

Case and the Structure of Events: Evidence from Indo-Aryan

Miriam Butt
University of Konstanz
Workshop *Place of Case in Grammar*
Crete, October 2018

Object of Inquiry

- ▶ Languages can (and do) innovate new case markers.
- ▶ These tend to be drawn from originally spatial terms.
- ▶ **Question:** How does an originally spatial term end up as a case marker for core event participant relations like:
 - ▶ Agents (typically Ergative/Instrumental)
 - ▶ Experiencers (typically Dative/Genitive)
 - ▶ Recipients (typically Dative)
 - ▶ Themes/Patients (typically Accusative)



Diachronic Case Project(s)

- ▶ Focus on Indo-Aryan (with some newer work on Germanic)
- ▶ Lexical Semantic Approach to Case Markers
- ▶ Combined with Event Structural Analyses
- ▶ Many Contributors/Collaborators over the years:
 - ▶ Tafseer Ahmed Khan, Ashwini Deo, Scott Grimm, Tikaram Poudel, Christin Schätzle, Karin Schunk, Sebastian Sulger, Anila Varghese.
 - ▶ Many of the examples are owed to Ashwini Deo.
 - ▶ Special thanks to Gillian Ramchand for on-going discussions and the sharing of her insights.

Indo-Aryan

- ▶ Longest diachronic record available (yet understudied)
- ▶ Old Indo-Aryan (OIA):
 - ▶ Inflectional case system
 - ▶ 7 cases
- ▶ Middle Indo-Aryan (MIA):
 - ▶ case distinctions collapsed (over several hundred years)
 - ▶ vestiges of former case system: nominative/oblique distinction
- ▶ As of around 1200 CE, new case markers developed.
- ▶ Most of these appear to have come from a small handful of spatial terms (former nouns).

See Beames (1872–79), Kellogg (1893), Trumpp (1872), Montaut (2006, 2009), Hewson and Bubenik (2006), Reinöhl (2106), a.o.

Indo-Aryan

- ▶ Many New Indo-Aryan (NIA) languages use the new case markers (and the nom/obl distinction) — complex systems of case marking.
- ▶ Other NIA languages continue the MIA pattern with just a nominative/oblique distinction.
- ▶ Major differences:
 - ▶ OIA shows next to no evidence for non-nominative subjects
 - ▶ NIA allows for these (e.g., experiencer subjects)
 - ▶ OIA did not have an ergative case
 - ▶ Many NIA languages do

Indo-Aryan — Similarities Across the Ages

- ▶ All stages show robust evidence for Differential Case Marking (DCM).
- ▶ DCM expresses a range of semantic distinctions (differs across languages)
 - ▶ partitivity, telicity
 - ▶ agency
 - ▶ animacy/sentience, specificity/referentiality
 - ▶ modality
 - ▶ focus
 - ▶ stage vs. individual level predication

Indo-Aryan — Structural Patterns Across the Ages

- ▶ MIA and NIA (partially) work along “classic” split-ergative lines
- ▶ Some modern NIA languages additionally seem to follow the classic person hierarchy split (3rd person ergative, others not)
- ▶ (some analyses see OIA as purely accusative, others point to an ergative alignment already being in place)
 - ▶ Past/perfect triggers ergative on agentive subjectives
 - ▶ Agreement is with unmarked object rather than ergative
- ▶ **But this is only one small subpart of the overall pattern and subject to immense variation across languages** (Subbarao 2001, Deo and Sharma 2006)

Indo-Aryan — Variation in Structural Patterns

- ▶ In Hindi/Urdu there is an ergative and the verb never agrees with an overtly case-marked noun.
- ▶ In Nepali, there is an ergative, the verb agrees with the subject regardless of case marking.
- ▶ Bengali has no ergative, has only retained person agreement and the verb agrees with the subject regardless of case.
- ▶ In Gujarati the verb does not agree with case marked subjects and agrees with the object regardless of case marking.

I have not seen a comprehensive, consistent and explanatory syntactic analysis of the space of agreement possibilities in Indo-Aryan languages and how they co-vary with case and person/number marking.

Indo-Aryan — Variation in Structural Patterns

Deo and Sharma (2006) explain the patterns via reduction of markedness in diachronic change, invoking Optimality-Theoretic constraints that are in competition.

Deo and Sharma (2006) conclude:

“An important insight of this paper is the partial independence of case-marking and agreement systems in many of the languages discussed. Deriving nominal and verbal paradigms with independent sets of constraints, rather than treating agreement as a corollary of case, appears to be the most intuitive way of dealing with these data.”

Core Message

- ▶ I see agreement as one way of identifying dependency relations — but the interaction with case is indirect.
- ▶ I think every case system will contain a default or structural case (typically nominative in the verbal domain, genitive in the nominal domain).
- ▶ But the key to understanding all **functioning** (= not almost dead) case systems is **semantics**.
- ▶ This is also the key to understanding diachronic developments of case loss and case innovation.
- ▶ E.g., Hewson and Bubenik (2006) note a correlation between the loss of case and the development of an article/determiner system.

Rough Time Line

- A. Old Indo-Aryan
1200 BCE — 600 BCE (Vedic)
600 BCE — 200 BCE (Epic and Classical Sanskrit)
- B. Middle Indo-Aryan (Aśokan inscriptions, Pāli, Prākṛits, Apabhraṃśa—Avahaṭṭha)
200 BCE — 1100 CE
- C. New Indo-Aryan (Bengali, Hindi/Urdu, Punjabi, Nepali, Marathi, Gujarati and other modern North Indian languages)
1100 CE — Present

Indo-Aryan Chronology and Sample Sources (from Deo)

TIMELINE	STAGE	SAMPLE SOURCE
OIA		
200 BCE-400 CE	Epic Sanskrit	<u>Mahābhārata (Mbh.)</u> ; ~ 967,000 words
MIA		
300 BCE-500 CE	Mahārāṣṭrī	<u>Vasudevahiṃḍi (VH 609CE)</u>
500 CE-1100 CE	Apabhraṃśa	<u>Paumacariu (PC ~ 880CE)</u> ; ~ 135,000 words
Old NIA		
1000–1350 CE	Old Marathi	<u>Dnyāneśvarī (Dny 1287CE)</u> ; ~ 103,000 words <u>Līlācaritra (LC 1278CE)</u> ; ~ 57,000 words
	Old Gujarati	<u>Saḍāvaśyakabālāvabodhavṛtti (SB)</u>

Case in OIA

Inflectional case system, numbering due to Paṇini

Number	Declension	Western Name
1	<i>devās</i>	nominative
2	<i>devam</i>	accusative
3	<i>devena</i>	instrumental
4	<i>devāya</i>	dative
5	<i>devāt</i>	ablative
6	<i>devasya</i>	genitive
7	<i>deve</i>	locative

Declension of Sanskrit *deva*- ‘god’

Case in OIA

- ▶ The standard case marking pattern is nominative–accusative.
- ▶ Some verbs lexically specify non-accusative objects (e.g., genitive object with ‘sacrifice’).
- ▶ Differential Object Marking (DOM) exists.

(1) pibā somam
 drink.Imp soma.**Acc**
 ‘Drink soma.’ (Ṛgveda VIII.36.1; Jamison 1976)

(2) pibā somasya
 drink.Imp soma.**Gen**
 ‘Drink (of) soma.’ (Ṛgveda VIII.37.1; Jamison 1976)

Case in OIA

- ▶ Pāṇinis grammar of Sanskrit mentions 23 possibilities of case alternations (Katre 1987, Böhrtlingk 1839–40).
 - ▶ Some of these alternations have to do with formal morphophonological reasons.
 - ▶ Others are determined by lexical semantics.
 - ▶ Others express DCM, cf. partitive and (3).
- (3) Rule 2.3.12: The Dative and Accusative are used for verbs of movement, but the dative cannot be used if motion is abstract.

Participles

- ▶ Participles were already being drawn into the verbal paradigm (Bynon 2005).
- ▶ The *-ta* adjectival participle was used in alternation with the aorist for the narration of events in the recent past or for past, culminated events (Kiparsky 1998, Condoravdi and Deo 2014).
 - ▶ Aorist: Usual Nom-Acc pattern
 - ▶ *-ta* participle: Agent in Instrumental

(4) aśrauṣam ... ghoṣam
 hear.1Sg.Aor noise.Acc
 'I heard a noise.' (Rāmāyana 2.57.16; Bynon 2005)

(5) ṣruto mayā śabdo
 hear.PP.Nom.M I.Ins sound.Nom
 'I heard a sound.' (Rāmāyana 2.58.13; Bynon 2005)

Ergative “Alignment”

- ▶ The *-ta* participle is standardly analyzed as being the precursor/trigger from a shift of “accusative alignment” to “ergative alignment” (Dixon 1994).
- ▶ The instrumental is seen as being reanalyzed as an ergative.
- ▶ An object/patient oriented agreement pattern follows.

(6) *ṣruto* *mayā śabdo*
 hear.PP.Nom.M I.Ins sound.Nom
 ‘I heard a sound.’ (Rāmāyana 2.58.13: Bynon 2005)

- ▶ However:
 - ▶ There is no historical continuity between the instrumental and the ergative (Beames 1872–79, Butt 2001).
 - ▶ Agreement patterns differ wildly.
 - ▶ The larger case system is not accounted for (e.g., development of experiencer subjects).

Non-nominative experiencers in OIA

- ▶ A class of OIA intransitive verbs may optionally appear with genitive experiencers.
- ▶ E.g. *ruc* means either ‘shine’ (non-psych) or ‘please’ (psych).
- ▶ The difference is signaled via case marking.

(7) sumukh-o bhava-taḥ **pautr-o** **roca-te**
 beautiful.faced-NOM.SG you-GEN.SG grandson-NOM.SG shine-PRES.3.SG
 Your beautiful-faced grandson shines (Mbh. 5.102.6c)

(8) vākya-ṃ na **me** **roca-te** yat tva-yā
 utterance-NOM.N.SG NEG I.GEN.SG please-PRES.3.SG which you-INS.SG
 uktaṃ
 say-PERF.N.SG
 The utterance which was spoken by you does not please me. (Mbh. 2.51.14a)

Interim Summary — OIA

OIA's case system was complex:

- ▶ Case alternations for semantic reasons (e.g., genitive/accusative for partitivity)
- ▶ Case used to mark certain thematic/semantic roles (e.g., experiencers, agents of participles).
- ▶ Subjects are generally nominative.

Middle Indo-Aryan

- ▶ The case system underwent heavy syncretism in MIA.
- ▶ In some situations, no distinction could be found between subject and object.
- ▶ Agreement is always with the nominative (or former nominative) argument.

	Singular	Plural
Nominative/Accusative	<i>-u, a, aṁ</i>	<i>-a, aĩ</i>
Instrumental	<i>-eṁ, iṁ, he, hi</i>	<i>-e(h)ĩ, ehi, ahĩ</i>
Ablative	<i>-hu, ahu, aho</i>	<i>-hũ, ahũ</i>
Genitive/Dative	<i>-ho, aho, ha, su, ssu</i>	<i>-na, hã</i>
Locative	<i>-i, hi, hiṁ</i>	<i>-hĩ</i>

Syncretized case paradigm in MIA, (Masica 1991, 231)

Loss of nominative–accusative contrast (880 CE)

- (9) #kiṃ **tamu** haṇ-ai ṇa vālu
 QUES darkness.NOM.SG destroy-IMPF.3.SG NEG young
ravi# #kiṃ vālu **davaggi** ṇa ḍah-ai
 sun.NOM.SG QUES young fire.NOM.SG NEG burn-IMPF.3.SG
vaṇu# #kiṃ kari dal-ai
 forest.NOM.SG QUES elephant.NOM.SG shatter-IMPF.3.SG
 ṇa vālu **hari#** #kiṃ vālu ṇa ḍaīk-ai
 NEG young lion.NOM.SG QUES young NEG bite-IMPF.3.SG
 uragamaṇu#
 snake.NOM.SG
*Does the young (rising) sun not destroy darkness? Does the young
 fire (spark) not burn down the forest? Does a young lion (cub) not
 shatter the elephant? Does the young snake not bite? (PC 2.21.6.9)*

Early Ergative Pattern with Agent Marking (609 CE)

- (10) **tiy-e** vi avaloi-o di-ṭṭho ya
 she-INS.SG also look-PERF.M.SG notice-PERF.M.SG and
ṇā-e so puriso
 she-INS.SG that.NOM.SG man.NOM.SG
 cakkhuramaṇo
 eye-beautiful.NOM.SG
 ‘She (the maidservant) also *looked*, and she *noticed* that man,
 attractive to the eye.’(VH:K:9.8)

Late Ergative Pattern without Agent Marking (Old Hindi)

- (11) masi kāgad chū-yo nahī kalam
 ink.Nom paper.M.Nom touch-Perf.M.Sg not **pen.F.Sg**
 gahī nahi hāth jāro juga mähātma
take.Perf.F.Sg not hand four.Pl age.Pl glory.Nom
 jehi **kabir** jan-ā-yo nāth
 who.Sg.Acc **Kabir.Obl** know-Caus-Perf.M.Sg lord.Nom
 ‘Kabir touched not ink nor paper, he took not pen in hand; He
 made known the lord to whom is glory in the four ages.’
 (Old Hindi; Kabir, Sakhi 183; Beames 1872–79, 269)

Interim Summary: MIA

- ▶ MIA saw massive syncretism of case forms.
- ▶ “Ergative alignment” is evidenced via agreement, even in the absence of overt agent marking.
- ▶ Additionally, MIA made use of Differential Case Marking (DCM).
- ▶ Aśokan inscriptions: in *-ta* participial clauses (Andersen 1986).
 - ▶ genitive only for animate agents
 - ▶ instrumental otherwise
- ▶ Even though massive case syncretism, seem to have a functioning (albeit reduced) case system.

Development of New Case Inventory

- ▶ From around 1200 on, one finds new case markers being drawn into the system in New Indo-Aryan (NIA).
- ▶ The case markers are mostly clitics, some markers are inflectional (these tend to reflect the old material).

	Dative	Ergative	Instrumental	Genitive
Hindi/Urdu	ko	ne	se	ka/ki/ke
Gujarati	ne	-e	-e/thi	no/ni/nu/na/nā
Marathi	la	ne/ni	ne/ni	ca/ci/ce
Nepali	lai	le	le	ko/ka/ki
Punjabi	nū	ne	kolō	da/di/de
Sindhi	k ^h e	-e/-an/-in	-e	jo/ji/je/ja/jyu
Bengali	ke	—	te	-(e)r
Oriya	ku	—	-e	-rɔ

Case Markers Across Indo-Aryan (Masica 1991, Ahmed Khan 2009)

New Case Inventory

- ▶ The genitive is the only one that inflects (put this aside for now).
- ▶ The various case markers all seem to be versions of some *n-*, *k-* and *l-* forms.
- ▶ Common Homophonies Crosslinguistically:
 - ▶ Dative/Accusative
 - ▶ Ergative/Instrumental
- ▶ Additionally in Indo-Aryan:
 - ▶ Ergative/Dative

Sample Look at Urdu/Hindi *ko* and *ne*

- ▶ Beames (1872–79:§56) reconstructs the Urdu *ko* to the locative of Sanskrit *kaksha* ‘armpit, side’ → Old Hindi *kākha*, accusative *kākham* → *kahū* → *kō* → *ko*.
- ▶ The most likely reconstruction of *ne* is due to Tessitori (1913, 1914).
 - ▶ Source: Apabhraṃśa form *kaṇṇahī*, related to the Sanskrit locative of ‘ear’ *karne*
 - ▶ Old Rajasthani: *kanhaiN* (or *kanhai*, *kanhi*, *kanhali*, *kaṇi*) → (*naī*, *naī*)
 - ▶ Mostly meant ‘aside, near’.

Skt. ‘ear’ > ‘near’

> Ablative ‘from’ > Agentive

> Dative (and Accusative)

Basic Questions

If the above is all correct, then:

- ▶ The origin of the modern case markers are spatial terms: how exactly does agent/patient marking result?
- ▶ Why draw new case markers into a system in the first place?

Next to no proposals for the first question.

Some high profile proposals for the second one.

Markedness and Dependent Case

- ▶ An attractive notion is *markedness* (see Malchukov and de Swart (2009), de Hoop (2009) for surveys).
- ▶ New case markers are predicted to arise first in situations where it is difficult to distinguish agents/subjects from patients/objects, i.e., in *marked* situations.

A O

S

- ▶ Typical As: animate, agentive (transitive), topical
 - ▶ Typical Os: inanimate, indefinite
- ▶ *Dependent Case*
 - ▶ Similar focus on just a subset of core arguments.
 - ▶ Posits systematic asymmetries between external and internal arguments.

Overmarking

- ▶ No good explanation for “over-marking”, i.e., when both subject and object are marked overtly with innovated case markers.
- ▶ The subject is already marked, so why mark the object?

(12)

nadya=ne **yasin=ko/*yasin** mar-a
Nadya.F.Sg=Erg Yassin.M.Sg=Acc/Yassin.M.Sg.Nom hit-Perf.M.Sg
'Nadya hit Yassin.'
Hindi/Urdu

- ▶ On the other hand, subject and object below need to be distinguished, but the example is questionable.

(13)

??**patt^har=ne** jīfa tor̥-a
stone.M=Erg glass.M.Sg.Nom break-Perf.M.Sg
'The stone/rock broke the glass.'
Hindi/Urdu

(based on Mohanan 1994, 75)

Overmarking without Distinguishing

- ▶ In some Indo-Aryan languages, the same case marker is used for ergative and dative/accusative.
- ▶ Why mark both and yet not distinguish?

(12) man=ne sahab=ne mar-a
 Pron.1.Sg=Acc/Dat Sahib.M.Sg=Erg hit-Perf.M.Sg
 ‘The Sahib hit me.’ (Shirani 1987) Haryani

(13) va-*ne* ve-ne dek^h-y-u
 Pron.3Sg-Erg Pron.3Sg-Acc see-Perf-N
 ‘He/she saw him/her.’ (Phillips 2013) Kherwada Wagdi

Note: in Kherwarda Wagdi, *ne* and *ne* are variants of one another.

Symmetric DOM

- ▶ DOM is expected to be mainly *asymmetric*, i.e., contrasting an unmarked object with a marked one.
- ▶ But symmetric types of DOM abound.

More Direct (ko) vs. Indirect (se)

(14) a.

nadya **yasin=ko** m1l-i
 Nadya.F.Sg.Nom Yassin.M.Sg=Acc meet-Perf.F.Sg
 ‘Nadya met Yassin.’ Hindi/Urdu

b.

nadya **yasin=se** m1l-i
 Nadya.F.Sg.Nom Yassin.M.Sg=Inst meet-Perf.F.Sg
 ‘Nadya met Yassin.’ Hindi/Urdu

Symmetric DOM

Type of Path

(15) a.

us=le dilli=**dek^hi** kat^hmandu=samma baṭo banaa-yo
 Pron.3.Sg=Erg Delhi=Abl Kathmandu=to street.Nom make-Past
 ‘He built a street from Delhi to Kathmandu.’ Nepali
 Ahmed Khan (2009), **static path**

b.

u dilli=**baṭa** kat^hmandu=samma kud-yo
 Pron.3.Sg.Nom Delhi=Abl Kathmandu=to ran-Past
 ‘He ran from Delhi to Kathmandu.’ Nepali
 Ahmed Khan (2009), **dynamic path**

Symmetric DOM

Attainment of Endpoint (boundedness)

(16) a.

ek vilayat **mē** poāce
 one city in reached
 ‘reached a city’ (Dehalvi, 1804)

Old Urdu

b.

is manzil **ko** kab poāco-ge
 this destination Dat/Acc when reach.2-Fut.Pl
 ‘When will (you) reach this destination?’ (Dehalvi 1804)

Old Urdu

DSM

- ▶ DSM is similarly complex.
- ▶ One finds asymmetric DSM, but also with intransitives where there is no need to distinguish one argument from the other.

(17) a.

ram k^hās-a
 Ram.M.Sg.Nom cough-Perf.M.Sg
 ‘Ram coughed.’

Urdu

b.

ram=ne k^hās-a
 Ram.M.Sg=Erg cough-Perf.M.Sg
 ‘Ram coughed (**purposefully**).’ (Tuite et al. 1985, 264)

Urdu

- ▶ The ergative is generally associated with agency.

DSM and Modality

(18) a.

nadya=ko zu ja-na hε
 Nadya.F.Sg=Dat zoo.M.Sg.Loc go-Inf.M.Sg be.Pres.3.Sg
 ‘Nadya has/wants to go to the zoo.’

Urdu

b.

nadya=ne zu ja-na hε
 Nadya.F.Sg=Erg zoo.M.Sg.Loc go-Inf.M.Sg be.Pres.3.Sg
 ‘Nadya wants to go to the zoo.’

Urdu

(19) a.

ami toma=ke cai
 I.Nom you=Acc wants
 ‘I want you.’ (Klaiman 1980, 279)

Bengali

b.

amar toma=ke cai
 I.Gen you=Acc wants
 ‘I need you.’ (Klaiman 1980, 279)

Bengali

Information Structure

- ▶ Dalrymple and Nikolaeva (2011) implicate information structural concerns in the rise of object marking.
- ▶ Focus particularly on DOM.
- ▶ Suggest that Urdu/Hindi dative/accusative *ko* arose as a secondary topic marker.
- ▶ Crosslinguistic development of secondary topic markers into specificity/definiteness markers.

(20) nadya **kitab/kitab=ko** xarid-e-g-i
 Nadya.F.Sg.Nom book.F.Sg.Nom/book.F.Sg=Acc buy-3.Sg-Fut-F.Sg
 ‘Nadya will buy a/the book.’ Hindi/Urdu

- ▶ Does not explain the full range of DOM found in Indo-Aryan.
- ▶ Also no hard and fast historical evidence.

Information Structure

- ▶ Still, Dalrymple and Nikolaeva (2011) are right that information structure is implicated in case marking patterns across South Asia.
- ▶ Hyslop (2010): One use of the ergative is to mark focus in Kurtöp (Tibeto-Burman)
- ▶ Need to take this into account in an analysis of case.

Taking Stock

- ▶ Indo-Aryan contains DCM systematically.
- ▶ The patterns are not as simple as expected under a markedness/indexing view.
- ▶ There is no good explanation why new case markers are drawn primarily from spatial terms.
- ▶ See Reinöhl (2015) for a proposal on how various different types of spatial terms became spatial postpositions in Indo-Aryan in the first place.
- ▶ But how does a spatial postposition become a case marker for A, S and O?

Case as a Multidimensional Phenomenon

The following dimensions of meaning/expression crop up over and over again in crosslinguistic generalizations:

- ▶ Participant Relations
 - ▶ Thematic Relations (agent, patient, goal)
 - ▶ A, O, S
- ▶ Information Structure (Given vs. not)
- ▶ Quantizability/Scalarity (event structure)
- ▶ Figure/Ground

Most approaches to case focus on a subset, with most attention devoted to the identification of participant relations.

But not:

how the participants relate to the **structure** of a given **event**.

Proposal for Case Innovation

- ▶ Spatial terms express Figure/Ground relations (Talmy 1975)
- ▶ Figure/Ground are generally in a static relationship to one another
 - ▶ adpositions (*The cat on the sofa*)
 - ▶ copula type of predications (*be, seem, contain*)
- ▶ These static Figure/Ground relationships can be reinterpreted as relationships between a Figure/participant and a Ground/(sub)event → **case marking develops.**

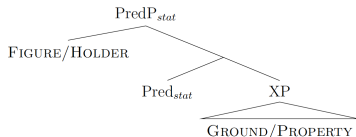
Figure/Ground

- ▶ The structure and semantics of adpositions have found good accounts in modern formulations of Talmy's original Figure/Ground proposal, e.g., Svenonius (2010).
- ▶ The Figure/Ground configuration is also taken as a basic in Ramchand's (2008) proposals for the representation of event structure in terms of subevents and participants.
 - ▶ init (initiator)
 - ▶ process (undergoer of process)
 - ▶ result (changed/resulting entity)

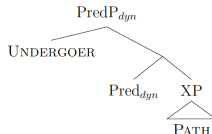
The Key to Case: (Lexical) Semantics

- ▶ Spatial terms are fundamentally concerned with relating a entity (Figure) to a given space (Ground).
- ▶ Case is fundamentally concerned with the relationship participants have to a given event.
- ▶ There is parallelism in this relation that offer natural opportunities for language change.

Static Property Predication



Dynamic Property Predication (\pm continuous)



(From Ramchand 2017)

The Key to Case: (Lexical) Semantics

- ▶ This approach differs radically from explanations that are concerned with understanding case in terms of
 - ▶ markedness or indexing
 - ▶ a fundamental need to differentiate subjects from objects
- ▶ Existing approaches have so far only been able to account for a sliver of the overall case patterns — my prediction is that they never will be able to deliver a full account.
- ▶ **Instead:** Lexical and clausal semantics need to be understood as a core motivating factor for case.

Event Structure and Event Properties

- ▶ Ramchand's system also allows for *rheme*.
 - ▶ Rhemes are part of the description of the predicate, but they are not associated with one of the three subevents that a predicate can maximally denote (init, process, result).
 - ▶ Rhemes are considered to be in a static relationship with a subevent of the predicate — much like the static spatial Figure/Ground relationship.
- ▶ The distinction between an undergoer of a process and a rheme nicely accounts for the difference in quantized vs. non-quantized objects (or scalarity as it has come to be known, Ramchand 1997, Kennedy and Levin 2008).
- ▶ This distinction is exactly what is encoded in many of the DOM examples (e.g., the Sanskrit partitive).

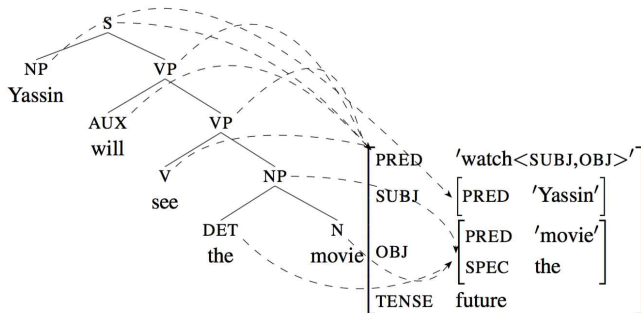
Towards an Analysis

- ▶ Svenonius gives us a structural interpretation of the Figure/Ground relationship.
- ▶ Ramchand's system gives us a well-articulated way to link participants with event structure, which draws heavily on the Figure/Ground configuration.
- ▶ Still need:
 - ▶ Integration of the lexical semantics of case — here I take the basic approach of Butt and King (1991), see also Butt and King (2004).
 - ▶ Linking of participant roles to grammatical relations — a very elegant, flexible and expandable system is provided by LFG's (Lexical-Functional Grammar) Mapping or Linking Theory.
- ▶ Understand the integration of new case markers in terms of a revised and extended version of LFG's Linking Theory.

LFG Architecture

- ▶ LFG separates out surface syntactic and information (c-structure) from functional information (f-structure).
- ▶ The different levels of representation are related to each other via mathematically defined projections.

(2) Yassin will watch the movie.



LFG's Projections

Over the years, more projections than the original core c-structure, f-structure and s(ematic)-structure have been argued for:

- ▶ a(rgument)-structure: place for thematic roles and information about predicate composition (complex predicates)
- ▶ i(nformation)-structure: place for information structural components (topic/focus)
- ▶ p(rosodic)-structure: place for intonational and prosodic information (Butt and King 1998, Mycock 2006, Bögel 2015).

The architecture of LFG allows for complex interactions across projections.

Standard Linking (Bresnan and Zaenen 1990)

▶ Active Transitive

a-structure:	<i>pound</i>	<	agent	theme	>
			[-o]	[-r]	
f-structure:			SUBJ	OBJ	

▶ Passive

a-structure:	<i>pound</i>	<	agent	theme	>
			[-o]	[-r]	
			∅		
f-structure:				SUBJ	

New Linking Proposal

- ▶ In joint work with Schätzle (2018), developing version of linking theory that integrates event structure and information about prominence.
- ▶ Event structure based on insights from Ramchand.
- ▶ Information structure based on Talmy's original insights of Figure being more salient (and thus more likely to be topic).
- ▶ Four possible argument slots (based on Kibort 2014).

		init	proc	result	rheme	
<i>predicate</i>	<	x	x	x	x	>
		Figure	Ground			
		SUBJ	OBJ	OBJ _{theta}	OBL	

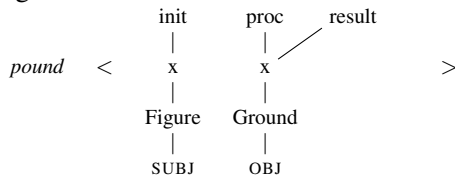
Table: General Linking Schema

Case and Linking

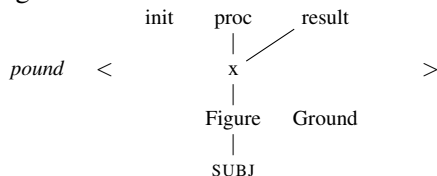
- ▶ Case does not “sit” within the Linking system.
- ▶ Linking determines the mapping from argument slots to grammatical relations based on event structural and prominence information.
- ▶ Case relates the participants (nominal domain) of an event to its subevental structure (verbal domain).
- ▶ It does this by
 - ▶ encoding the semantics denoted by the participant-subevent relationship
 - ▶ encoding constraints on the syntactic realization of the participants

Revised Simple Analysis of Agentive Transitives

▶ Agentive Active Transitive



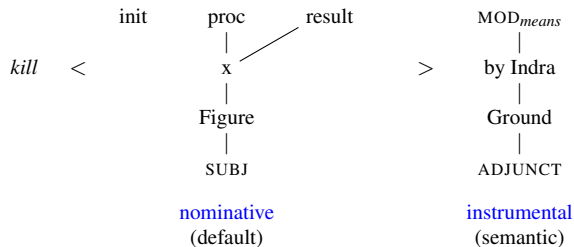
▶ Agentive Passive Transitive



Towards an Analysis

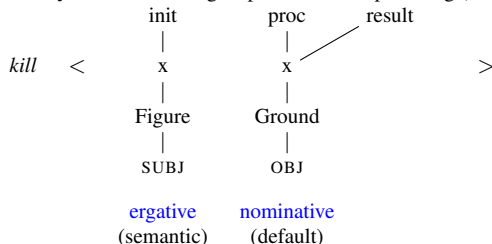
- (21) ahi-r indr-eṇa ha-ta-ḥ
 serpent-NOM.M.SG Indra-INST.SG kill-PTCPL-NOM.M.SG
 ‘The serpent has been killed by Indra.’
 Original Participle Reading: ‘The by Indra killed serpent.’

Sanskrit



Towards an Analysis

Reanalysed as: Indra-Erg serpent-Nom kill-perf.m.sg ('Indra has killed the serpent.')



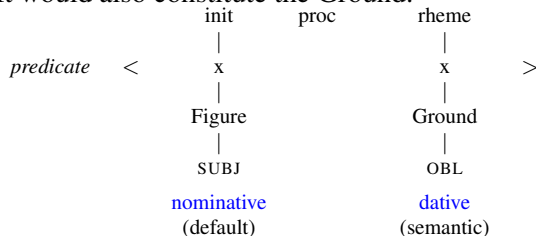
- ▶ With agentive verbs like *kill*, the sentient instrument is not a good fit for a Ground.
- ▶ Its semantics make it a better fit as a Figure → pressure for reanalysis as a Figure.
- ▶ As a Figure it is interpreted as agentive and is associated with the init subevent and linked to SUBJ (instead of the former adjunct status).
- ▶ The originally spatial marking is reinterpreted as an agentive case marker → the ergative (but in the initial stages, it is restricted to the aspect marking that gave rise to the configuration, leading to a split-ergative system).

History of New Ergative and Dat/Acc in Hindi/Urdu

- ▶ *ko* first entered Urdu/Hindi around 1200 CE
- ▶ First uses are for dative goals/experiencers (‘give to the Brahmins’, teach to life, grief is at me’)
- ▶ Some first accusative/object uses with the verbs ‘seek’ (seek a husband) and ‘rattle’ (rattle the bones).
- ▶ *ne* first entered Urdu/Hindi around 1600 CE — probably via language contact
- ▶ Found prior to that in Old Western Rajasthani as **both** dative/accusative and agentive/ablative.

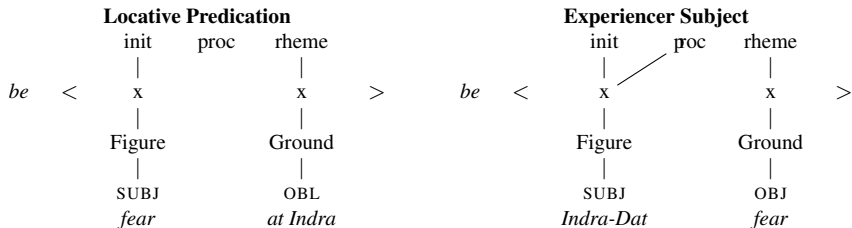
Towards an Analysis

- ▶ *ko* in Hindi/Urdu today marks
 1. Indirect Objects: goals
 2. Subject: experiencer/goal
 3. Object: animacy & specificity (roughly)
- ▶ As an originally spatial term, *ko* marked goals/locations and could be instantiated as an argument via the rHEME.
- ▶ It would also constitute the Ground.



Experiencer Subjects

- ▶ For sentient goals/locations, this again resulted in a semantic mismatch → reanalysis of the goal/location argument a Figure that was then associated with the init&proc subevents.
- ▶ This corresponds to non-agentive initiators → the *ko* developed into a marker of experiencer subjects.
- ▶ See also Schätzle (2018) on the history of dative subjects in Icelandic.



Towards an Analysis

- ▶ Differential Object Marking (animacy and specificity) – tentative
 - ▶ The original Ground rheme as a goal/location can be seen as a natural result or culmination for verbs like ‘seek’ or ‘teach’.
 - ▶ The rheme is thus reanalyzed as instantiating the result subevent of those predicates.
 - ▶ Over time it becomes associated with specificity — animates are inherently specific/countable (and resist noun incorporation) so that these become subsumed in this category → Differential Object Marking

Distribution of Case Marking

- ▶ Case is not “assigned” by the syntax.
- ▶ Case markers come with their own syntactic and semantic specifications.
- ▶ These specifications need to be compatible with the semantics (and syntax) of the participants identified in the subevental predicate structure.
- ▶ Explains: optionality of case assignment
 - ▶ The agentive ergative *ne* can be used to emphasize volitionality of unergative intransitive (semantics/syntax are in principle compatible as it hooks onto an INIT subevent).
 - ▶ The accusative *ko* can be used to mark referentiality (specificity) of an object, but it need not (this can also be done via word order or demonstratives) — it is always associated with an UNDERGOER/RESULT subevent.

Further Semantic Phenomena

- ▶ A perspective in which case is seen as relating participants to an event structure also provides avenues of explanation for other semantic contrasts.
- ▶ An example is the use of the ergative in Nepali to express individual vs. stage level contrasts.

(21) a.

raam=le (#aajaa) angreji jaan-da-cha
 Ram=Erg today English know-Impf-NonPast.M.3.Sg
 ‘Ram knows English (#today).’ Nepali (Individual-Level)

b.

raam (aajaa) angreji bol-da-cha
 Ram today English speak-Impf-NonPast.M.3.Sg
 ‘Ram will speak English (today).’ Nepali (Stage-Level)

- ▶ Can think of this an originally copular predication where a property is located at an individual.
- ▶ This sentient Ground was then reanalyzed as a Figure and linked to init&proc.
 → much as in experiencer predicates.

Case Polysemy

What accounts for polysemies such as Ergative/Dative or Ergative/Instrumental/Genitive?

- ▶ Clue lies in the original semantics of the spatial terms/adpositions.
(22) a. Amra opened the door with the key. (Means/Instrumental)
b. Ravi sat with the teddy bear. (Locational)
- ▶ Need to delve into the semantics of adpositions (e.g., Kracht 2002, Zwarts 1997).
- ▶ Ahmed Khan (2009) has some interesting proposals that allow for underspecification and hence also polysemy.
- ▶ The different versions of the same adposition are drawn into the case system differently – so the same adposition could end up as an ergative but also as a dative.

Conclusion

- ▶ Several dimensions play a role in the deployment of case marking.
 - ▶ Figure/Ground
 - ▶ Event Semantics/Participant Relations
- ▶ Major difference with respect to Dependent Case, where case assignment fundamentally depends on the configuration of two DPs with respect to one another.
- ▶ Here, case is understood as fundamentally relating participants to event structure (following Ramchand's overall system and insights).
- ▶ The patterns identified by Dependent Case fall out indirectly as a subset of the overall system (e.g., configurations within the event structurally motivated vP).
- ▶ Claim: without this type of understanding/perspective, the crosslinguistic synchronic distribution of case and its diachronic development will not be understood.

References I

- Ahmed Khan, Tafseer. 2009. Spatial Expressions and Case in South Asian Languages. Ph. D. thesis, University of Konstanz.
- Andersen, Paul Kent. 1986. Die ta-Partizipialkonstruktion bei Aśoka: Passiv oder Ergativ? Zeitschrift für vergleichende Sprachforschung 99, 75–95.
- Beames, John. 1872–79. A Comparative Grammar of the Modern Aryan Languages of India. Delhi: Munshiram Manoharlal, republished 1966.
- Bögel, Tina. 2015. The Syntax-Prosody Interface in Lexical Functional Grammar. Ph. D. thesis, University of Konstanz.
- Böhtlingk, Otto. 1839–40. Pāṇinis Grammatik. Delhi: Motilal Banarsidass, republished in 1998.
- Bresnan, Joan and Zaenen, Annie. 1990. Deep Unaccusativity in LFG. In Katarzyna Dziwirek, Patrick Farrell and Errapel Mejías-Bikandi (eds.), Grammatical Relations: A Cross-Theoretical Perspective, pages 45–57, Stanford: CSLI Publications.

References II

- Butt, Miriam. 2001. A Reexamination of the Accusative to Ergative Shift in Indo-Aryan. In Miriam Butt and Tracy Holloway King (eds.), Time Over Matter: Diachronic Perspectives on Morphosyntax, pages 105–141, Stanford: CSLI Publications.
- Butt, Miriam and King, Tracy Holloway. 1991. Semantic Case in Urdu. In L. Dobrin, L. Nichols and R.M. Rodriguez (eds.), Papers from the 27th Regional Meeting of the Chicago Linguistic Society, pages 31–45.
- Butt, Miriam and King, Tracy Holloway. 1998. Interfacing Phonology with LFG. In Miriam Butt and Tracy Holloway King (eds.), Proceedings of the LFG98 Conference, CSLI Publications.
- Butt, Miriam and King, Tracy Holloway. 2004. The Status of Case. In Veneeta Dayal and Anoop Mahajan (eds.), Clause Structure in South Asian Languages, pages 153–198, Berlin: Kluwer Academic Publishers.
- Bynon, Theodora. 2005. Evidential, Raised Possessor and the Historical Source of the Ergative Construction in Indo-Iranian. Transactions of the Philological Society 103(1), 1–72.

References III

- Condoravdi, Cleo and Deo, Ashwini. 2014. Aspect Shifts in Indo-Aryan and trejectories of semantic change. In Chiara Gianollo, Agnes Jäger and Doris Penka (eds.), Language Change at the Syntax-Semantics Interface, pages 261–292, Berlin: Mouton de Gruyter.
- Dalrymple, Mary and Nikolaeva, Irina. 2011. Objects and Information Structure. Cambridge: Cambridge University Press.
- de Hoop, Helen. 2009. Case in Optimality Theory. In The Oxford Handbook of Case, pages 88–101, Oxford: Oxford University Press.
- Dehalvi, Mir Amman. 1804. Bagh-o-Bahaar. Calcutta: Fort William College.
- Deo, Ashwini and Sharma, Devyani. 2006. Typological Variation in the Ergative Morphology of Indo-Aryan Languages. Linguistic Typology 10(3).
- Dixon, R. M. W. 1994. Ergativity. Cambridge: Cambridge University Press.
- Hewson, John and Bubenik, Vit. 2006. From Case to Adposition: The development of configurational syntax in Indo-European Languages. Amsterdam: John Benjamins.

References IV

- Hyslop, Gwendolyn. 2010. Kurtöp Case: The Pragmatic Ergative and Beyond. Linguistics of the Tibeto-Burman Area 33(1), 1–40.
- Jamison, Stephanie. 1976. Functional Ambiguity and Syntactic Change: The Sanskrit Accusative. In Papers from the Parasession on Diachronic Syntax, 12th Regional Meeting of the Chicago Linguistic Society, pages 126–135.
- Katre, Sumitra M. 1987. Aṣṭādhyāyī of Pāṇini. Delhi: Motilal Banarsidass, republished in 1989.
- Kellogg, S. H. 1893. Grammar of the Hindi Language. Delhi: Munshiram Manoharlal Publishers Pvt. Ltd., second Edition, reprinted 1990.
- Kennedy, Chris and Levin, Beth. 2008. Measure of Change: The Adjectival Core of Degree Achievements. In Louise McNally and Chris Kennedy (eds.), Adjectives and Adverbs: Syntax, Semantics and Discourse, pages 156–182, Oxford: Oxford University Press.
- Kibort, Anna. 2014. Mapping out a construction inventory with (Lexical) Mapping Theory. In M. Butt and T. H. King (eds.), Proceedings of the LFG14 Conference, pages 262–282, CSLI Publications.

References V

- Kiparsky, Paul. 1998. Aspect and Event Structure in Vedic. Yearbook of South Asian Languages and Linguistics 1, 29–62.
- Klaiman, M. H. 1980. Bengali Dative Subjects. Lingua 51, 275–295.
- Kracht, Marcus. 2002. On the Semantics of Locatives. Linguistics and Philosophy 25, 157–232.
- Malchukov, Andrej and de Swart, Peter. 2009. Differential Case Marking and Actancy Variations. In The Oxford Handbook of Case, pages 339–355, Oxford: Oxford University Press.
- Masica, Colin. 1991. The Indo-Aryan languages. Cambridge: Cambridge University Press.
- Mohanan, Tara. 1994. Argument Structure in Hindi. Stanford: CSLI Publications.
- Montaut, Annie. 2006. The Evolution of the Tense-Aspect System in Hindi/Urdu: The Status of the Ergative Alignment. In Miriam Butt and Tracy Hollowy King (eds.), Proceedings of the LFG06 Conference, pages 365–385, Stanford: CSLI Publications.

References VI

- Montaut, Annie. 2009. Ergative and Pre-ergative Patterns in Indo-Aryan as Predications of Localization: A Diachronic View of Past and Future Systems. In A.R. Faithi (ed.), Language Vitality in South Asia, pages 295–325, Aligarh Muslim University.
- Mycock, Louise. 2006. The Typology of Constituent Questions: A Lexical-Functional Grammar Analysis of wh-questions. Ph. D. thesis, University of Manchester.
- Phillips, Maxwell. 2013. Ergative case attrition in Central Indo-Aryan: NP-splits and the Referential Hierarchy. Studies in Language pages 196–216.
- Ramchand, Gillian. 1997. Aspect and Predication. Oxford: Oxford University Press.
- Ramchand, Gillian. 2008. Verb Meaning and the Lexicon: A First Phase Syntax. Cambridge: Cambridge University Press.
- Ramchand, Gillian. 2017. The Event Domain. In Roberta DAlessandro and Irene Franco (eds.), The Verbal Domain, Oxford: Oxford University Press.
- Reinöhl, Uta. 2015. Grammaticalization and Configurationality — The Emergence of Postpositional Phrases in Indo-Aryan. Oxford: Oxford University Press.

References VII

- Reinöhl, Uta. 2006. A single origin of Indo-European primary adpositions?
Unveiling the Indo-Aryan branch-off. Diachronica 33(1), 95–130.
- Schätzle, Christin. 2018. Dative Subjects: Historical Change Visualized. Ph. D. thesis, University of Konstanz.
- Shirani, Mahmood. 1987. urdu ki shakh haryani zaban mein talifat. In Mazhar Mahmood Shirani (ed.), maqaalaat-e-hafiz mahmood shirani (Papers of Hafiz Mahmood Shirani), Lahore: Majilis-e-Taraqqi-e-Adab.
- Subbarao, K.V. 2001. Agreement in South Asian Languages and Minimalist Inquiries: The Framework. In P. Bhaskararao and K.V. Subbarao (eds.), The Yearbook of South Asian Languages, London/New Delhi: Sage Publications/Thousand Oaks.
- Svenonius, Peter. 2010. Spatial P in English. In G.C. Cinque and L. Rizzi (eds.), Cartography of Syntactic Structures, Oxford: Oxford University Press.
- Talmy, Leonard. 1975. Figure and Ground in Complex Sentences. In Proceedings of the First Annual Meeting of the Berkeley Linguistics Society, pages 419–430.

References VIII

- Tessitori, Luigi. 1913. On the Origin of the Dative and Genitive Postpositions in Gujarati and Marwari. Journal of the Royal Asiatic Society of Great Britain and Ireland pages 553–567.
- Tessitori, Luigi. 1914. Notes on the Grammar of the Old Western Rajasthani with Special Reference to Apabhram̃ṣa and to Gujarati and Marwari. Indian Antiquary XLIII, 181–216, 225–236, chapter 3.
- Trumpp, Ernest. 1872. Grammar of the Sindhi Language. Osnabrück: Biblio Verlag, reprinted 1970.
- Tuite, Kevin J., Agha, Asif and Graczyk, Randolph. 1985. Agentivity, transitivity, and the question of active typology. In W.H. Eilfort, P.D. Kroeber and K.L. Peterson (eds.), Papers from the Parasession on Causatives and Agentivity at the 21st Regional Meeting of the Chicago Linguistic Society, pages 252–270.
- Zwarts, Joost. 1997. Vectors as relative positions: A compositional semantics of modified PPs. Journal of Semantics 14, 57–86.