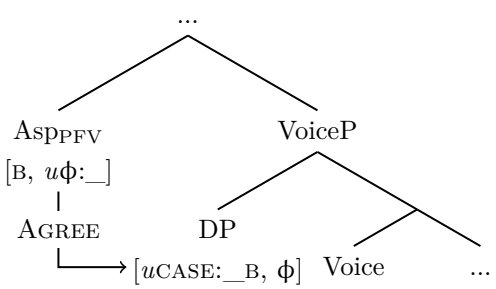
morphology to suggest that Asp is only a number and gender probe (see also Davison, 2002). While it is common in Urdu for verbal elements to show subsets of agreement features (section 1.2.4, Table 1.4), the tense paradigm as a whole shows number, gender and person, while the aspect paradigm only shows number and gender (Table 5.2). This may be indication that Asp does not have any person features in Urdu.[11]

		Gender	**Number**	**Person**
Asp	PFV	✓	✓	–
	IPFV	✓	✓	–
	PROG	✓	✓	–
T	PST	✓	✓	–
	PRS	–	✓	✓
	FUT	✓	✓	✓

Table 5.2: Agreement morphology on tense and aspect markers.

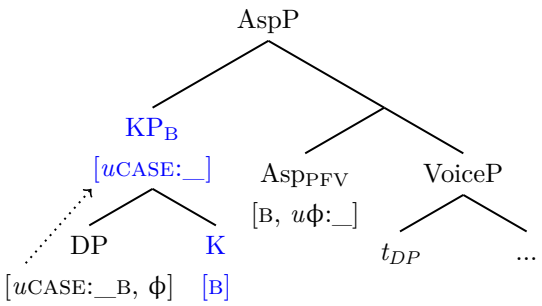
I propose that as a partial probe, Asp_{PFV} cannot value all the sub-features of a case-feature, and hence, only partially values it. As a minimal working example, I break down the case-feature as [A, B], and assume that Asp_{PFV} values [B] but not [A] (32). The result of this is twofold. Firstly, because Asp_{PFV} values [B], the subject moves to Spec-AspP (33), where a KP layer is projected as a result of K-insertion (shown in blue). This makes the ϕ-features of the DP inside KP_{B} inaccessible for further probing. Simultaneously, because *all* sub-features are not valued, part of DP's case-feature remains unvalued. I assume that this unvalued case-feature is copied onto the resulting KP.

(32)



[11] I assume that even though morphological agreement is parasitic on T, verbal heads, such as Asp_{PFV}, have their own unvalued ϕ-features in order to act as probes. I do not delve into the mechanics of parasitic agreement between Asp (and other verbal heads) and T (see Bhatt, 2005, for consideration of different possible mechanisms).

(33)



Feature-copying or *feature percolation* occurs when features of a non-terminal node are inherited from a node it dominates (Williams, 1981).[12] For example, N has gender features, which percolate up so that the DP as a whole has gender features. Feature percolation from specifiers to higher projections has also been proposed, most notably in accounting for *wh*-pied-piping (Cole, Hermon & Sung, 1993; and subsequent). I take it that unvalued features must percolate up the extended projection they are found in, until they can be valued. This is similar to Neeleman & van de Koot's (2002) assumptions regarding Function Copying, whereby selectional functions percolate upwards until they are satisfied.[13] KP is part of the nominal projection, hence, any unvalued case-features on DP can be copied on to it. Note, that ϕ-features do not percolate up from DP to KP, as these are all valued within the DP. This means that KPs never have ϕ-features, and are not be visible for Match and Agree (section 3.6.4).

Returning to ergative case assignment, T$_{FIN}$ now probes and finds KP$_B$ (34).[14] T$_{FIN}$ values the remaining sub-feature, [A].[15] The subject then moves to Spec-TP. Since [A] essentially corresponds to nominative case (see below), no additional KP layer is projected. This representation of ergative case may also shed light on why ergative case has eluded placement on case hierarchies like Caha's (2009). Descriptively speaking, ergative case seems to be the spell-out of a partial KP layer combined with nominative case. This may suggest that ergative case is a contextual phenomenon, at least in split-ergative languages, and less 'independent' than other cases, hence, making it difficult to place on a hierarchy.

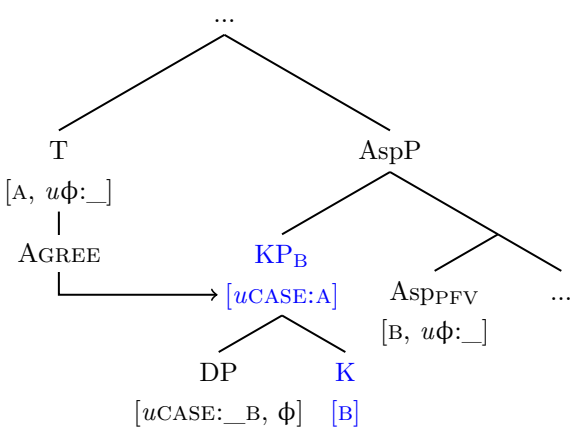
[12]Feature percolation is notably different from the other operations which drive the derivation (Merge, Agree, Move). This has led some to argue that it should be entirely eliminated from Minimalist derivations (Heck, 2008; Cable, 2010).

[13]This is also similar to feature-sharing in Head-Driven Phrase Structure Grammar (HPSG), as also noted by Neeleman & van de Koot (2002).

[14]I do not distinguish between Fin and T, as all tensed verbs seem to be finite in Urdu. Non-finite verbs do not show tense distinctions.

[15]This may be seen as an instance of feature gluttony. According to Coon & Keine (2021), different segments (probing features) of a single probe (head) may Agree with distinct goals (see section 3.6.1, footnote 22). In my proposal of ergative case assignment, different segments of a single goal Agree with distinct probes.

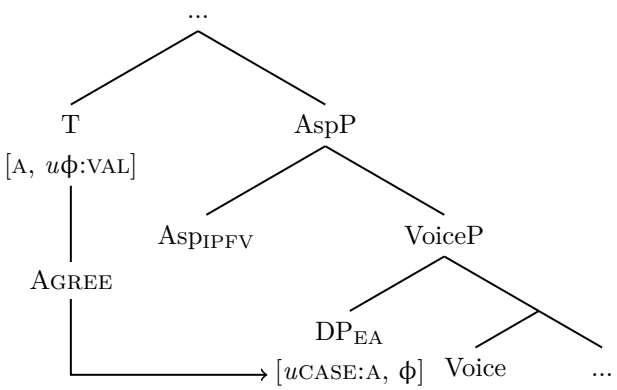
(34)



Despite T_{FIN} Agreeing with the subject, its own ϕ-features are not valued because it cannot access the DP inside KP_B.[16] Thus, ergative subjects do not trigger agreement. Details for how object agreement comes about can be found in section 3.6.4.

On the other hand, Asp_{IPFV} is not a case-assigning probe. It does not value any case sub-features. Consequently, when T probes, it finds a DP goal. T Agrees with DP, and assigns nominative case to it. DP's ϕ-features are accessible to T, thus, T's ϕ-features are valued and agreement is with the subject.

(35)



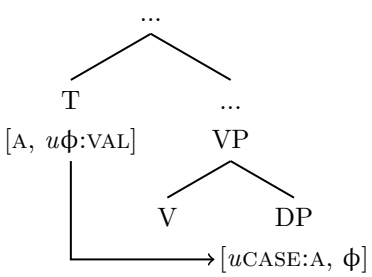
As mentioned, derived subjects, like promoted objects, do not receive ergative case. I propose this is because the sub-feature valued by Asp_{PFV}, [B], is only found on arguments which are First-Merged as specifiers, that is, base-generated external arguments and applicative arguments.[17] Applicative arguments (or indirect objects) receive inherent case, and thus, are not active for Agree and subsequent ergative

[16] In section 3.4, I redefined successful Agree as an instance of Agree which results in at least one of the probe or goal's features being valued by the other. Consequently, even though T's ϕ-features are not valued upon probing KP_B, this is still considered to be a successful instance of Agree, as the goal's case-feature is valued by T, meaning some valuation has taken place.

[17] While it is common for case sub-features to be defined in structural terms, the extent to which structural information is represented featurally is unclear (see discussion on previous approaches to case decomposition in section 2.3.3), and even more so to what extent structurally-defined features should be able to project their own projection, as in the current approach. As of now, I cannot find a more optimal solution for constraining ergative case assignment to base-generated subjects.

case assignment. Direct objects are Merged as complements; as a result, their case-feature does not have [B]. Therefore, Asp_{PFV} cannot value a case-feature on a direct object. This leads to T valuing the case-feature alone (36), which is spelled out as nominative.

(36)



Therefore, the non-structural properties of ergative case arise due to the sub-feature valued by Asp_{PFV} being restricted to specifiers. This also sheds light on the use of ergative case outside of transitive contexts. The EA position is often (although not always) associated with agenthood. This may have led to an association between ergative case and agentivity, which has been extended to other constructions, like intransitives and deontic modals. The idea that these uses of ergative case are an extension of its transitive uses is supported by the fact that its distribution in these contexts is far more limited than in transitives: only one sub-class of intransitives allows ergative subjects, and only a single modal construction. Moreover, in both intransitives and modals, ergative case is the more marked choice, and is even rejected by some speakers, suggesting that it may still be a change in progress. It should also be noted that the structural conditions which govern the availability of ergative case in transitives are seen to varying degrees in intransitives and modals. As in transitives, ergative case is only possible with perfective aspect in intransitives (ex.27b, repeated, vs. 37), but with modals, ergative case is possible regardless of aspect (38).

(27b) *Ram=ne kHaans-a.*
Ram=ERG cough-PFV.M.SG
'Ram coughed [purposefully].' (Butt & King, 2004: p.158)

(37) *Ram (*=ne) kHaans-ta he.*
Ram (*=ERG) cough-IPFV.M.SG be.PRS.3SG
'Ram coughs [purposefully].'

(38) a. *Nadya=ne* [*zoo* *jaa-na*] *ho* *ga.*
Nadya=ERG [zoo go-INF] be.FUT.3SG FUT.M.SG

'Nadya will want to go to the zoo.'

b. *Nadya=ne* [*zoo* *jaa-na*] *ho-ta* *he.*
Nadya=ERG [zoo go-INF] be-IPFV.M.SG be.PRS.3SG

'Nadya wants [habitually] to go to the zoo.'

This may be an indication that ergative case in deontic modal constructions is more non-structural than in intransitives, where it seems to have retained some of its structural properties.

To conclude, ergative case shows properties of both structural and non-structural cases. I have proposed that ergative case comes about due to valuation by two functional heads, Asp_{PFV} and T_{FIN}. Asp_{PFV} can only value a case sub-feature found on external arguments, hence, confining ergative case to base-generated subjects and giving it a non-structural flavour.

5.3 Dative Subjects

Dative case is found on experiencer subjects (39), and is generally taken to be an inherent case associated with the experiencer θ-role (Mohanan, 1994: §7.1; Butt & King, 2004: p.162; Subbarao, 2012: Ch.5; contra Agarwal, 2022: Ch.4; Baker, 2019).[18]

(39) a. ***Rami=ko*** *khushi* *hui.*
Rami=DAT happiness happen.PFV.F.SG

'Rami felt happy.'

b. ***Rami=ko*** *bHuuk* *lag-i.*
Rami=DAT hunger contact-PFV.F.SG

'Rami felt hungry.'

c. ***Rami=ko*** *gHar* *yaad* *aa* *rah-a* *he.*
Rami=DAT house.NOM memory come PROG-M.SG be.PRS.3SG

'Rami is missing home.'

[18] While all dative subjects are experiencers, all experiencers do not have dative case (Mohanan, 1994: p.142; Davison, 2004b: p.200 + note 5; Davison, 2015: p.1482). As we shall see in section 5.3.2, dative case is assigned to experiencers in Spec-HApplP. Experiencers with ergative or nominative case are presumably introduced in Spec-VoiceP, like other EAs which receive ergative/nominative case.

I apply the subject diagnostics to dative subjects in section 5.3.1. In line with previous reports on Hindi (Davison, 2004a; Poole, 2016), dative subjects show a subset of subject properties, and furthermore, objects of dative predicates are also able to pass subject tests. In section 5.3.2, I propose that (i) dative subjects originate as indirect objects in the specifier of an applicative phrase (Spec-HApplP); and (ii) only arguments which Agree with T are able to move to Spec-TP and satisfy T's EPP feature. As dative subjects are inherently case-marked and do not Agree with T, they remain in a low position (see also Poole, 2016) and show fewer subject properties than high subjects, like nominative and ergative ones.

5.3.1 Applying subjecthood diagnostics

Davison (2004b) and Poole (2016) report that dative subjects pass fewer subject diagnostics than nominative subjects (see also Subbarao, 2012: Ch.5; Bhatia & Poole, 2016; contra Mohanan, 1994: §7.1). Like nominative (and ergative) subjects, dative subjects are able to bind anaphors (40) and control into participial clauses (41).

(40) *Rami$_i$=ko* ***apna$_i$*** *kaam pasand he.*
Rami$_i$=DAT REFL$_i$ work like be.PRS.3SG

'Rami$_i$ likes his$_i$ own work.'

(41) *Rami$_i$=ko* [***PRO$_i$*** *California jaa kar*] *kHaana khuub pasand*
Rami$_i$=DAT [PRO$_i$ California.LOC go do] food many like
aa-ya.
come-PFV.M.SG

'Upon [Rami] going to California, Rami liked the food a lot.'

However, dative subjects are also able to bind pronominal possessors (42), which nominative (and ergative) subjects are unable to do (sections 5.1.2 and 5.2.1).

(42) *Rami$_i$=ko sirf* ***us$_{i/j}$=ki*** *biwi pasand he.*
Rami$_i$=DAT only 3SG$_{i/j}$=GEN wife like be.PRS.3SG

'Rami$_i$ likes his$_{i/j}$ wife only.'

This is a true case of binding and not simply co-reference, as shown through quantifier binding in (43).

(43) *har aadmi$_i$=ko sirf **us$_i$=ki** biwi pasand he.*
every man$_i$=DAT only 3SG$_i$=GEN wife like be.PRS.3SG

'Every man$_i$ likes his$_i$ wife only.'

The behaviour of dative subjects with anaphoric and pronominal possessors shows that the two are not in complementary distribution. In transitives, nominative and ergative subjects can bind anaphors but not pronouns, while objects can bind pronouns but not anaphors (section 5.1). This seemingly suggests that anaphors and pronouns are in complementary distribution. However, dative subjects are able to bind both, showing that this is not so.

Additionally, unlike nominative subjects, dative subjects cannot be replaced by PRO, as shown by Davison (2008). The predicate *mil-na* 'to receive/meet' takes a dative subject, as shown in (44a).[19] When this predicate appears in a non-finite clause, as in (44b), its subject cannot be replaced by PRO.

(44) a. ***mujHe** aisa paisa mil gya.*
1SG.DAT such money receive go.PFV.M.SG

'I got such money.'

b. **mein* [***PRO** aisa paisa mil-na*] *nahi chah-ti.*
1SG.NOM [PRO such money receive-INF] not want-IPFV.F.SG

Intended: 'I don't want to get such money.' (Davison, 2008: p.1)

A dative antecedent does not make PRO available either (45). This is unsurprising, as case-matching between the controller and PRO is not a requirement for control, as shown in section 5.2.1.

(45) ***mujHe** [***PRO** aisa paisa mil-na*] *nahi chah-iye.*
1SG.DAT [PRO such money meet-INF] not want-PFV.F.SG

Intended: 'I don't want to get such money.'

A further complication with dative predicates comes from the fact that their objects can also pass subject diagnostics (Davison, 2004a,b; Bhatia & Poole, 2016; Poole, 2016), as mentioned above. This is unlike objects of (di)transitives, as seen in section 5.1. Objects of dative predicates can bind anaphors (46a), but not pronouns (46b), and can also control into participial clauses (47).

[19]The light verb *jaa* 'go' accompanies the dative predicate in (44a) but does not affect the EA or its case. This is not a passivised dative predicate – the lexical verb is in its root form, *mil*, as selected by light verbs, rather than its perfective form, *mil-a*, as selected by the passive auxiliary. In fact, dative predicates cannot be passivised, the reason for which is discussed in section 5.3.2.

(46) a. *har laRka$_i$* ***apni$_i$*** *behen=ko nazar aa-ya.*
every boy$_i$ REFL$_i$ sister=DAT sight come-PFV.M.SG

'Every boy$_i$ was seen by his$_i$ own sister.'

b. *har laRka$_i$* ***us$_{*i/j}$=ki*** *behen=ko nazar aa-ya.*
every boy$_i$ 3SG$_{*i/j}$=GEN sister=DAT sight come-PFV.M.SG

'Every boy$_i$ was seen by his$_{*i/j}$ sister.'

(47) *Rami$_i$* [***PRO$_i$*** *Cambridge jaa kar*] *sirf Sana=ko pasand*
Rami$_i$.NOM [PRO$_i$ Cambridge.LOC go do] only Sana=DAT like
aa-ya.
come-PFV.M.SG

'Upon [Rami] going to Cambridge, only Sana liked Rami.'

These objects must also be replaced by PRO in non-finite clauses (48b).

(48) a. *sirf Omar=ko Rami pasand aa-ya.*
only Omar=DAT Rami.NOM like come-PFV.M.SG

'Only Omar liked Rami.'

b. *Rami$_i$* [***PRO$_i$*** *sirf Omar=ko pasand aa-na*] *nahi*
Rami$_i$.NOM [PRO$_i$ only Omar=DAT like come-INF] not
chah-ta he.
want-IPFV.M.SG be.PRS.3SG

'Rami doesn't want to be liked only by Omar.'

To understand the behaviour of these arguments with respect to subject properties, I now turn to the structure of dative predicates.

5.3.2 Structure of dative predicates

Davison (2004b) proposes that dative subjects originate as internal arguments in Spec-VP, that is, as indirect objects (IOs). This is lower than the position in which ergative/nominative subjects are introduced, which she takes to be Spec-vP. The object is shown as nominative in (49), reasons for which are discussed later in this section.

(49) ... T ... [$_{VP}$ DAT [V NOM]]

Following Chomsky's (1995) principle of *equidistance* (50), the two arguments are equidistant from T, since they are in the same minimal projection, VP. Equidistance results in equal economy of movement, that is, the cost of moving both arguments is the same.

(50) EQUIDISTANCE:
ɣ and β are equidistant from α if ɣ and β are in the same minimal domain.
(Chomsky, 1995: p.356)

Davison also posits a parameter which allows languages to choose whether non-structurally case-marked arguments can satisfy T's EPP feature or not. She claims this parameter is 'on' in Hindi-Urdu which allows non-structurally case-marked arguments to satisfy T's EPP feature. This, in combination with equidistance, means that either the dative or nominative argument can move to Spec-TP.[20] The argument which undergoes promotion shows subject behaviour.

I follow Davison's analysis in essence, but implement it differently. I take dative subjects to be introduced as IOs, but depart from Davison with regards to the position in which they are introduced. I also disagree with Davison regarding T's EPP feature: I argue that only structurally case-marked arguments can satisfy T's EPP feature because Agree with T is a prerequisite for movement to Spec-TP. By virtue of having inherent case, dative subjects never move to Spec-TP .

Before looking at the details of the analysis, let us consider the alternative: dative subjects are introduced as EAs in Spec-VoiceP. Such an analysis is assumed by Bhatia & Poole (2016). What kind of Voice head would be found in dative predicates? In Chapter 4, we saw that Voice heads differ in their properties, specifically specifier projection, θ-role assignment, and case assignment. In dative predicates, we would require a Voice head, $\text{Voice}_{\text{DAT}}$, which obligatorily projects a specifier (dative subjects are not optional), selects a dative KP, and assigns an experiencer θ-role to it. Additionally, $\text{Voice}_{\text{DAT}}$ would be extremely selective with respect to the predicates it can attach to. This is necessary to restrict the distribution of such a Voice head to dative predicates only.

There are two issues with positing such a Voice head. Firstly, $\text{Voice}_{\text{DAT}}$ does not fit into the typology of active/non-active Voice heads that we have seen. While the typology seen in section 4.5 is by no means comprehensive, a clear pattern emerges with regards to the active/non-active distinction. Active Voice heads have an obligatory specifier and assign structural case; non-active Voice heads have an optional specifier and assign an inherent case. In section 4.3, I proposed that these two properties may even be connected. $\text{Voice}_{\text{DAT}}$ would have an obligatory specifier

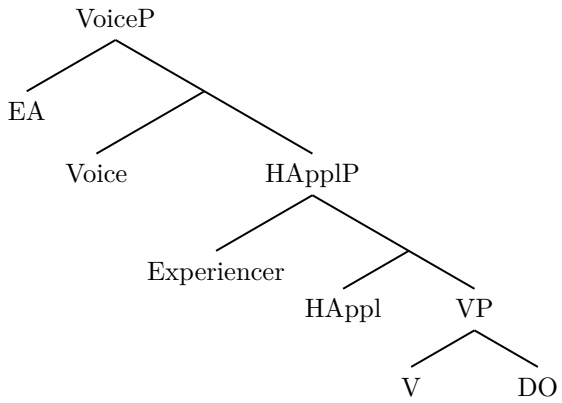
[20] Ura (2000) proposes a similar analysis for experiencer-object inversion in Dutch, Icelandic and German.

and assign an inherent case, thus, patterning with neither active nor non-active Voice. Moreover, none of the other Voice heads are restricted to a specific lexical class of verbs. Nor do any of the other Voice heads Merge directly with v_{B}P. As we saw in sections 2.2 and 4.4.4, Voice heads, including Voice_{AC}, only Merge to v_{B}P with an intervening v_{CAUS}P.[21] Dative predicates have v_{B} and cannot be causativised. Hence, $\text{Voice}_{\text{DAT}}$ would Merge directly with v_{B}P. All these properties would make $\text{Voice}_{\text{DAT}}$ highly unusual as a Voice head, at least with respect to the typology we have here. Secondly, and more importantly, the functional load we need $\text{Voice}_{\text{DAT}}$ to perform is already performed by another functional head: Appl. Appl introduces an argument in its specifier, and assigns the experiencer θ-role and dative case to it.

The idea that dative subjects originate as IOs in Spec-ApplP has motivated several analyses of dative predicates (Belletti & Rizzi, 1988; Moore & Perlmutter, 2000; Cuervo, 2003: §4.1, 2020; Tubino-Blanco, 2009), especially because dative subjects tend to behave differently from nominative subjects, and often pass a subset of subject tests.[22] In particular, Cuervo (2020) argues in favour of unifying different dative arguments as all originating in Spec-ApplP, with different interpretations arising as a result of differences in structure above and below ApplP (see also Cuervo, 2003).

In section 3.7, I proposed that there are two applicative heads which introduce dative IOs in Urdu. Experiencers/beneficiaries are event participants, standing in a relation to the event, and are introduced in the specifier of a high applicative head, HAppl (51a). Recipients are in a possessor relation with direct objects, and are introduced in the specifier of a low applicative head, $\text{LAppl}_{\text{REC}}$ (51b).

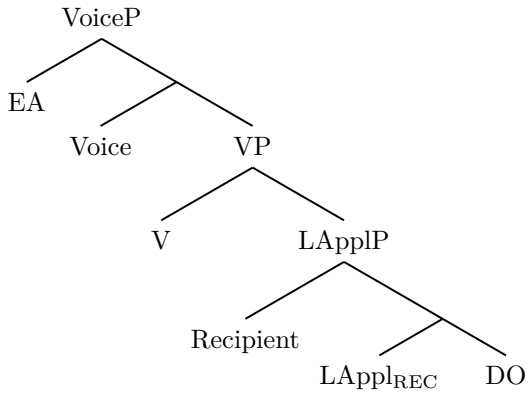
(51) a.



[21] Alexiadou et al. (2006) and Alexiadou et al. (2015: Ch.2) argue that marked anticausatives also have v_{CAUS}, meaning that Voice_{AC} too does not Merge directly with v_{B}P.

[22] Moore & Perlmutter (2000) show that in Russian, some dative subjects originate as IOs, while others are true subjects.

b.



Spec-VP is not a position where dative arguments are introduced.[23] Therefore, I do not follow Davison's (2004b) proposal that dative subjects originate in Spec-VP, but propose instead that they are introduced in Spec-HApplP, where other dative experiencers are introduced.[24, 25]

It has been argued that dative predicates behave like unaccusatives, in that they do not have an EA (Belletti & Rizzi, 1988; Cuervo, 2020; amongst others; see Subbarao, 2012: Ch.5, for Hindi-Urdu). I propose this is so because dative predicates do not have VoiceP. Firstly, dative predicates cannot be passivised (52).

(52) * *Rami=ko* *gHar* *yaad* *aa-ya* *gya.*
Rami=DAT house.NOM memory come-PFV.M.SG PASS.PFV.M.SG

Intended: 'Home was missed by Rami.'

Some dative predicates can have the light verb *jaa* 'go' (53a), which I argued was an exponent of non-active Voice when accompanying unaccusative verbs (section 4.4). However, not all dative predicates are acceptable with *jaa* (53b), making this use of *jaa* more similar to its use as a lexical item with unergatives and transitives, rather than a spell-out of a functional head, as with unaccusatives (section 4.4.2).

(53) a. *Rami=ko* *gHar* *yaad* *aa* ***gya.***
Rami=DAT house.NOM memory come go.PFV.M.SG

'Rami missed home [finally].' / 'Rami remembered home [finally/completely].'

[23] In fact, it is locative goals which are introduced in Spec-VP (Malhotra, 2014). These IOs show very different binding relations with the direct object as compared to dative IOs (section 4.1.4, ex.39a, vs. section 3.7.1, ex.83–88).

[24] Mohanan (1994: p.150) argues that dative experiencer subjects are not raised IOs, since neither can license gapping of the other in a coordinate construction. As noted in section 5.1.5, gapping can be licensed by matching in grammatical function and case. We may assume this is because of differences in the structure above ApplP, namely the presence/absence of VoiceP (see below), which is needed for the correct interpretation of the applicative argument (Cuervo, 2003, 2020).

[25] The shared position of dative subjects and experiencer IOs may be why some speakers allow IOs in ditransitives to bind anaphors.

b. **Rami=ko* *kHaana* *chah* *gya.*
Rami=DAT hunger want go.PFV.M.SG

Intended: 'Rami wanted food [finally/completely].'

Secondly, if there were a VoiceP above HApplP, we would expect this Voice head to be able to project a specifier. Neither ergative/nominative nor instrumental EAs are possible with dative predicates (54).

(54) a. ***Omar** / ***Omar=ne*** *Rami=ko* *khushi* *hui.*
Omar.NOM / Omar=ERG Rami=DAT happiness happen.PFV.F.SG

Intended: 'Omar caused Rami to be happy.'

b. ***Omar=se*** *Rami=ko* *khushi* *hui.*
Omar=INS Rami=DAT happiness happen.PFV.F.SG

Intended: 'Omar caused Rami to be happy.'

Nor is there a silent *pro* subject, as in active impersonals (section 4.2). This can be seen through truth conditions and agentivity tests. (55) is true with or without an agent causing Rami to remember the story. Adding an agentive adverb causes the sentence to be infelicitous (56) – the dative subject cannot be modified by an agentive adverb as it is an experiencer without agency over the experience, and there is no implicit agent to modify. Finally, use of the phrase *by itself* is possible (57), showing that there is no EA present in interpretation.

(55) *Rami=ko* *kahani* *yaad* *aa-i.*
Rami=DAT story memory come-PFV.F.SG

'Rami remembered the story.'

(56) #*Rami=ko* ***jaan.buujH.kar*** *kahani* *yaad* *aa-i.*
Rami=DAT deliberately story memory come-PFV.F.SG

'Rami remembered the story deliberately.'

(57) *Rami=ko* ***khud-ba-khud*** *kahani* *yaad* *aa-i.*
Rami=DAT self-with-self story memory come-PFV.F.SG

'Rami remembered the story [without any cause].'

Therefore, I take it that there is no VoiceP projected above HApplP in dative predicates. This also explains why accusative case is not possible on objects of dative predicates (58).[26]

(58) *Rami=ko Omar / ***Omar=ko** yaad aa-ya.*
Rami=DAT Omar.NOM / *Omar=ACC memory come-PFV.M.SG
'Rami remembered/missed Omar.'

This raises the question of case-licensing of objects with uninterpretable case-features, namely human objects (section 3.1). I propose that, as in passives, T can license these objects via nominative case assignment. T does not Agree with the dative subject, hence, it can probe the object. This predicts that human objects should be ungrammatical in non-finite clauses with dative predicates as finite T is absent. This is borne out (59). Non-human objects are grammatical, as their case-feature can remain unvalued.

(59) [*Rami=ko* ****Omar*** / ***gHar*** *yaad aa-na*] *ajeeb he.*
[Rami=DAT *Omar / home memory come-INF] weird be.PRS.3SG
'It is weird for Rami to miss *Omar/home.'

The fact that objects of dative subjects are nominative is further corroborated by agreement with coordinated objects. As discussed in section 3.6.4, coordinated subjects show resolved agreement because subject agreement is the result of Agree with &P, while coordinated objects show closest conjunct agreement because object agreement comes about via Feature-Copying at PF (Bhatt & Walkow, 2013). If human objects of dative predicates receive nominative case, that is, they enter into Agree with T, then we expect them to show resolved agreement. This is seen in (60). Agreement must be masculine plural.

(60) a. *Rami=ko [Hira aur Omar] yaad* ***aa-ey*** */*
Rami=DAT [Hira.F and Omar.M] memory come-PFV.M.PL /
**aa-ya.*
*come-PFV.M.SG
'Rami missed/remembered Hira and Omar.'

[26]Note that an analysis of dative predicates as having VoiceP may be able to account for lack of accusative case through dative intervention (see section 3.7).

b. *Rami=ko* [*Omar* *aur* *Hira*] *yaad* ***aa-ey*** /
Rami=DAT [Omar.M and Hira.F] memory come-PFV.M.PL /
**aa-i.*
*come-PFV.F.SG

'Rami missed/remembered Omar and Hira.'

Finally, I depart from Davison's (2004b) account in assuming that T's EPP feature can only be satisfied by arguments it Agrees with or assigns case to (Chomsky, 1995: p.282–84; see also Preminger, 2014: Ch.8).[27] This means that inherent case-marked arguments, including dative subjects, are not potential goals for T's EPP feature, and do not intervene in T probing the object instead.

The empirical motivation for this comes from the pronoun binding facts. In section 5.5, I discuss the locus of subject properties, and show that the domain for pronoun obviation is finite TP, and that arguments in Spec-TP are unable to bind pronouns. Dative subjects are always able to bind pronouns, even when they show other subject properties, such as control into participial clauses (61), showing that they never move to Spec-TP. The example below also highlights that subject properties do not always cluster together.

(61) *har* *laRke$_i$=ko* [***PRO$_i$*** *gHar* *jaa* *kar*] ***us$_i$=ki*** ***behen*** *nazar*
every boy$_i$=DAT [PRO$_i$ house.LOC go do] 3SG$_i$=GEN sister.NOM sight
aa-i.
come-PFV.F.SG

'Upon [every boy] going home, every boy$_i$ saw his$_i$ sister.'

Instead, only the object may move to Spec-TP.[28] In section 4.1.4, I showed that T assigns nominative case to objects in passives, but that this does not always result in movement to Spec-TP because T's EPP feature is optional. The same can be said for dative predicates: objects which receive nominative case from T do not always move to Spec-TP, although they may. When the object is not promoted, it does not pass subject tests. In (62), the quantifier in the dative subject binds the pronominal possessor in the object, showing that the object is c-commanded by the subject and has not moved to Spec-TP. This object cannot pass subject tests,

[27] More accurately, Chomsky (1995: p.282–84) argues that only arguments which trigger agreement move to Spec-TP. This obviously does not hold in Urdu, as ergative subjects do not trigger agreement but show all signs of moving to Spec-TP. Instead, Agree with T is necessary to move to Spec-TP; in Urdu, Agree simply does not always result in agreement (or even movement).

[28] This leads to the word order Object - EA - V. I assume that any other word orders in which the object passes subject tests are due to the EA scrambling (i.e. undergoing A'-movement for discourse purposes, A. Kidwai, 2000) over the object later in the derivation. The same applies to non-active constructions (section 5.4).

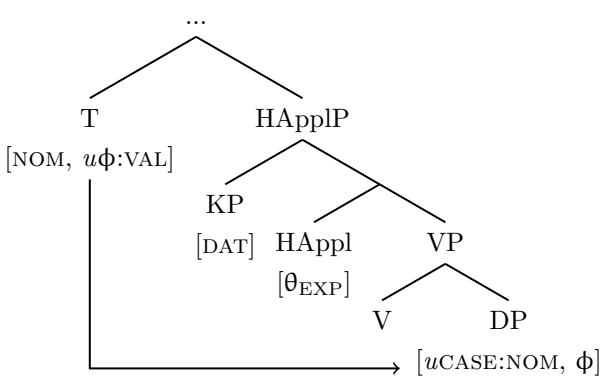
such as controlling PRO. When the object is promoted, it passes all subject tests, as shown in section 5.3.1.

(62) *har laRke$_i$=ko us$_i$=ki behen$_j$ [PRO$_{i/*j}$ gHar jaa kar]*
every boy$_i$=DAT 3SG$_i$=DAT sister$_j$.NOM [PRO$_{i/*j}$ house.LOC go do]
nazar aa-i.
sight come-PFV.F.SG

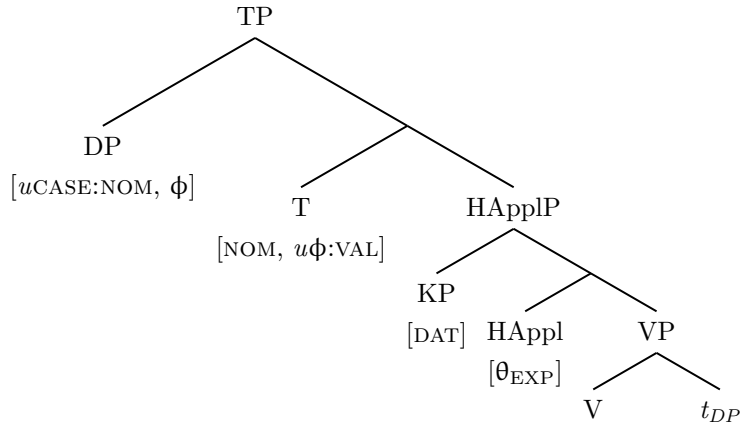
'Upon [every boy/*his sister] going home, every boy$_i$ saw his$_i$ sister.'

The tree in (63) illustrates the structure for dative predicates. Dative subjects are selected as valued KPs in Spec-HApplP, where they receive the experiencer θ-role from HAppl. T does not assign case to the experiencer, hence, the experiencer cannot move to Spec-TP. Instead, T is free to Agree with the object, which receives nominative case. T's ϕ-features are also valued as a result. The nominative object may move to Spec-TP to satisfy T's EPP feature. If the object does not move, as in (63), the dative subject will show subject properties, and the object will not. If the object does move (64), then it will show subject properties, and the dative subject will not. The dative subject is not an intervener, for the same reason that *by*-phrases and oblique causers do not prevent object promotion in passives and marked anticausatives respectively: movement to Spec-TP requires Agree; since inherent case nominals do not enter into Agree with T, they are not eligible to move, and therefore, do not act as interveners.

(63)



(64)



Notice that (63) also shows us that nominative objects must be able to remain VP. As we saw, movement of these objects to Spec-TP is optional. One possibility is to argue that all valued case-features must move out of VP, and that like accusative objects, nominative objects must undergo object shift. Object shift is simply not visible as it has no effect on word order. However, this cannot be right. Assuming the two variants of HAppl are in complementary distribution, non-thematic HAppl is not selected in dative predicates since the thematic variant is selected instead. This means there is no landing site for object shift. Consequently, it must be the case that nominative objects can remain inside VP. This is unsurprising on two counts. Firstly, as discussed in section 2.3.2, nominative case shows many similarities to caseless DPs. Caseless DPs, like incorporated objects, can remain inside VP. The fact that nominative case can remain within VP can be chalked up to being one more similarity. Secondly, on the basis of similarity to caseless DPs, I claimed that nominative case lacks KP. If we consider the fact that movement out VP goes hand-in-hand with counter-cyclic K-insertion for accusative objects, the fact that nominative objects do not need K-insertion may also explain why they do not need to move out of VP. Further discussion on movement, counter-cyclicity and case is given in section 6.2.2.

5.4 Subjects in Non-Active Constructions

A potential risk in establishing subjecthood diagnostics is that they may in fact track properties that are *generally* associated with subjects (e.g. agentivity, nominative case) but not always. In the previous sections, we have already begun to tease apart such properties from the notion of subjecthood. Ergative subjects are quirky case subjects, yet pass all subject tests. Dative subjects originate as indirect objects, and pass a subset of subject tests. In this section, we take this exploration further by investigating subjects in non-active constructions. *By*-phrases and oblique causers (OCs) are introduced as EAs in Spec-VoiceP, but have inherent case and, in the case

of OCs, are not agentive (sections 4.1.3, 4.4.3). Moreover, in these constructions, the object may receive nominative case from T, and move to surface subject position (section 4.1.4). In this section, I recap data from Chapter 4 showing that EAs and objects of non-active constructions both pass subject diagnostics. Strong similarities between non-active constructions and dative predicates emerge, which I account for through lack of movement of inherent case-marked arguments to Spec-TP, and optional promotion of nominative objects to Spec-TP.

By-phrases in passives and OCs in marked anticausatives (henceforth, simply anticausatives) can bind anaphors (65) and control into participial clauses (66). However, they do not show pronoun obviation, that is, they can bind pronouns (67).

(65) Anaphor binding:

a. ***Rami$_i$=se apni$_i$*** *kHiRki* *toR-i* *gai.*
Rami$_i$=INS REFL$_i$ window.NOM break.CAUS-PFV.F.SG PASS.PFV.F.SG

'His$_i$ own window was broken by Rami$_i$.'

b. ***Rami$_i$=se apni$_i$*** *kHiRki* *TooT gai.*
Rami$_i$=INS REFL$_i$ window.NOM break AC.PFV.F.SG

'His$_i$ own window broke because of Rami$_i$.'

(66) Control into participial clause:

a. ***Rami$_i$=se*** [***PRO$_i$*** *zor laga kar*] *kHiRki* *toR-i*
Rami$_i$=INS [**PRO$_i$** force put do] window.NOM break.CAUS-PFV.F.SG
gai.
PASS.PFV.F.SG

'Upon [Rami] applying force, the window was broken by Rami.'

b. ***Rami$_i$=se*** [***PRO$_i$*** *ball maar kar*] *kHiRki* *TooT gai.*
Rami$_i$=INS [**PRO$_i$** ball hit do] window.NOM break AC.PFV.F.SG

'Upon [Rami] hitting the ball, the window broke because of Rami.'

(67) Pronoun obviation:

a. ***har*** ***laRki$_i$=se*** ***us$_i$=ka*** *bHai* *pakR-a*
every girl$_i$=INS 3SG$_i$=GEN brother.NOM catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Her$_i$ brother was caught by every girl$_i$.'
('Every girl's$_i$ brother was caught by her$_i$.')

b. ***har*** ***laRki$_i$=se*** ***us$_i$=ki*** *botal* *TooT* *gai.*
every girl$_i$=INS 3SG$_i$=GEN bottle break AC.PFV.F.SG

'Her$_i$ bottle broke because of every girl$_i$.'
('Every girl's$_i$ bottle broke because of her$_i$.')

With regards to being PRO, it is not immediately obvious whether a *by*-phrase or OC has been omitted or replaced by PRO in a non-finite clause since these EAs are optional. As mentioned earlier, arguments which can be replaced by PRO cannot be overt in non-finite clauses, presumably because the relevant case-assigner (finite T) is missing. This was shown for nominative and ergative subjects in section 5.2.1. On the other hand, arguments which cannot be replaced by PRO can be overt in non-finite clauses. This is shown for dative subjects in (68). Non-active EAs can also appear overtly in non-finite clauses (69).

(68) [***Rami=ko*** *aisa* *paisa* *mil-na*] *afsos=ki* *baat* *he.*
[Rami=DAT such money meet-INF] sorrow=GEN talk be.PRS.3SG

'For Rami to get such money is a matter of sorrow.'

(69) a. *Rami* [***Omar=se*** *pakR-a* *jaa-na*] *chah-ta*
Rami.NOM [Omar=INS catch-PFV.M.SG PASS-INF] want-IPFV.M.SG
he.
be.PRS.3SG

'Rami wants to be caught by Omar.'

b. [***Rami=se*** *botal* *TooT-na*] *afsos=ki* *baat* *he.*
[Rami=INS bottle break-INF] sorrow=GEN talk be.PRS.3SG

'For the bottle to break because of Rami is a matter of sorrow.'

Given the correlation between the (un)availability of overt arguments and the distribution of PRO, the fact that non-active EAs can appear overtly in non-finite clauses leads me to assume that they cannot be replaced by PRO.

By-phrases and OCs receive instrumental case as an inherent case from non-active Voice (Chapter 4). In section 5.3.2, I proposed that arguments with non-structural case cannot move to Spec-TP, as they do not enter into Agree with T. As with dative subjects, we can demonstrate that non-active EAs do not show pronoun obviation, a property associated with arguments in Spec-TP (as will be argued in section 5.5.2), even when they pass other subject tests. This is shown with a *by*-phrase in (70), where the *by*-phrase controls into the participial clause but also binds the pronominal possessor.

(70) ***har*** ***laRki$_i$=se*** [***PRO$_i$*** *gHar* *jaa* *kar*] ***us$_i$=ka*** *bHai*
every girl$_i$=INS [PRO$_i$ house.LOC go do] 3SG$_i$=GEN brother.NOM
pakR-a *gya.*
catch-PFV.M.SG PASS.PFV.M.SG

'Upon [every girl] going home, her$_i$ brother was caught by every girl$_i$.'
('Every girl's$_i$ brother was caught by her$_i$ when she$_i$ went home.')

We shall see that being PRO is also associated with Spec-TP (section 5.5.2). Since *by*-phrases and OCs do not move to Spec-TP by virtue of having inherent case, they cannot be replaced by PRO.

In contrast to EAs of non-active constructions, promoted objects pass all subject tests. They bind anaphors but not pronouns (71), and control into participial clauses (72). Moreover, they cannot appear overtly in non-finite clauses (if they require licensing), and must be replaced by PRO (73) (see also Bhatt, 2003c: p.12).

(71) Anaphor + pronoun binding:

a. *har* *laRka$_i$* ***apni$_i$*** / ***us$_{*i/j}$=ki*** *behen=se* *pakR-a*
every boy$_i$.NOM REFL$_i$ / 3SG$_{*i/j}$=GEN sister=INS catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Every boy$_i$ was caught by his$_i$ own / his$_{*i/j}$ sister.'

b. *har* *laRka$_i$* ***apni$_i$*** / ***us$_{*i/j}$=ki*** *jaga=se* *gir* *gya.*
every boy$_i$.NOM REFL$_i$ / 3SG$_{*i/j}$=GEN place=INS fall AC.PFV.M.SG

'Every boy$_i$ fell from his$_i$ own / his$_{*i/j}$ place.'

(72) Control into participial clause:

a. *Omar$_i$* [***PRO$_{i/j}$*** *kamre=mein jaa kar*] *pakR-a*
Omar$_i$.NOM [PRO$_{i/j}$ room=LOC go do] catch-PFV.M.SG
gya.
PASS.PFV.M.SG

'Omar$_i$ was caught when he$_i$ went into the room.'

b. *peR$_i$* [***PRO$_i$*** *hawa=se hil kar*] *gir gya.*
tree$_i$.NOM [PRO$_i$ wind=INS move do] fall go.PFV.M.SG

'The tree fell, having moved because of the wind.'

(73) Being PRO:

a. *Rami$_i$* [***PRO$_i$*** / **Omar nahi pakR-a jaa-na*]
Rami$_i$.NOM [PRO$_i$ / *Omar.NOM not catch-PFV.M.SG PASS-INF]
chah-ta.
want-IPFV.M.SG

'Rami doesn't want (*Omar) to be caught.'

b. *Rami$_i$* [***PRO$_i$*** / **Omar gir-na*] *nahi chah-ta.*
Rami$_i$.NOM [PRO$_i$ / *Omar.NOM fall-INF] not want-IPFV.M.SG

'Rami doesn't want (*Omar) to fall.'

Since T does not assign case to the EA, it can assign case to the object in these constructions. Non-active Voice does not assign case to objects, leaving them active for Agree with T. Consequently, as shown in section 4.1.4, objects that depend on nominative case for licensing are ungrammatical in non-finite clauses, since finite T is absent. Nominative case assignment also allows objects to move to Spec-TP, where they can no longer bind pronouns. Objects which are not promoted do not show subject properties. For example, in (74), the *by*-phrase binds the pronominal in the object, showing that the object has not been promoted, and is c-commanded by the *by*-phrase. This object cannot control into a participial clause.

(74) ***har*** *laRke$_i$=se* ***us$_i$=ki*** *behen$_j$* [***PRO$_{i/*j}$*** *gHar jaa kar*]
every boy$_i$=INS 3SG$_i$=GEN sister$_j$ [PRO$_{i/*j}$ house.LOC go do]
pakR-i gai.
catch-PFV.F.SG PASS.PFV.F.SG

'Upon [every boy/*his sister] going home, his$_i$ sister was caught by every boy$_i$.'
('Every boy's$_i$ sister was caught by him$_i$ when he$_i$ went home.')

To summarise, the results of subjecthood diagnostics in passives and marked anticausatives mirror those of dative predicates. The higher argument has inherent case and cannot Agree with T. Since Agree is a prerequisite for movement to Spec-TP, inherent case arguments are unable to move to Spec-TP to satisfy T's EPP feature. T may Agree with the object instead, which also allows the object to move to Spec-TP and satisfy T's EPP feature. Objects do not always move to Spec-TP because T's EPP feature is optional (Bhatt, 2007; Davison, 2008).

5.5 Locus of Subject Properties

The previous sections examined the behaviour of several arguments with respect to four subject diagnostics. The arguments tested include base-generated and derived subjects, agents and non-agents, and structurally and non-structurally case-marked arguments. Table 5.3 summarises the results. An initial comparison of nominative subjects (row i) to objects (row vii) shows that these four properties are exclusive to subjects. Ergative subjects (row ii) show the same behaviour as nominative subjects. In contrast, dative subjects, *by*-phrases and oblique causers (rows iii–v) can bind anaphors and control into participial clauses, but do not show pronoun obviation and cannot be replaced by PRO. Finally, promoted objects of dative predicates, passives and marked anticausatives (row vi) pass all subject tests.

		Anaphor	**Control**	**Pn obviation**	**Being PRO**
i.	NOM subjects	✓	✓	✓	✓
ii.	ERG subjects	✓	✓	✓	✓
iii.	DAT subjects	✓	✓	×	×
iv.	*By*-phrases	✓	✓	×	×
v.	Oblique causers	✓	✓	×	×
vi.	Promoted objects	✓	✓	✓	✓
vii.	Objects	×	×	×	×

Table 5.3: Distribution of subject properties.

Two patterns emerge from this data. One, all the arguments which show subject properties (rows i–vi) are structurally highest in their event domain. Two, the common factor between arguments which show a subset of subject properties (rows iii–v) is that they all receive inherent case and do not receive case from T. This section looks at how these patterns connect to the subject properties themselves.

There have been two prominent analyses of subjecthood in Hindi. The first is by Mohanan (1994: Ch.6) who proposes that subject properties track prominence on different scales. For example, agreement, a common subject property cross-linguistically, tracks *case prominence* in Hindi: nominative case triggers agreement

while non-nominative cases do not. Other subject properties may track *structural prominence*, being the highest structural argument, or *thematic/logical prominence*, having the highest θ-role on a thematic hierarchy.

The second analysis comes from Poole (2016). He proposes that subject properties are spread across a series of functional heads. Arguments move via A-movement into the specifier of a given head to gain the associated property. Since A-movement is cyclic, subject properties stand in an implicational hierarchy – an argument must have moved into a lower specifier and gained properties lower on the hierarchy to be able to move into a higher specifier and gain properties higher on the hierarchy. Poole argues that non-nominative subjects show a subset of subject properties because they can stop at intermediate subject positions instead of moving all the way to the highest subject position.

In this section, I combine components of both Mohanan's (1994: Ch.6) and Poole's (2016) analyses, and propose that anaphor binding and control into participial clauses are associated with structural prominence (i.e. the highest structural argument), while pronoun obviation and being PRO are associated with a specific structurally prominent position, Spec-TP. In line with Poole, inherent case subjects are unable to move to Spec-TP since they do not enter into Agree with T (for case assignment). As a result, they do not pass the pronoun obviation and being PRO tests, although they may still be structurally prominent enough to show anaphor binding and control into participial clauses. Finally, I show that the domain for determining structural prominence is contextually determined, showing that the term subject is truly relative.

5.5.1 Anaphor binding and control into participial clauses

Let us start by looking at anaphor binding. Previous accounts of anaphor binding as a subject property have built on the premise that binding relies on functional heads (Finer, 1985; Borer, 1989; Hale, 1992; Cole & Sung, 1994; Kratzer, 1998, 2009), and that antecedents must occupy the specifier of the given functional head to successfully bind anaphors. By restricting relevant features for binding to specific functional heads, anaphor binding can be limited to subjects only.

Following a head-movement account of anaphor binding (Cole & Sung, 1994; and following), Davison (2001) argues that Hindi-Urdu anaphors move to (finite) T, and are bound by the argument in Spec-TP. She uses this to account for long-distance binding of anaphors in embedded non-finite clauses as an instance of cyclic head movement which extends the domain for anaphor binding. Davison provides evidence for T as the relevant functional head for anaphor binding from lack of anaphor binding in domains without TP, such as small clauses (75a) and nominal

phrases (75b).

(75) a. *Ram*$_i$ [*Mohan*$_j$*=ko* *apne* *aap*$_{i/*j}$*=se* *sharminda*]
Ram$_i$.NOM [Mohan$_j$=DAT REFL self$_{i/*j}$=INS ashamed]
samajH-ta *he.*
consider-IPFV.M.SG be.PRS.3SG

'Ram$_i$ regards/sees Mohan$_j$ as ashamed of himself$_{i/*j}$.'

b. *[*Ram=ka* *apne=ko* *dHoka*] *qaanuun=ke* *khilaaf* *nahi*
[Ram=GEN SELF=DAT deception] law=GEN against not
he.
be.PRS.3SG

'Ram's deception of himself is not against the law.'

(Davison, 2001: pp.63–64)

Davison also reports that anaphor binding is not possible by the causee in indirect causatives (76). Assuming indirect causatives are bi-eventive but not bi-clausal, she attributes this to the fact that there is no lower TP domain in which the causee may bind the anaphor.

(76) *Ram*$_i$*=ne* ***Vijay*$_j$*=se*** *Ravi*$_k$*=ko* ***apni*$_{i/*j/*k}$** *saikal=par*
Ram$_i$=ERG Vijay$_j$=INS Ravi$_k$=ACC REFL$_{i/*j/*k}$ bicycle=LOC
biTh-va-ya.
sit-CAUS-PFV.M.SG

'Ram made Vijay make Ravi sit on his$_{i/*j/*k}$ own bicycle.'

(Mohanan, 1994: p.123)

However, the judgements reported by Davison (2001; see also Mohanan, 1994: §6.2) for indirect causatives do not hold in the dialect of Urdu reported in this dissertation (see also judgements reported by Srishti, 2011: Ch.7, and S. Bhatia, 2016). Causees are able to bind anaphors; (77) repeats the example in (76) with changed indices to reflect this.[29]

[29]Binding by the agent is preferred over binding by the causee, although both options are available. Causees have the additional option of binding pronouns (see section 5.5.2), while agents do not. This may lead to a preference to use anaphors for agents and pronominal possessors for causees.

(77) *Ram$_i$=ne* ***Vijay$_j$=se*** *Ravi$_k$=ko* ***apni$_{i/j/*k}$*** *cycle=par*
Ram$_i$=ERG Vijay$_j$=INS Ravi$_k$=ACC REFL$_{i/j/*k}$ bicycle=LOC
biTh-va-ya.
sit-CAUS-PFV.M.SG
'Ram made Vijay make Ravi sit on his$_{i/j/*k}$ own bicycle.'

The acceptability of causees as antecedents for anaphor binding means that TP cannot be the domain for anaphor binding in this dialect. This raises the question whether the domain for anaphor binding may in fact be smaller. This is compatible with the data. Small clauses have been argued to be as small as VP (Wurmbrand, 2000), meaning that lack of anaphor binding can also be due to lack of VoiceP. Nominals, too, lack such verbal projections. Indirect causatives, on the other hand, do have an embedded VoiceP (Srishti, 2011: Ch.7; S. Bhatia, 2016; Bhatt & Embick, 2017; see also Nie, 2020a,b; contra Ramchand, 2008: Ch.6, 2011), which may explain why causees can bind.

Bhatia & Poole (2016) propose that the domain for anaphor binding is VoiceP. Following Kratzer (2009), they assume that functional heads can introduce semantic operators as index features. These index features match index features on the anaphor and antecedent, and attract the antecedent to the specifier of the relevant functional head.[30] They assume that in Hindi-Urdu, Voice introduces the index feature necessary for anaphor binding, which results in antecedents moving to Spec-VoiceP.

In S. Kidwai (2022a), I followed Bhatia & Poole (2016) in taking Voice to be the locus of anaphor binding. However, there are two challenges for such an analysis. The first, noted in S. Kidwai (2022a), comes from active impersonals. In section 4.2, I proposed that accusative-preserving passive-like structures in Urdu are underlyingly active constructions with a silent *pro* subject, which I called active impersonals. As we saw in section 4.2, *pro* can control into participial clauses (78), but cannot bind anaphors (79). Based on the latter point, I argued that *pro* lacks a [D] feature necessary for binding.

(78) ***pro$_i$*** *Omar$_j$=ko* [***PRO$_{i/*j}$*** *bHaag kar*] *pakR-a* *gya.*
pro$_i$ Omar$_j$=ACC [PRO$_{i/*j}$ run do] catch-PFV.M.SG PASS.PFV.M.SG
'Omar was caught by one running.'

[30] There is a contradiction in Bhatia & Poole's (2016) proposal. They argue that subject properties are gained through movement to relevant specifiers. However, the antecedent for anaphor binding is not selected by virtue of being in Spec-VoiceP but rather moves to Spec-VoiceP because it bears the right index. This suggests that it already has the ability to bind anaphors before movement.

(79) * ***pro$_i$*** ***apne$_{*i}$*** *bHai=ko* *pakR-a* *gya.*
pro$_i$ REFL$_{*i}$ brother=ACC catch-PFV.M.SG PASS.PFV.M.SG

'One$_i$'s own brother was caught by one$_i$.'

The challenge for linking anaphor binding to Spec-VoiceP comes from the fact that the accusative object of an active impersonal can bind anaphors (80) (see also Bhatt, 2003c: p.11).

(80) *pro$_i$* ***Sana$_j$=ko*** ***apne$_{*i/j}$*** *gHar=mein* *pakR-a* *gya.*
pro$_i$ Sana$_j$=ACC REFL$_{*i/j}$ house=LOC catch-PFV.M.SG PASS.PFV.M.SG

'Sana$_j$ was caught by one$_i$ in her$_j$/*one's$_i$ own room.'

In this case, we cannot explain anaphor binding through movement to Spec-VoiceP. Firstly, the EA, *pro*, occupies Spec-VoiceP, meaning the object cannot move through it.[31] Secondly, as shown in section 4.2.1, objects in active impersonals occupy the same object position as in other actives, and are not raised (barring object shift for accusative case assignment).

The second challenge comes from dative predicates. In section 5.3.2, I proposed that dative subjects originate as indirect objects. Crucially, I argued that there is no evidence for VoiceP in these constructions. This means that there is no possibility of dative subjects moving to Spec-VoiceP, and yet, as we saw, they are able to bind anaphors (section 5.3.1, ex.40).

Instead, I would like to propose that only the highest available antecedent in the event domain is able to bind anaphors.[32] Evidence for the event, rather than the clause, being the relevant domain comes from indirect causatives. As mentioned above, indirect causatives in Urdu are bi-eventive but not bi-clausal. Causees are the highest structural argument in the embedded event domain, but not in the clause, and can bind anaphors (ex.77, above). This shows that it is structural height in the event domain which determines the antecedent, not structural height in the clause. Yet defining the event domain as the verbal phase, VoiceP, is also not an accurate definition of the domain in play here. Nominative and ergative subjects, *by*-phrases and oblique causers are highest inside VoiceP, as are causees in a Voice-over-Voice structure. However, promoted objects only bind anaphors when they move to Spec-TP, outside VoiceP. Dative subjects too are highest in HApplP or TP, but not in VoiceP, since there is no VoiceP in dative predicates under my analysis (section 5.3.2). The generalisation seems to be that the event domain here is the

[31] I assume multiple specifiers are not possible, as there is no evidence of this anywhere in the system, and multiple specifiers of at least HAppl are categorically not possible, leading to dative intervention (section 3.7).

[32] This is not intended to be an account for binding itself.

highest thematically related verbal domain, HApplP or VoiceP (akin to Ramchand's, 2008, *first phase*), which may then be extended to TP, if an argument moves out of HApplP/VoiceP to Spec-TP.[33] This is reminiscent of Bošković's (2012, 2013, 2014) contextual phases and, in particular, den Dikken's (2007) phase-extension via head-movement (although the movement here is XP-to-Spec). A big advantage of having a contextually-determined domain for determining structural height is that it gives us a way of capturing formally the intuition that the notion of 'subject' is extremely relative, and that there is no fixed subject position. I continue to use the term event domain in the rest of the exposition, and leave its exact formulation open to further research.

Finally, note that this analysis is also able to explain the behaviour of objects in active impersonals. Pro_{IMP} is unable to bind due to its lack of [D] feature. This makes the direct object the highest available antecedent for anaphor binding.[34]

Turning now to control into participial clauses, we have seen that it consistently patterns with anaphor binding (Table 5.3). This is also the case with causees. Causees can bind anaphors, as mentioned earlier (ex.77, above), and can also control into participial clauses (81) (S. Bhatia, 2016).

(81) *Rami$_i$=ne* ***Omar$_j$=se*** [*PRO$_{i/j}$* *gHar* *jaa* *kar*] *kHaana*
Rami$_i$ Omar$_j$=INS [PRO$_{i/j}$ house.LOC go do] food
pak-va-ya.
cook-CAUS-PFV.M.SG

'Upon [Rami] going home, Rami$_i$ made Omar$_j$ cook food.' / 'Rami made Omar go home and cook food.'

The sole exception to the tight relationship between control into participial clauses and anaphor binding seem to be active impersonals. As stated earlier, pro_{IMP}

[33] In section 3.7.3.2, we also saw that sources, which are introduced in a low applicative phrase inside VP, do not show subject properties in passives of ditransitives, even when the direct object is not promoted. This gives us a lower bound for the domain in which structural prominence is determined: arguments must be outside VP to be considered structurally prominent.

[34] This explanation may still be too broad as it predicts that *any* nominal may be able to bind anaphors simply by virtue of being the only nominal in the sentence (p.c. Rajesh Bhatt). This does not hold for the following examples showing an impersonal passive (i-a) and active impersonal (i-b), respectively.

(i) a. * *Rami$_i$=ke* *saatH* *apne$_i$* *gHar=mein* *naach-a* *gya.*
Rami$_i$=GEN with REFL$_i$ house=LOC dance-PFV.M.SG PASS.PFV.M.SG
Intended: 'It was danced with Rami$_i$ in his$_i$ own home.' (p.c. Rajesh Bhatt)

b. * *Rami$_i$=ke* *gHar=se* *apne$_i$* *bachchon=ko* *li-ya* *gya.*
Rami$_i$=GEN house=INS REFL$_i$ children=ACC take-PFV.M.SG PASS.PFV.M.SG
Intended: 'His$_i$ own children were picked up from Rami's$_i$ house.'

What the examples above have in common is that they disallow a nominal inside a PP to bind anaphors. It may be the case then that anaphor binding is restricted to DP arguments of the verb.

can control into participial clauses but not bind anaphors. Conversely, objects of active impersonals can bind anaphors but not control into participial clauses.[35] Yet, control into participial clauses and anaphor binding *do* go hand-in-hand even in active impersonals. Sentences which force different antecedents for control and binding are infelicitous. In (82), the only possible controller is pro_{IMP}, while the only possible binder is the object. This sentence is infelicitous, showing that while the highest possible binder and controller may be distinct, two different arguments cannot be selected to show these properties at the same time.

(82) ?? *pro$_i$ Sana=ko$_j$ [**PRO$_{i/*j}$** London jaa kar] **apne$_{*i/j}$** gHar=mein*
pro$_i$ Sana=ACC$_j$ [PRO$_{i/*j}$ London.LOC go do] REFL$_{*i/j}$ house=LOC
pakR-a gya.
catch-PFV.M.SG PASS.PFV.M.SG

Intended: 'Sana$_i$ was caught in her$_i$ own house by one$_j$ when one$_j$ went to London.'

The above facts indicate that the locus for control into participial clauses is the same as that for anaphor binding, namely, the event domain, and moreover, that the computation process for selecting which argument is considered the highest in this domain occurs only once and outputs only one result. Therefore, two different arguments cannot be selected for these two properties.

5.5.2 Pronoun obviation and being PRO

This section looks at the remaining two subject properties, which I argue are both associated with Spec-TP and structural case. Furthermore, I argue that only arguments which are assigned case by T, and thus, have entered into Agree with T, can move to Spec-TP. As a result, inherently case-marked arguments cannot move to Spec-TP and do not show these properties.

As for anaphor binding, analyses of pronoun obviation as a subject property make use of proposals that functional heads play a role in binding. For example, to account for pronoun obviation in Icelandic, Hestvik (1992) proposes that pronouns move to T at LF, as a result of which arguments in Spec-TP cannot bind pronouns due to Principle B of binding theory (Chomsky, 1981: p.188). Since only subjects move to Spec-TP, this derives pronoun obviation as a subject property.

We can show through long-distance binding that the domain for pronoun obviation in Urdu is TP. Davison (2001) reports that matrix subjects, which cannot bind

[35] Mohanan (1994: pp.185–86) claims that objects of active impersonals can control into participial clauses which do not require a subject antecedent. However, objects of actives are also able to control into such participial clauses, hence, they are not a diagnostic of subjecthood.

pronouns in the same clause (as shown in section 5.1.2), can do so when the pronoun is in an embedded finite clause. In (83), the nominative subject of the matrix clause binds the embedded pronominal. Quantifier binding shows that this is a true case of binding, and not simply co-referentiality (84).

(83) ***Radha$_i$*** *(yeh) pasand nahi kar-ti* [*keh* ***us$_i$=ka*** *bHai*
Radha$_i$.NOM (this) like not do-IPFV.F.SG [that 3SG$_i$=GEN brother
aisay logon=se baat kar-ay].
such people=INS talk do-PFV.M.PL]

'Radha$_i$ does not like that her$_i$ brother should talk to such people.'
(Davison, 2001: p.62)

(84) ***koi laRki$_i$*** *(yeh) pasand nahi kar-ti* [*keh* ***us$_i$=ka*** *bHai*
any girl$_i$.NOM (this) like not do-IPFV.F.SG [that 3SG$_{i/j}$=GEN brother
aisay logon=se baat karay].
such people=INS talk do-PFV.M.PL]

'Any girl$_i$ does not like that her$_i$ brother should talk to such people.'
('No girl$_i$ likes that her$_i$ brother should talk to such people.')

An argument in Spec-TP of the matrix clause can bind an embedded pronoun because the pronoun remains free within its clause, and so Principle B is not violated. The role of TP becomes even clearer when we look at embedded non-finite clauses. Consider the contrast between (85a) and (85b). In (85a), the nominative matrix subject can bind the pronoun in the embedded clause, but in (85b), it cannot. The crucial difference between these examples is that the matrix object controls PRO in (85a), but the matrix subject controls PRO in (85b). This means that in (85b), the subject as an antecedent would in fact be local to the pronoun and violate Principle B.

(85) a. ***har laRki$_i$*** *Ahmed$_j$=ko* [*PRO$_j$* ***us$_{i/*j}$=ke*** *gHar aa-ne*
every girl$_i$ Ahmed$_j$=DAT [PRO$_j$ 3SG$_{i/*j}$=GEN house.LOC come-INF
]=ki ijazat de gi.
]=GEN permission give.3SG FUT.F.SG

'Every girl$_i$ will give Ahmed permission to come to her$_i$ house.'

b. ***har laRki$_i$*** [*PRO$_i$* ***us$_{*i/j}$=ke*** *gHar* *jaa-na*] *chah-ti*
every girl$_i$ [PRO$_i$ 3SG$_{*i/j}$=GEN house=LOC go-INF] want-IPFV.F.SG
he.
be.PRS.3SG

'Every girl$_i$ wants to go to her$_{*i/j}$ house.'

Recall from Table 5.3 that all arguments which show pronoun obviation receive case from T. This includes nominative and ergative subjects, as well as promoted objects of dative predicates, passives, and marked anticausatives. I assume that inherently case-marked arguments cannot move to Spec-TP and satisfy T's EPP feature because they do not Agree with T for case assignment. This means that dative subjects, *by*-phrases and oblique causers do not move to Spec-TP, and so continue to be able to bind pronouns. Furthermore, as discussed earlier, objects which receive case from T do not always move to Spec-TP (see discussion in section 4.1.4). When these objects are not promoted, they too can bind pronouns. Finally, causees, which we saw can bind anaphors as a result of being the highest structural argument in their event domain can also bind pronouns (86). This is expected under the present analysis as they are not in Spec-TP.

(86) *Rami$_i$=ne* ***Omar$_j$=se*** ***us$_{*i/j}$=ka*** *kHaana* *pak-va-ya.*
Rami$_i$=ERG Omar$_j$=INS 3SG$_{*i/j}$=GEN food cook-CAUS-PFV.M.SG

'Rami$_i$ made Omar$_j$ cook his$_{*i/j}$ food.'

Various works have proposed that PRO can only appear in Spec-TP (Chomsky, 1981: §2.4; Landau, 2004, 2006), although their accounts for this vary. Chomsky (1981: §2.4) proposes that PRO must remain ungoverned, and hence, the highest argument position is the only available position for PRO. Landau (2004, 2006) links the availability of PRO to tense and agreement features on I/T. Comparing nominative and ergative to dative subjects, Davison (2008) argues that PRO can only appear in structural case positions in Hindi-Urdu. This is also seen in our data, as highlighted in Table 5.3. Thus, I too take it that PRO can only occur in Spec-TP, although I do not try to explain why, as this is outside the scope of this dissertation.

There is also a correlation between the presence of PRO and the (un)availability of case in our data. Arguments which can be replaced by PRO noticeably cannot receive case in non-finite clauses as finite T is absent. On the other hand, arguments which cannot be replaced by PRO, continue to receive case in non-finite clauses as their inherent case-assigners are unaffected by finiteness. This gives us an alternative explanation that PRO can only occur in the absence of case assignment. Since only structural case assignment is affected in non-finite clauses, this amounts

to the complementary distribution between PRO and structural case identified by Chomsky (1981: p.64) and others.

However, I do not posit case as the conditioning factor for the distribution of PRO for two reasons. Firstly, many works have argued that PRO does bear case in some languages (Chomsky & Lasnik, 1993; Landau, 2004, 2006).[36] Secondly, linking PRO to the unavailability of case predicts that inherently case-marked arguments can never be replaced by PRO, since inherent case is always available in non-finite clauses. Conversely, linking PRO to Spec-TP predicts that, in languages in which T's EPP feature can be satisfied by inherently case-marked arguments, PRO will be able to occur in place of such arguments. The latter prediction is correct. Quirky case subjects can be replaced by PRO in some languages, as we saw for Icelandic in section 5.1.4. The relevant example is repeated below. Poole (2016) surveys several other languages and reports that Laz, Faroese, Tamil, and Telugu, and possibly, Gujarati, Korean, and Marathi, also allow quirky case subjects to be replaced by PRO. This is shown for Laz in (87).[37]

(11) Icelandic:

a. ***Henni*** *leiðist bókin.*
her.DAT bores book.the.NOM

'She finds the book boring.'

b. *Hún*$_i$ *vonast til* [*að* ***PRO***$_i$ *leiðast ekki bókin*].
she.NOM hopes for [to PRO bore not book.the.NOM]

'She hopes not to find the book boring.' (McFadden, 2018: p.3)

(87) Laz:

a. *Bere-s* *layç'-epe* *a-limb-en.*
child-DAT dog-PL.NOM APPL-love-IPFV.3

'The child loves dogs.'

[36] Comparing nominative, ergative and dative subjects, Davison (2008) argues that PRO can only receive structural case in Hindi-Urdu. However, considering finite T is absent in non-finite clauses, it is unclear how PRO would receive nominative/ergative case. Thus, it seems that PRO in Hindi-Urdu, at least, does not have case.

[37] NMLZ = nominalizer (ex.87b)

b. *Bere-k$_i$* [***PRO$_i$*** *layç'-epe* *o-limb-u*] *gor-um-s*
child$_i$-ERG [PRO$_i$.DAT dog-PL.NOM NMLZ-love-NMLZ] want-IPFV-3
ama *a-şk'urin-en.*
but APPL-fear-IPFV.3

'The child wants to love the dogs but s/he fears [them].'
(Demirok, 2013: p.25)

To conclude, both pronoun obviation and being PRO are associated with Spec-TP in Urdu. Arguments with inherent case cannot move to Spec-TP as they do not Agree with T, and therefore, do not show either of these properties.

5.5.3 A note on movement to Spec-TP

We have seen repeatedly that objects which Agree with T only move to Spec-TP optionally. I attributed this to an optional EPP feature on T. Such a feature is supported by the fact that Urdu does not have overt expletive subjects (Bhatt, 2007: p.15), equivalent to *there* and *it* in English (88). In languages like English, expletive subjects do not contribute any semantic information but are present only to satisfy T's obligatory EPP feature (Chomsky, 1981: pp.323–25).

(88) a. **It** was raining.
b. **There** was only misery.

Although objects move to Spec-TP optionally, subjects which Agree with T do so obligatorily. If ergative/nominative subjects did not always move to Spec-TP, they would sometimes be able to bind pronouns (assuming pronoun obviation is associated with Spec-TP, as argued in section 5.5.2). This does not occur. Sentences like (ex.5a, repeated) are unambiguous with regards to binding possibilities.

(5a) ***har*** ***larke$_i$=ne*** *Anu$_j$=ko* ***us$_{*i/j/k}$=ki*** *kitaab* *di.*
every boy$_i$=ERG Anu$_j$=DAT 3SG$_{*i/j/k}$=GEN book give.PFV.F.SG

'Every boy$_i$ gave Anu his$_{*i/k}$/her$_{j/k}$ book.' (Bhatia & Poole, 2016: p.63)

I do not have a good reason for why this asymmetry between subjects and objects should exist, except a possible suggestion that subjects move for discourse-related reasons. For example, both subjects and Spec-TP (or more generally sentence-initial positions) have been associated with topic-prominence and aboutness (Rizzi, 2005, 2018; Svenonius, 2002b). Such factors may force subjects to move to Spec-TP, despite the optionality of its EPP feature.

5.6 What is a subject?

The range of arguments that pass subject tests include base-generated and derived subjects, agents and non-agents, and structurally and non-structurally case-marked arguments. This shows us that the subject properties under discussion are not associated with being generated as an EA, receiving the agent θ-role, or receiving a specific case or specific type of case (i.e. structural case). This leads to the question: what *do* these properties track? What is a subject?

In classic generative phrase structure grammar, the term subject was reserved for a specific structural position (Chomsky, 1965), roughly translating to Spec-TP in our system. In the time since, many works have shown that this definition is too narrow (Bobaljik & Jonas, 1996; Kiss, 1996; McCloskey, 1997; Svenonius, 2002b; Cardinaletti, 2004; Poole, 2016; amongst others), as is also seen in the data presented in this chapter. McCloskey (1997), in particular, engages in a detailed discussion on the notion of subjecthood. He concludes that subjecthood is a composite set of properties, and is derived via moving through certain structural positions. McCloskey's discussion expands the notion of subject to encompass more than just Spec-TP, but is still reserved for a fixed set of positions.

In this chapter we have seen that while some subject properties (pronoun obviation and being PRO) are associated with a specific position, Spec-TP, other subject properties (anaphor binding and control into participial clauses) are associated with *relative position*. This is similar to Mohanan's (1994: Ch.6) proposal that subject properties in Hindi track different kinds of prominence (structural, logical, case-related, and so on), as mentioned at the beginning of this chapter. A particularly striking example of this is the possibility of anaphor binding by accusative objects of active impersonals (section 5.5.1, ex.80). These objects most certainly do not move into any so-called subject position, yet they are able to pass some subject diagnostics.

The relativity of subjecthood is also reflected in the behaviour of arguments in other domains, such as the nominal projection. Consider genitives. In Urdu, genitives are found as possessors (89) and as subjects of gerunds (90) (Butt & King, 2004).[38] These genitives can bind anaphors and control into participial clauses, and cannot bind pronouns.

[38] Genitive case is also found on subjects of copular *be* to indicate possession.

(i) *Rami=ki ek behen he.*
Rami=GEN one sister be.PRS.3SG
'Rami has one sister.'

(89) ***Rami$_i$=ki*** *apni$_i$* / **us$_{*i}$=ki* *biwi*
Rami$_i$=GEN REFL$_i$ / *3SG$_{*i}$=GEN wife

'Rami's own wife'

(90) a. ***Rami$_i$=ka*** *apne$_i$* / *us$_{*i/j}$=ke* *gHar* *jaa-na*
Rami$_i$=GEN REFL$_i$ / 3SG$_{*i/j}$ house.LOC go-INF

'Rami's going to his$_i$ own/his$_{*i/j}$ house'

b. ***Rami$_i$=ka*** [*PRO$_i$* *gHar* *jaa* *kar*] *ro-na*
Rami$_i$=GEN [PRO$_i$ house.LOC go do] cry-INF

''Rami's crying upon [Rami] going home'

Both these constructions are nominals (see Butt, 1995, on the nominal nature of Urdu gerunds). There is no Spec-TP and no verbal event domain, yet genitives pass subject tests because they are structurally prominent in the nominal domain. Many works have shown that there are parallels in the verbal and nominal domains, with corresponding functional projections, and furthermore, that subject positions can be identified in nominals, similar to those in verbal projections (Valois, 1991: Ch.2; Alexiadou, 2001; Alexiadou, Haegeman & Stavrou, 2007). We may then be able to match the domains and positions we have found for subject properties in the verbal projection to parallel domains and positions in the nominal projections. However, these will only be *parallels*, not the exact positions themselves, again highlighting that subjecthood is relative, and not tied to fixed structural positions.

The matter is further complicated if we consider locative subjects. Mohanan (1994: Ch.6) and S. Kidwai (2022a) show that locatives of the type in (91) are subjects, and not modifiers or indirect objects. Kidwai also shows that locative subjects pass all subject tests except being PRO.

(91) ***Rami=mein*** *khuub* *achaiyaan* *hein.*
Rami=LOC many good-qualities be.3PL

'There are many good qualities in Rami.'

While genitives are easy to identify as structurally prominent arguments in a different domain, locatives are much harder to analyse as such, mainly because constructions with locative subjects are not well-understood. Parallels to genitive subjects of copular *be*[39] and to locative subjects in other languages[40] may shed some light.

[39] See footnote 38.

[40] For example, in English, locative phrases can undergo subject-auxiliary inversion, as in *Under the bed is a good place to hide. Is under the bed a good place to hide?* Thanks to Theresa Biberauer for this example.

Moreover, we have also seen in this chapter that the domain for some subject diagnostics is itself contextually determined. The highest verbal projection, VoiceP or, in the absence of VoiceP, HApplP, acts as the domain for determining the highest available argument. This domain can be extended to TP, if an argument moves out of the verbal projection. This adds another layer of relativity to the notion of subjecthood, emphasising that subjects can only be identified in context.

Finally, returning to one of the relationships we set out to explore at the beginning of this dissertation, we have seen in this chapter that the case of the external argument does affect its behaviour, although only as a reflection of the relationship (or lack thereof) between the external argument and T. Thus, the relationship between case and the external argument is once again mediated by a functional head, just as we saw for the relationship between accusative case assignment and the external argument. This is to be expected if functional heads assign case, as they do in the Agree-based approach to case followed here.

Chapter 6

Conclusion

In this concluding chapter, I first present a synopsis of the key analyses presented in each chapter (section 6.1). I then discuss some of the implications of the main analyses and findings of the dissertation (section 6.2). Finally, I round off with some concluding remarks (section 6.3).

6.1 Synopsis

6.1.1 Chapter 3: Accusative Case in Actives

In Chapter 3, we investigated accusative case assignment. I showed the primary conditioning factor for differential object marking in Urdu is animacy, specifically humanness. Bringing in facts from pseudo-noun-incorporation, I argued this is so because human objects require licensing, either through incorporation or case assignment. On the other hand, non-human objects may also be incorporated or receive case, but they can also remain unlicensed (at least with respect to these two mechanisms). To account for this, I proposed an analysis along the lines of Kalin (2014: Ch.4), in which human objects have an additional functional projection, Human, which has an uninterpretable case-feature. This uninterpretable feature must be valued to prevent a derivational crash. All other functional projections in the nominal domain only introduce interpretable case-features. Interpretable features can remain unvalued in the derivation without causing a crash, hence, these interpretable case-features need only be valued optionally. This accounts for obligatory accusative case on human objects and optional accusative case on all other objects.

In this chapter, we also saw that accusative objects undergo object shift, moving out of VP to the specifier of a non-thematic high applicative head, HAppl. I proposed that case assignment forces objects to move out of VP because valued case-features cannot remain inside VP. The need for case-assigned objects to move out of VP also accounts for dative intervention facts. Accusative case is not assigned in the presence

of a dative indirect object. I proposed that dative intervention arises in two contexts. Experiencers are introduced by the thematic variant of the same head which otherwise provides a landing site for object shift, that is, HAppl. When an experiencer is found in the argument structure, the non-thematic variant of HAppl has not been selected, hence, there is no landing site for accusative objects to move to. On the other hand, recipients are introduced by a low applicative head, making it possible for non-thematic HAppl to be selected. Recipients have valued case-features. This puts them in competition with accusative direct objects for movement. Being the higher of the two arguments, recipients move to Spec-HApplP, leaving the direct object inside VP. In both these situations, although accusative case assignment itself is not blocked or prevented, the necessary movement that must take place following case assignment is made impossible. Thus, if accusative case assignment takes place, a valued case-feature is left inside VP. This means that only direct objects which can have their case-feature left unvalued can occur with dative ditransitives. This is borne out, as only non-human and incorporated objects occur with dative indirect objects.

I extended the analysis of dative intervention to account for lack of intervention by source indirect objects. I showed that sources are arguments, but are PPs, which do not move out of VP. PPs are independent domains, in which arguments can be introduced and assigned case. Hence, a PP can remain within VP, and do not intervene in movement of accusative objects. Accusative objects are thus possible in source ditransitives I also used the PP analysis of sources to account for locative-instrumental case-stacking in Urdu, as recursive PPs rather than multiple case assignment to a single nominal.

Lastly, this chapter also looked at objects which do not receive accusative case. I argued that these objects have neither (low) nominative nor null accusative case, but that their case-feature simply remains unvalued. A strong argument in favour of the nominative camp comes from the fact that unmarked objects can trigger agreement. To counter this, I presented evidence from Bhatt & Walkow (2013) showing that Urdu has both syntactic and post-syntactic agreement, meaning a nominative analysis of objects which trigger agreement is not the only way to account for object agreement (i.e. if objects trigger post-syntactic agreement). Finally, I proposed a modified version of Bhatt & Walkow's mechanisms for syntactic and post-syntactic agreement.

An important point made in this chapter was that, in addition to the requisite functional head c-commanding an argument, there can be other factors which affect case assignment. In this case, active Voice makes accusative case assignment possible but does not guarantee it, as the internal structure of the nominal in question and the nature of other arguments in the construction also play a role in determining

case assignment.

6.1.2 Chapter 4: Properties of Non-Active Voice

Chapter 4 looked at non-active constructions. Taking the observation that Urdu may preserve accusative case in passives as its starting point, this chapter showed that Urdu has two passive-like constructions, one of which is a canonical passive with a non-active Voice head, and the other of which is an active impersonal with an active Voice head. For canonical passives, I showed that the *by*-phrase is an argument, not an adjunct, and occupies Spec-VoiceP. Moreover, while object promotion is possible in passives, it is optional. In active impersonals, on the other hand, no *by*-phrase is possible and no object promotion takes place. I showed that active impersonals have a *pro* subject, which is obligatorily interpreted as human.

I then examined marked anticausatives. These have previously been analysed as unaccusatives with an accompanying light verb. I showed that the light verb in these cases shows more functionality than other light verbs in the language, suggesting it is the spell-out of a more functional head, like Voice. I also showed that this light verb introduces an external argument, the oblique causer, which is identical in form and syntactic behaviour to the *by*-phrase. Based on this, I proposed that marked anticausatives have a non-active Voice head, similar to passives, however, this Voice head is non-thematic, in that it does not assign a θ-role to its specifier. The result of this is twofold. Firstly, the lack of θ-role restricts the interpretation of the external argument to causers only. Secondly, when the oblique causer is not projected, there is no implicit argument. This is because, unlike short passives, there is no θ-role to existentially bind.

This investigation also led to a typology of Voice heads. Firstly, we saw that the main distinguishing factors between active and non-active Voice heads are the fact that the former always project a specifier, while the latter only do so optionally, and that active Voice assigns accusative case to the direct object, while non-active Voice assigns an inherent case to its specifier. This characterisation of the active/non-active Voice distinction provides a way to account for lack of accusative case assignment in non-active constructions, as also argued by Kallulli & Roberts (2022): non-active Voice is an inherent case-assigner, and therefore, does not have accusative case to assign. Secondly, we saw that beyond this initial active/non-active divide, there are different flavours of active and non-active Voice. In addition to the canonical active Voice head, there is the Voice head found in active impersonals, which is more restrictive regarding its specifier (i.e. selects pro_{IMP}). Similarly, non-active Voice found in anticausatives is distinct from passive Voice, as the former does not assign a θ-role while the latter does.

The findings of this chapter lead to two important insights into the relationship between Voice, case and the external argument. Firstly, the external argument and object case are not connected in the way suggested in Burzio's Generalisation (Burzio, 1986: p.178). Both actives and passives have external arguments, yet accusative case is only seen in the first. Instead, accusative case assignment (or more accurately, the possibility of it, in light of Chapter 3) depends only on the properties of Voice. Secondly, the relationships between Voice and object case, and Voice and subject case are deeply interconnected. Voice is only able to assign one case, either to the subject or the object. As a structural case assigner, (active) Voice assigns accusative case to the direct object. As an inherent case assigner, (non-active) Voice assigns oblique case to the external argument. Thus, these cases are in complementary distribution because these variants of Voice are in complementary distribution.

6.1.3 Chapter 5: Subjecthood and Case

In Chapter 5, we probed the notion of subjecthood, in particular, the role of case in determining subject behaviour. We tested the behaviour of different arguments, both base-generated and derived subjects, agents and non-agents, and bearing structural and non-structural case, and saw that subjecthood diagnostics do not track either base-generated external arguments, agency or structural case, but rather track something else entirely, which can descriptively be called 'subjecthood'.

Looking first at ergative subjects, we saw that these pattern with nominative subjects in showing all four subject properties: anaphor binding, control into participial clauses, pronoun obviation and being PRO. The fact that ergative subjects pass the being PRO test, suggests that ergative case is structural, as it has been shown that PRO can only replace subjects with structural case in Urdu (Davison, 2008). I examined the distribution of ergative case, and showed that it has properties of both structural and non-structural case. I then proposed a composite case assignment account of ergative case, with valuation from both Asp and T. I argued that perfective Asp is a partial probe, which only values some sub-features of the case-feature, hence, the resulting KP is left active for further Agree. The structural representation proposed for ergative case also shed light on why ergative case may have resisted placement on case hierarchies like Caha's (2009).

Dative subjects only showed a subset of subject properties. Objects of dative predicates behave similarly to objects of passives, in that they receive nominative case from T and are able to undergo object promotion to Spec-TP. When promoted, they also show subject properties. I proposed an analysis of dative predicates as lacking VoiceP, with the dative subject originating as an indirect object in Spec-

HApplP (the same position where experiencer indirect objects are introduced in ditransitives). I also argued that dative subjects do not move to Spec-TP, since they do not Agree with T as they already have inherent case. In other words, Agree with T is a prerequisite for movement to Spec-TP.

Non-active constructions show great similarity to dative predicates, in that the external argument has inherent case, hence does not Agree with T, and the object receives nominative case, leading to (optional) object promotion to Spec-TP. The pattern of subject properties is also similar: the subject shows a subset of properties, while the promoted object is able to show all properties.

I proposed that while only arguments in Spec-TP show pronoun obviation and being PRO, the other two subject properties, anaphor binding and control into participial clauses, are associated with relative position. The structurally highest argument within, what I called, the event domain shows these latter properties. I showed that the event domain itself is determined contextually. It starts off as the highest verbal projection, be that HApplP (in dative predicates) or VoiceP (elsewhere). If an argument moves out of this verbal projection, that is, when object promotion to Spec-TP takes place, this event domain is extended to TP. This formally captures the relativity of the notion of subject.

6.2 Implications for Syntactic Theory

6.2.1 Voice, case and the external argument

At the very beginning of this dissertation, I set out to examine the relationships between Voice, case and the external argument as seen in Urdu, with focus on the following relationships:

(i) Voice and object case (Chapters 3, 4)

(ii) Voice and subject case (Chapter 4)

(iii) The external argument and object case (Chapter 4)

(iv) Subjecthood and subject case (Chapter 5)

Through the course of this dissertation, we have seen that Voice plays a role in both object and subject case assignment (i, ii). Active Voice is a structural case-assigner, and probes its c-command domain, as a result of which it assigns accusative case to the direct object. Non-active Voice is an inherent case-assigner, and c-selects a valued KP in its specifier. Moreover, these case-assigning properties of Voice may vary across languages. This idea has been pursued in the literature on

ergative-absolutive case systems. To derive different patterns, it has been proposed that a given head may either assign both inherent ergative and structural absolutive, or assign ergative only, with absolutive either being assigned by a different head or being the default case (Aldridge, 2008; Legate, 2008, 2012; Sheehan, 2017). Although Voice is not usually mentioned in this literature, the functional head in questions is usually the one which introduces the external argument, which I have called Voice in this work.

With regards to the relationship between Voice and subject/object case, we also saw that despite the requisite Voice head being present, there are several other factors which can affect accusative case assignment to the object. Yet, we did not see any factors which affect inherent case assignment to the subject. This fits in with our general understanding of structural and inherent case. Inherent case is assigned in a close local relationship between the functional head and the nominal. In fact, in my model of case, inherent case assignment is c-selection of valued KPs. This leads us to expect that inherent case assignment will not and cannot be affected by additional factors, since it will in some sense take place immediately when the nominal is Merged. On the other hand, structural case is assigned in a less local relationship, and any factors which can affect the structural configuration can also affect structural case assignment. A well-known example of this from existing literature is A-movement, which can change c-command relationships between functional heads and nominals, and hence, also has an effect on structural case assignment (Woolford, 2006). In this dissertation, we have also seen the effects of nominal structure and competition with other arguments on structural case assignment.

With respect to the link between external argument and accusative case assignment (iii), no special relationship seems to exist, contrary to Burzio's Generalisation (Burzio, 1986: p.178). Both active and non-active constructions may have an external argument in Urdu, yet accusative case is only seen in the former. Instead, it is the properties of Voice which make accusative case assignment possible. This is a largely unsurprising conclusion in light of the many works which have argued that Burzio's Generalisation may be a by-product of other operating constraints (e.g. Burzio, 2000; Marantz, 2000). In Urdu, these other constraints simply do not conspire in the same way to produce the same dependency.

Finally, in relation to subjecthood and case (iv), we saw that case does affect the behaviour of an argument with respect to subject diagnostics. This is because case reflects a relationship (or lack thereof) between an argument and a functional head. Some subject properties require the argument to be in an Agree relation with T; if these arguments do Agree with T, they will bear the correct case to reflect this, and also show the relevant subject properties. Thus, the relationship between subjecthood and case is not direct, but rather indirect and mediated by the relevant

functional head.

One interesting finding regarding subjecthood which remains unexplained is the asymmetry between ergative/nominative subjects and promoted objects with regards to movement to Spec-TP. As we saw, promoted objects optionally move to Spec-TP; however, ergative/nominative subjects obligatorily move. This raises the question whether base-generated external arguments (which show all subject properties) are somehow 'more subject-like' than promoted objects (which also show all subject properties), and if so, how can this be captured formally.

6.2.2 Case

The structural representation of case plays an important role in several of the analyses presented in this dissertation. I adopted the approach that nominals with valued case-features are KPs, as opposed to nominals without valued case-features, which are DP/NPs. The exception to this is nominative case, which has no morphological exponent, and shows similarity to DP/NPs instead of KPs, and hence, was taken to lack KP. In addition, I adopted a split-KP approach, whereby case-features can be decomposed into sub-features and each sub-feature projects its own KP layer. We have seen the theoretical and empirical advantages of KP in several places in this thesis. Most notably, decomposing the case-feature allowed us to propose a composite case assignment process for ergative case, in a way which captures its many nuances.

I proposed that inherent case nominals are selected as KPs, but that structural case nominals require counter-cyclic K-insertion. This counter-cyclic insertion is restricted to the landing site of Move triggered by Agree/case-valuation. It is worth noting that while both accusative and ergative subjects move, the motivations for the movement were said to be different. For accusative case, I proposed that valued case-features cannot remain inside VP, hence, accusative objects must undergo object shift to Spec-ApplP. For ergative (and nominative) subjects, I proposed that T has an EPP feature which drives movement of the subject into Spec-TP. Given that these movement operations are necessary for counter-cyclic K-insertion, it would be more desirable to have a unified motivation for movement. The challenge comes from nominative objects. These, as we saw, only move optionally, which prevents us from generalising that *all* Agree for structural case assignment must trigger Move.

Some of the other formal aspects of the representation of case still remain open. For example, the nature and specification of the case sub-features remains open. I used abstract sub-features, [A], [B], but it would be more enlightening to know what these abstract features actually are. Moreover, in my analysis of differential object marking, I proposed that some nominals have uninterpretable case-features, while others only have interpretable ones. Although this achieved the desired outcome, it

is unclear to what extent case-features can be interpretable, and what implications this has for case-features in other places. Additionally, although I did not say so explicitly, I implicitly assumed that the interpretable case-features are only found on objects, hence, only objects show optional case-marking. Subjects are always case-marked, and hence, must always have uninterpretable case-features in this model. This would not be the first asymmetry to exist between subjects and objects though, and so there may be good reasons to explain this, but as of now, I do not know what they might be.

Finally, also in my analysis of differential object marking, I argued that not all nominals require case-licensing. This has also been shown in many other works (Zaenen, Maling & Thráinsson, 1985; Marantz, 2000; Massam, 2001; Danon, 2006; McFadden, 2004; Preminger, 2011, 2014; Wiltschko, 2014: Ch.6; Levin, 2015; amongst others), however, it does beg the question, what is the function of case? Why should case exist if it is not always needed for licensing? Although it is difficult to answer this question, we can see in a language like Urdu, that the functionality of case extends far beyond simple nominal licensing. Case has many discourse-related functions in Urdu, and in many places, a case which is purely structural in some constructions is used optionally in others to create interpretive effects. We saw two clear examples of this in this dissertation. Accusative case, which is required on human objects, is used optionally on non-human objects for definiteness effects. Similarly, ergative case is obligatory on subjects of transitives in perfective aspect, but is used optionally with some intransitives and deontic modals to convey volitionality. Investigating these varying functions of case in more detail may also prove fruitful in fleshing out the structural representation of case and the split-KP.

6.2.3 Dialectal variation

Throughout this dissertation, I have highlighted many instances of variation between Hindi and Urdu, and where possible, I have also pointed out ways in which this variation can be captured formally. For example, regarding dative intervention, Hindi seems to allow multiple specifiers of Appl, thus, allowing accusative objects to move over dative indirect objects and escape VP. In Urdu, however, multiple specifiers of Appl do not seem to be possible, as moving over the indirect object does not make accusative case possible. Similarly, with regards to *by*-phrases, Hindi makes use of PPs, while Urdu uses oblique nominals. The distribution of these *by*-phrases varies. For example, Urdu *by*-phrases are unacceptable in accusative-preserving passives, which I took as an important data point in analysing these constructions as underlyingly active. However, Hindi *by*-phrases are acceptable in accusative-preserving passives, which may lead to analysing them as true passives. I characterised the active/non-active Voice distinction as a distinction in the case-

assigning nature of Voice (structural vs. inherent case-assigner); it may be that non-active Voice is able to assign accusative case in Hindi because it is not an inherent case-assigner (since the *by*-phrase is a PP). The micro-variation between Hindi and Urdu must be studied in more detail, not to mention that the distinction between Hindi and Urdu is only the tip of the iceberg in uncovering dialectal variation on a much larger spectrum.

6.3 Concluding remarks

Two notions that have come up repeatedly in analysing the various phenomena in this dissertation are optionality and relativity. In Chapter 3, we saw that accusative case assignment to some objects is optional; in Chapter 4, we saw that non-active Voice optionally projects its external argument; and also in Chapter 4, we saw that T's EPP feature is optional. The best example of relativity was seen in Chapter 5, where we dissected subjecthood, and saw how relative the definition of subject truly is. Optionality and relativity are both difficult to capture formally, optionality more so than relativity, yet are extremely prevalent in natural language. Looking deeper into optional and relative phenomena, as I have in this dissertation, may reveal mechanisms by which our current models of grammar may capture these notions more easily.

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