The Dative-Ergative Connection

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It would be an easy map if that were all; but there is also the first day at school, religion, fathers, the round pond, needlework, murders, hangings, verbs that take the dative ...   [J.M. Barrie, *Peter Pan*, p.6]

1   Introduction

Case, especially ergative case, is generally viewed as primarily structural.

- It is used mainly to identify participants in an event (cf. Fillmore 1968, Kiparsky's 997 notion of a "linker").

- Ergativity is taken to be a case of a different way of grouping subjects vs. objects (e.g. Fillmore 1968, Egede 1760, Silverstein 1976, Dixon 1979).

- Plank (1979:4) concisely summarizes the idea:

  (1) a. A grammatical pattern or process shows ergative alignment if it identifies intransitive subjects (S_i) and transitive direct objects (dO) as opposed to transitive subjects (S_t).

  b. It shows accusative alignment if it identifies S_i and S_t as opposed to dO.

- The (now) more standard terms and grouping are shown below (e.g. Dixon 1994:9).

$$\begin{array}{l l} \text{nominative} & \left\{ \begin{array}{l} \text{A ergative} \\[2mm] \text{S} \end{array} \right. \\[4mm] \text{accusative} & \left. \begin{array}{l} \\ \text{O} \end{array} \right\} \text{absolutive} \end{array}$$

  A = transitive subject (Agent); S = intransitive subject; O = transitive object

  (whereby nominative and absolutive are the unmarked case and are now often referred to by just "nominative")

- Some expected patterns or *case systems* across languages:

  (2)

Clause Type	Language Type		
	Ergative	Accusative	Active
Transitive	Erg-Abs	Nom-Acc	Erg-Abs
Intransitive (Unacc)	Abs	Nom	Abs
Intransitive (Unerg)	Abs	Nom	Erg

But:

- Is this really representative of the case system? (I.e., what about the dative?)

- What about semantically motivated case alternations?

- What about diachronic and synchronic "affinities" (e.g., form-identity) between accusative/dative, ergative/instrumental/genitive (and, in this talk, **ergative/dative**)?

We begin with a look at case alternations, followed by some historical data.

2 Object Alternations

Object Alternations are quite famous.

Several sophisticated syntax-semantics interface analyses exist in terms of *aspectual* interpretation and/or the semantic type of the object (e.g., Enç 1991, de Hoop 1996, Ramchand 1997, Kiparsky 1998).

Example: Specificity Alternation (Nom/Acc)

(3) a. Ali bir **piyano** kivalamak istiyor.
   A. one piano to.rent   wants
   'Ali wants to rent one (some) piano.' (Enç 1991)   Turkish

   b. Ali bir **piyano-yu** kivalamak istiyor.
   A. one piano-Acc to.rent   wants
   'Ali wants to rent a certain piano.' (Enç 1991)   Turkish

(4) a. ram   **gari**   xɑrid-e-g-a
   Ram.M.Sg.Nom car.F.Sg.Nom buy-3.Sg-Fut-M.Sg
   'Ram will buy a/the car.'   **Nom→No Information**   Urdu

   b. ram   **gari=ko**   xɑrid-e-g-a
   Ram.M.Sg.Nom car.F.Sg=Acc buy-3.Sg-Fut-M.Sg
   'Ram will buy the car (a specific car).'   **Acc→Specific Object**   Urdu

Example: Partitive Alternation (Part/Acc)

(5) a. Ostin   **leivän**
   bought.1.Sg bread.Acc
   'I bought the bread.'   Finnish

   b. Ostin   **leipää**
   bought.1.Sg bread.Part
   'I bought (some) bread.'   Finnish

(6) a. Ammu-i-n   **karhu-n**
    shoot-Past-1Sg bear-Acc
    'I shot the/a bear.' (Kiparsky 1998:267)   Finnish

   b. Ammu-i-n   **karhu-a**
    shoot-Past-1Sg bear-Part
    'I shot at the/a bear (bear is not dead).'
    (Kiparsky 1998:267)   Finnish

Example: Boundedness Alternation (Nom/Gen) (from Ramchand 1997)

(7) a. tha   Calum air **na craobhan** a   ghearradh
    be.Pres Calum Asp the trees.Dir   OAgr cut.VN
    'Calum has cut the trees.'   Scottish Gaelic

   b. tha   Calum a'   ghearradh **nan craobhan**
    be.Pres Calum Asp cut.VN   the trees.Gen   Scottish Gaelic
    'Calum is cutting the trees (no tree has necessarily been cut yet).'

(8) a. tha   mi air **am ball**   iarraidh
    be.Pres I   Asp the ball.Dir want.VN
    'I have acquired the ball.'   Scottish Gaelic

   b. tha   mi ag   iarraidh **a'bhuill**
    be.Pres I   Asp want.VN the ball.Gen
    'I want the ball.'   Scottish Gaelic

3   Subject Alternations

- Subject Alternations are less famous and therefore less well understood.

- The fact of non-nominative subjects (as in Icelandic; Zaenen, Maling and Thráinsson 1985) is generally attributed to factors driven by lexical semantics (inherent Case).

  (9) Mér   batnaði   kvefið.
    I.Dat recovered the.cold.Nom
    'I recovered from the cold.' (Svenonius 2002:205)   Icelandic

- More recently, it has been suggested that non-nominative subjects can also be understood in terms of an interaction between the verbal lexical semantics and the temporal/aspectual semantics of a clause (e.g., Pesetsky and Torrego 2001, Svenonius 2002).

- This might also help to account for ergative/nominative case alternations (known as *split-ergativity*), by which the ergative is often found only in one tense/aspect (generally perfect(ive)/past).

(10) a. **ram**   gari=ko   xɑrid-e-g-a
        Ram.M.Sg.Nom car.F.Sg=Acc buy-3.Sg-Fut-M.Sg
        'Ram will buy the car.'   **Non-Perf→Nom**   Urdu

   b. **ram=ne**   gari=ko   xɑrid-a
        Ram.M.Sg=Erg car.F.Sg=Acc buy-Perf.M.Sg
        'Ram has bought the car.'   **Perf→Erg**   Urdu

3.1   Ergative Alternations

But: what accounts for the ergative/nominative alternations found with unergatives?

(11) a. **ram**   kʰãs-a
        Ram.M.Sg.Nom cough-Perf.M.Sg
        'Ram coughed.'   **Nom→No Information**   Urdu

   b. **ram=ne**   kʰãs-a
        Ram.M.Sg=Erg cough-Perf.M.Sg
        'Ram coughed **(purposefully)**.'   **Erg→Control**   Urdu

And ergative/dative alternations with infinitives?

(12) a. **nadya=ko**   zu   ja-na   hɛ
        Nadya.F.Sg=Dat zoo.M.Sg.Loc go-Inf.M.Sg be.Pres.3.Sg
        'Nadya has/wants to go to the zoo.'   **Dat→Goal**   Urdu

   b. **nadya=ne**   zu   ja-na   hɛ
        Nadya.F.Sg=Erg zoo.M.Sg.Loc go-Inf.M.Sg be.Pres.3.Sg
        'Nadya wants to go to the zoo.'   **Erg→Control**   Urdu

3.2   Lexical Entries for Case Markers

Generally assume that:

- the ergative is associated with *control* over an action ((13a)).

- the dative is associated with *goal* semantics (cf. Verma and Mohanan 1990) ((13b)).

  (13) a. **nadya=ne**   kɑhani   yad   **k-i**
          Nadya.F.Sg=Erg story.F.Sg.Nom memory do-Perf.F.Sg
          'Nadya remembered the story (actively).'   **Erg→Control**   Urdu

    b. **nadya=ko**   kɑhani   yad   **a-yi**
          Nadya.F.Sg=Dat story.F.Sg.Nom memory come-Perf.F.Sg
          'Nadya remembered the story (memory came to Nadya).' **Dat→Goal**   Urdu

This leads to a distinction between *internal control* (volitionality, "wants to") and *external control* (goal/experiencer, "has to"), which can begin to account for the contrast in (12).

Butt and King (1991, 2003, 2005) *Differential Case Marking Theory* (DCT):

- Assume that case always has both a syntactic and a semantic function (though nominative is default).

- The case markers themselves carry the relevant semantic information (cf. Nordlinger's 1998 *Constructive Case*).

- This interacts with other information in the clause (but is not licensed by it).

3.3 Modal Alternations

Question: Is the interaction between case and modality just a fluke of Urdu?

Answer: No—something more general seems to be going on.

Example: Want/Need Alternation (Nom/Gen)

(14) a. **ami**   tomake cai
    I.Nom you.Acc wants
    'I want you.' (Klaiman 1980:279)   Bengali

   b. **amar** tomake cai
    I.Gen you.Acc wants
    'I need you.' (Klaiman 1980:279)   Bengali

Example: Must/Want Alternation (Nom/Dat)

(15) a. **amma**   kuṭṭiye   aḍik'k'-aṇam
    mother.Nom child.Acc beat-want
    'Mother must beat the child.'   Malayalam

   b. **ammak'k'ə** kuṭṭiye   aḍik'k'-aṇam
    mother.Dat child.Acc beat-want
    'Mother wants to beat the child.'   Malayalam

Latin/Sanskrit Associations between Case and Modality with Nonfinites

(16) haec   **caesari**   facienda   erant
    this.N.Pl Caesar.Dat do.Gerund.N.Pl be.Past.3.Pl
    'These things had to be done by Caesar.'   Latin
    'Caesar had to do these things.'   **Dat→Goal/Must**

(17) samprati gan-tavyā puri   vārāṇasī   **mayā**
    now   go-Gerund city.Nom.F.Sg Benares.Nom.F.Sg I.Inst
    'now I want to go to the city of Benares'   **Inst→Control/Want**   Sanskrit

The cases involved (so far) are: Nominative, Ergative, Genitive, Dative, and Instrumental.

Questions:

- How can this be explained?

- Is there a semantically generalizable connection between the cases?

Intriguing theoretical possibilities are opened up by a look at the historical development of case markers in Urdu, in particular, the ergative.

4   Historical Development of the Ergative

4.1   Urdu—Basic Information

Urdu is a South Asian language spoken in:

- Pakistan (national language) and India (one of the 22 official languages)

Urdu is closely related to Hindi (mainly differences in vocabulary and pronunciation).
Taken together these represent the second most spoken language in the world: **400 000 000**.

- Urdu has an ergative and is ultimately descended from Sanskrit.

- Sanskrit had no ergative.

- **Question:** How did the ergative enter the language?

- **Standard Answer:** Via reanalysis of a **passive** construction, Inst → Erg.

- **But:** This turns out not be true, the likely origin is a *dative*.

4.2   The Passive Hypothesis

- The ergative was first noticed in languages like Basque, Greenlandic or Polynesian and was typically called *Nominative of the Agent* (*Nominativ des Handelns*) or simply *Agent* (e.g., Ray 1907, Pott 1873, Kellogg 1883).

- Some researchers sought to identify the presence of the ergative with a familiar construction: the passive (e.g., Schuchardt 1896, Uhlenbeck 1916).

  In both the ergative and the passive, the agent argument is linked to something other than the nominative(=subject in many theories).

Basic Pattern		Passive		Ergative	
agent	patient	agent	patient	agent	patient
|	|	|	|	|	|
NOM	ACC	INST	NOM	ERG	NOM

- The passive=ergative idea received support from the fact that the ergative and instrumental are form-identical in some languages (Australian, Polynesian).

- **However:** It was soon established that ergative constructions were *active* rather than *passive* in nature (a.o., by Sapir 1917, see Trask 1979:390 for further discussion).

- But the passive idea has not died completely. In particular, it is assumed that passive constructions historically gave rise to ergative patterns.

4.3   Undisputed Path of Change

NPinstr NPnom $V_{adjectival\ derverbal\ participle}$ > NPerg NPnom $V_{active(perf)}$
(*der von Hans gegessene Apfel → Hans aß den Apfel*)
(*the by John eaten apple → John ate the apple*)

4.4   Existence of Problems with the Passive Story

- Numerous difficulties have been pointed out with respect to the passive ancestry of the modern ergative in Indo-Aryan (e.g., Beames 1872–79, Kellogg 1893, Klaiman 1978, Trask 1979, Zakharyin 1979, Andersen 1986, Hock 1986, Hook 1999).

- However, the passive analysis has remained popular in modern times (e.g., Pray 1976, Anderson 1977, Pirejko 1979, Bubenik 1989) and indeed is regarded as "standard" textbook knowledge (Dixon 1994, Harris and Campbell 1995).

4.5   Problem 1: The Case Marker Itself

- **Standard Assertion** (goes back to Trumpp):

  - **Instrumental to Ergative:**
    Inflectional Sanskrit instrumental *-ina* → ergative clitic *ne.*
  - **Nominative**: former passive subject.

- **Problem:** Historical data does not back this up (Beames 1872, Kellogg 1893:130–132).

- Sanskrit instrumental *-ina* → $\tilde{e}$ by Middle Indo-Ayran (MIA, between 600 CE–1000 CE) (can still be found in Urdu as *-e*, an oblique marker of masculine nouns in *-a*).

- Modern Urdu *ne* only appeared in the 17th century.

- So — there cannot be a direct connection between the old instrumental and modern ergative (see Butt 2001, Butt and King 2005 for a more detailed discussion).

Instead, in the middle ages, Old Hindi continued the ergative pattern it inherited from Middle Indo-Aryan (see Peterson 1998 for an analysis of MIA as ergative), just without an overt "ergative" case marker (indeed, several languages continue to do so today).

Old Hindi Examples: Transitives with perfective morphology, but no ergative *ne*.

Modern form in (18) would be: *jis=ne*.

(18) **jihi**   rac-e   suraga   bhu   satta   pātāla
who.Obl create-Perf.M.Pl heaven.M.Nom earth.Nom seven.Nom hell.M.Nom
'Who made heaven, earth, the seven hells.'   Old Hindi
[He who created heaven, earth and the seven hells.]
(Chand, Prithiraja-Rasau i.11; Beames 1872:267)

(19) masi   kāgad   chū-yo   nahī kalam   gahī   nahi hāth
ink.Nom paper.M.Nom touch-Perf.M.Sg not   **pen.F.Sg take.Perf.F.Sg** not   hand

jāro   juga   māhātma jehi   **kabir**   jan-ā-yo   nāth
four.Pl age.Pl glory.Nom 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 1872:269)

4.6   Problem 2: Verbal Passive vs. Adjectival Passive

The ancestral construction corresponding to today's ergative was an *adjectival participle* in
-*ta*, which could already be used as a past tense form in Sanskrit (Speijer 1886:255,294).

(20) evam-**uk-tā**   tu   haṃsena   damayantī
so-say-Part.Nom.Sg then goose.Inst.Sg Damayanti.Nom.Sg.F
1. 'Then Damayanti was spoken to like that by the goose.'
2. 'Then the goose spoke to Damayanti thus.'   Sanskrit, Nalopākhyāna I,30

Sanskrit also had a "normal" verbal passive in -*ya*-.

(21) devadattena   kaṭāḥ   **kriyante**
Devadatta-Inst.Sg mat.Nom.Pl do-Pass-3.Pl
'by Devadatta mats are made' (adapted from Hock 1986:16)

Question: Why did this verbal passive not give rise to ergativity?

- Instrumental agents of verbal passives (-*ya*-) were rarely expressed in both Sanskrit
  (Gonda 1951:22) and the later Pāli (Peterson 1998).

- Instrumental agents of adjectival passive participles (-*ta*), on the other hand, were
  almost always overtly expressed.

- There is some possible evidence (from anaphora and control) that the instrumental
  agents of the adjectival participles had subject status (Hook 1999, Speijer 1886:4).

  (22) kesariṇā [__ kariṇam   nihatya]   kutracidagami
      lion.Inst   elephant.Acc down.smite.Gerund somewhere.go.Aor.Pass.3.Sg
      'The lion, having slain the elephant, disappeared.'   Daçak. 18, Vedic Sanskrit

Conclusion:

- The passive vs. the adjectival participle served to highlight participants of the event in different ways.

- In the adjectival participle, the presence of the instrumental agent was important.

  - Andersen (1986): in Aśokan (MIA) inscriptions the agent in the *-ta* construction is marked either with the genitive or the instrumental.
  - The genitive is rarer.
  - The genitive can only apply when the agent is animate.
  - No such restriction applies to the instrumental.

Thus: Case marking was sensitive to semantic factors; in MIA the instrumental in the *-ta*-adjectival participle marked agentivity/control when it was not expected.

Question: If the old instrumental was used to mark control, but eroded, then how did the new ergative *ne* come into the language?

5 The Dative/Ergative Connection

Beames (1872–79:270): the modern ergative *ne* comes from a dative form *nẽ*

- This dative was used on subjects in a dialect of Hindi spoken in provinces adjacent to the Moghul court.

- During the reign of the Moghul Emperor Shah Jehan (1627–1658) a change in administrative policies led to an influx of Hindu administrators, who might have influenced the language of the court (cf. the history of English).

Can this be right?—Compare the forms in (23).

(23)

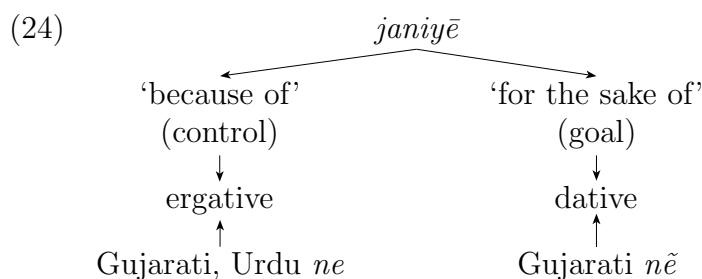|	Dative (subjects and objects)	Ergative (subjects only)
Hindi/Urdu	ko	ne
Punjabi	nũ	ne
Sindhi	kʰe	OBLIQUE INFLECTION
Gujarati	nẽ	-e (old -nē)
Marathi	lā	ne/ni
Bengali	ke	NONE
Oṛiya	ku	NONE
Assamese	ko/no	-e
Nepali	lāī	le

The data leads one to conclude a **fluidity in forms:** one language's dative is another's ergative.

My Working Hypothesis:

- The *ne* was introduced as a non-nominative subject case marker which was used to reinforce semantic contrasts with existing subject markings (e.g., nominative, dative).

Likely ancestors?

- Beames and Kellogg propose the participial form *lage* of the verb *lag* 'stick to' as a possible ancestor.

- More likely is that *ne* is related to Bengali *jonno* 'for', derived from the Sanskrit locative *janiyē* (from *janiyā*) 'for the sake of, because of' (Aditi Lahiri, p.c.; Chatterji 1926).

- One can see immediately how this might give rise to both goal (dative) and control (ergative) readings.

(24)

$$janiy\bar{e}$$

'because of' (control)	'for the sake of' (goal)
↓	↓
ergative	dative
↑	↑
Gujarati, Urdu *ne*	Gujarati *nẽ*

- Compare German (*wegen* is derived from a spatial concept, the dat. pl. of *Weg* 'way') (Ingrid Kaufmann, p.c.):

(25) wegen   ihm   zerbrach die Vase
     because he.Dat broke   the vase
     'Because of him the vase broke' **(cause/control)**   German

(26) wegen   ihm   schaffte   ich   einen Hund an
     because he.Dat acquired I.Nom a.Acc dog   at.Prt
     'For him I got a dog.' **(for/goal)**   German

6   Space and Agency

Hypothesis: Need both *spatial concepts* **and** *notions of control* for understanding of case.

- It has been firmly established in linguistic theory that

  - Spatial concepts are fundamental to language and the structuring of events (cf. Roman and modern Localist Approaches).

* Jackendoff (1990): *place* and *path* are of particular importance.
  – Degree of Control over an action is important (e.g., Silverstein's (1976) *NP hierarchy*, Hopper and Thompson's (1980) notion of *Transitivity*, Wierzbicka's (1981) idea that experience/affectedness (lack of control) is central).

Observation: Most theories of case (and linking) focus on **either** the spatial metaphors **or** the animacy/control hierarchy, but not both.

6.1 A Combined View

(27)

MORE CONTROL	PLACE	PATH
Ergative		
Genitive	▓▓	
Instrumental		▓▓
Dative		▓▓
Accusative	▓▓	
LESS CONTROL		

Note:

* Nominative is default: absence of directly encoded information.

Working Hypothesis for Ergative/Dative Connection:

* A given form can take on differing case functions, depending on the meaning dimension.

* On the spatial/path dimension, a dative (something goes **to** somebody) can result.

* On the control dimension, an agentive (by means of, because of) reading can result.

* This can turn out to be more or less agentive, given the rest of the system and can be used to contrast with other case markers in the system.

Form identity arises when a case marker spreads over several cells. Example: something denoting low control(=affectedness) and **both** place+path would result in homophony of accusative/dative, something which is observed quite often crosslinguistically, including in Urdu.

6.2 The Connection between Modality and Case

6.2.1 Datives vs. Ergatives

* Experiencer subjects generally have *goal* semantics (cf., Verma and Mohanan 1990).

(28) **nadya=ko**   ḍɑr   lɑg-a
     Nadya.F.Sg=Dat fear.M.Sg.Nom be attached-Perf.M.Sg
     'Nadya was afraid.'

- If Urdu already had a dative that was marking experiencer subjects when the *ne* came into the language, then it would make sense to allow a clear modal contrast along the lines that had already existed.

(29) samprati gan-tavyā puri   vārāṇasī   **mayā**
     now   go-Gerund city.Nom.F.Sg Benares.Nom.F.Sg I.Inst
     'now I want to go to the city of Benares'   Sanskrit

- **Note:** This idea is not far-fetched as OIA, MIA and NIA all show semantically based case alternations.

    - Some of them have persisted over the millenia even though the actual case markers themselves were eroded away and replace.

    - A clear example comes from accusative/instrumental alternations on causees.

(30) a. ɑnjʊm=ne   saddɑf=**ko**   masala   cɑkʰ-va-ya
        Anjum.F=Erg Saddaf.F=**Acc** spice.M.Nom taste-**Caus**-Perf.M.Sg
        'Anjum had Saddaf taste the seasoning.'   Urdu

     b. ɑnjʊm=ne   saddɑf=**se**   masala   cɑkʰ-va-ya
        Anjum.F=Erg Saddaf.F=**Inst** spice.M.Nom taste-=bf Caus-Perf.M.Sg
        'Anjum had the seasoning tasted by Saddaf.'   Urdu

   If one wants to say *he causes me to do something, it is by his impulse I act*, there is room for the type [accusative causee], but if it be meant *he gets soemthing done by me, I am only the agent or instrument through which he acts*, the instrumental is on its place. [Speijer (1886:§49)]

(31) a. mantrapūtam   carum   **rājñīm**   prāśayat
        consecrated.Acc   porridge.Acc queen.Sg.**Acc** eat.Caus.Impf.3.Sg
        munisattamaḥ
        best-of-ascetic.Nom
        'the best of ascetics made the queen eat a consecrated porridge.'   Sanskrit
        (Kathaāsaritsāgar 9.10)

     b. tām   **śvabhiḥ**   khādayet   rājā
        Demon.F.Sg.Acc   dog.Pl.**Inst** eat.Caus.Opt.3.Sg king.Nom
        'Her the king should order to be devoured by dogs.'   Sanskrit
        (Mahābhārata 8.371)

6.2.2   The Modal Alternation Revisited

Bashir (1999) notes that the ergative is slowly encroaching on the domain of the dative in the Modal Infinitive construction (data from TV-dramas).

(32) a. **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.'   **Erg→Control**   Urdu

 b. **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.'   **Dat→Goal**   Urdu

Analysis:

- The copula only expresses that there is a relation between a participant (Nadya) and an event (zoo going).

- Modality is triggered because a non-finite event is placed in relationship with a subject.

- In (32b), *Nadya* is marked as a goal and thus "receives" the *zoo going* event.

  – But we know nothing about whether goals like, want or hate what they get, so sentence is ambiguous.
  – Cf. German, English: *I got a cold/present.*, *Ich bekam einen Schnupfen/ein Geschenk.*
  – Since datives can mark subjects who have (reduced) control over an action, the "want" reading is possible.

- In Urdu, the ergative *ne* is used to mark control. So the introduction of the ergative in the Modal Infinitive unambiguously marks *Nadya* as having control in (32). This results in a reading whereby she **wants** the event being placed in relationship to her, in a clear contrast to the dative usage.

7   Summary and Outlook

- **Result:**

  – Case needs to be understood in terms of two dimensions simultaneously: *space* and *control*.
  – The syntactic and semantic role of case needs to be understood in the context of the entire *case system* of the language, in particular in terms of case alternations.
  – Case markers themselves carry structural and semantic information that interacts with the overall clausal analysis—they are not simply "spell outs" of requirements encoded by verbs (or other parts of the sentence).

- **Future:**

  – **Language Change:** Need to do more historical research to establish where case markers come from, how they function and how case systems might change.

References

Andersen, Paul Kent. 1986. Die *ta*-Partizipialkonstruktion bei Aśoka: Passiv oder Ergativ? *Zeitschrift für vergleichende Sprachforschung* 99:75–95.

Anderson, Stephen R. 1977. On Mechanisms by which Languages become Ergative. In *Mechanisms of Language Change*, ed. Charles Li. 317–363. Austin, TX: University of Texas Press.

Bashir, Elena. 1999. The Urdu and Hindi Ergative Postposition *ne*: Its changing role in the Grammar. In *The Yearbook of South Asian Languages and Linguistics*, ed. Rajendra Singh. 11–36. New Delhi: Sage Publications.

Beames, John. 1872–79. *A Comparative Grammar of the Modern Aryan Languages of India*. Delhi: Munshiram Manoharlal. Republished 1966.

Bittner, Maria, and Kenneth Hale. 1996a. Ergativity: Toward A Theory of a Heterogeneous Class. *Linguistic Inquiry* 27(4):531–604.

Bittner, Maria, and Kenneth Hale. 1996b. The Structural Determination of Case and Agreement. *Linguistic Inquiry* 27(1):1–68.

Bobaljik, Jonathan D. 1993. On ergativity and ergative unergatives. In *Papers in Case and Agreement II*, ed. Colin Phillips, 45–88. MIT Working Papers in Linguistics.

Böhtlingk, Otto. 1839–40. *Pâṇinis Grammatik*. Delhi: Motilal Banarsidass. Republished in 1998.

Bresnan, Joan, and Annie Zaenen. 1990. Deep Unaccusativity in LFG. In *Grammatical Relations: A Cross-Theoretical Perspective*, ed. K. Dziwirek, P. Farrell, and E. Mejías-Bikandi. Stanford, CA: CSLI Publications.

Bubenik, Vit. 1989. On the Origins and Elimination of Ergativity in Indo-Aryan Languages. *Canadian Journal of Linguistics* 34:377–398.

Butt, Miriam. 1993. Object specificity and agreement in Hindi/Urdu. In *Papers from the 29th Regional Meeting of the Chicago Linguistic Society*, 80–103.

Butt, Miriam. 2005. *Theories of Case*. Cambridge: Cambridge University Press. In Press.

Butt, Miriam, and Tracy Holloway King. 1991. Semantic Case in Urdu. In *Papers from the 27th Regional Meeting of the Chicago Linguistic Society*, ed. L. Dobrin, L. Nichols, and R.M. Rodriguez, 31–45.

Butt, Miriam, and Tracy Holloway King. 2003. Case Systems: Beyond Structural Distinctions. In *New Perspectives on Case Theory*, ed. Ellen Brandner and Heike Zinsmeister. 53–87. Stanford: CSLI Publications.

Butt, Miriam, and Tracy Holloway King. 2005. The Status of Case. In *Clause Structure in South Asian Languages*, ed. Veneeta Dayal and Anoop Mahajan. Berlin: Kluwer Academic Publishers.

Butt, Miriam, Tracy Holloway King, and Anila Varghese. 2004. A Computational Treatment of Differential Case Marking in Malayalam. In *Proceedings of the International Conference on Natural Language Processing (ICON) 2004*. Hyderabad.

Chatterji, Suniti Kumar. 1926. *The Origin and Development of the Bengali Literature, Volume II*. Calcutta: D. Mehra, Rupa & Co. 1975 edition.

Davison, Alice. 1999. Ergativity: Functional and Formal Issues. In *Functionalism and Formalism in Linguistics, Volume I: General Papers*, ed. Michael Darnell, Edith Moravcsik, Frederick Newmeyer, Michael Noonan, and Kathleen Wheatley. Amsterdam: John Benjamins.

Davison, Alice. 2000. 'Dependent structural case' as a consequence of VP structure. *Texas Linguistics Forum* 42(2).

de Hoop, Helen. 1996. *Case Configuration and Noun Phrase Interpretation*. New York: Garland.

Dixon, R. M. W. 1979. Ergativity. *Language* 55:59–138.

Dixon, R. M. W. 1994. *Ergativity*. Cambridge: Cambridge University Press.

Egede, Paul. 1760. *Grammatica Groenlandico Danico-Latina*. Copenhagen: ULO.

Enç, Mürvet. 1991. The Semantics of Specificity. *Linguistic Inquiry* 22(1):1–25.

Fillmore, Charles J. 1968. The case for case. In *Universals of Linguistic Theory*, ed. Emmon Bach and R.T. Harms. 1–88. New York: Holt, Rinehart and Winston.

Garrett, Andrew. 1990. The Origin of NP Split Ergativity. *Language* 66:261–296.

Glassman, Eugene. 1976. *Spoken Urdu*. Lahore: Nirali Kitaben.

Gonda, Jan. 1951. *Remarks on the Sanskrit Passive*. Leiden: E. J. Brill.

Gruber, Jeffrey S. 1965. *Studies in Lexical Relations*. Doctoral dissertation, MIT.

Harris, Alice C., and Lyle Campbell. 1995. *Historical Syntax in Cross-Linguistic Perspective*. Cambridge: Cambridge University Press.

Hjelmslev, Louis. 1935. *La catégorie des cas*. Aarhus: Universietsforlaget.

Hock, Hans Henrich. 1986. *P*-oriented Constructions in Sanskrit. In *South Asian Languages: Structure, Convergence and Diglossia*, ed. Bh. Krishnamurti. Delhi: Motilal Banarsidass.

Hock, Hans Henrich. 1991. Possessive agents in Sanskrit? In *Studies in Sanskrit Syntax*, ed. Hans Henrich Hock. 55–69. Delhi: Motilal Barnasidass.

Hook, Peter Edwin. 1999. On Identifying the Conceptual Restructuring of the Passive as Ergative in Indo-Aryan. In *Pāṇinian Studies*, ed. Madhav M. Deshpande and Saroja Bhate. 177–199. Ann Arbor, Michigan: Center for South and Southeast Asian Studies, University of Michigan.

Hopper, Paul, and Sandra Thompson. 1980. Transitivity in Grammar and Discourse. *Language* 56:251–299.

Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge: The MIT Press.

Jackendoff, Ray. 1990. *Semantic Structures*. Cambridge: The MIT Press.

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.

Kiparsky, Paul. 1997. The Rise of Positional Licensing. In *Parameters of Morphosyntactic Change*, ed. Ans van Kemenade and Nigel Vincent. 460–494. Cambridge: Cambridge University Press.

Kiparsky, Paul. 1998. Partitive Case and Aspect. In *The Projection of Arguments: Lexical and Compositional Factors*, ed. Miriam Butt and Wilhelm Geuder. 265–307. Stanford: CSLI Publications.

Klaiman, M. H. 1978. Arguments Against a Passive Origin of the IA Ergative. In *The Proceedings of the 14th Meeting of the Chicago Linguistic Society*, 204–216.

Klaiman, M. H. 1980. Bengali Dative Subjects. *Lingua* 51:275–295.

Klaiman, M.H. 1987. Mechanisms of Ergativity in South Asia. *Lingua* 71:61–102.

Klimov, Georgij A. 1974. On the Character of Languages of Active Typology. *Linguistics* 131:11–25.

Mahajan, Anoop. 1990. *The A/A-Bar Distinction and Movement Theory*. Doctoral dissertation, MIT.

Mohanan, Tara. 1994. *Argument Structure in Hindi*. Stanford, CA: CSLI Publications.

Nordlinger, Rachel. 1998. *Constructive Case: Evidence from Australian Languages*. Stanford, CA: CSLI Publications.

Pesetsky, David, and Esther Torrego. 2001. T-to-C Movement: Causes and Consequences. In *Ken Hale: A Life in Language*, ed. Michael Kenstowicz. Cambridge: The MIT Press.

Peterson, John M. 1998. *Grammatical Relations in Pāli and the Emergence of Ergativity in Indo-Aryan*. München: LINCOM Europa.

Pirejko, L. A. 1979. On the Genesis of the Ergative Construction in Indo-Iranian. In *Ergativity: Towards a Theory of Grammatical Relations*, ed. Frans Plank. 481–488. New York, NY: Academic Press.

Plank, Frans (ed.). 1979. *Ergativity: Towards a Theory of Grammatical Relations.* New York, NY: Academic Press.

Plank, Frans. 1995. Research into Syntactic Change III: Ergativity. In *Syntax: An International Handbook of Contemporary Research*, ed. Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld, and Theo Vennenmann. 1184–1199. Berlin: Walter de Gruyter.

Pott, A.F. 1873. Unterschied eines transitiven und intransitiven nominativs. *Beiträge zur vergleichenden Sprachforschung auf dem Gebiete der arischen, celtischen und slawischen Sprachen* 7:71–94.

Pray, Bruce. 1976. From Passive to Ergative in Indo-Aryan. In *The Notion of Subject in South Asian Languages*, 195–211. Madison, WI. University of Wisconsin. South Asian Studies Publication Series 2.

Ramchand, Gillian. 1997. *Aspect and Predication.* Oxford: Oxford University Press.

Ray, Sidney H. 1907. *Reports of the Cambridge Anthropological Expedition to Torres Straits, Volume II: Linguistics.* Cambridge: Cambridge University Press.

Sapir, Edward. 1917. Review of C.C. Uhlenbeck, "Het passieve karakter van het verbum transitivum of van het verbum actionis in talen van Noord-Amerika. *International Journal of American Linguistics* 1:82–86.

Schuchardt, Hugo. 1896. Über den passiven Charakter des Transitivs in den kaukasichen Sprachen. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften (Wien), Philosophisch-historische Classe* 133(1):1–91.

Silverstein, Michael. 1976. Hierarchy of features and ergativity. In *Grammatical Categories in Australian Languages*, ed. R. M. W. Dixon. 112–171. Canberra: Australian Institute of Aboriginal Studies.

Speijer, J. S. 1886. *Sanskrit Syntax.* Delhi: Motilal Banarsidas. Republished 1973.

Svenonius, Peter. 2002. Icelandic Case and the Structure of Events. *Journal of Comparative Germanic Linguistics* 5:197–225.

Trask, R. L. 1979. On the Origins of Ergativity. In *Ergativity: Towards a Theory of Grammatical Relations*, ed. Frans Plank, 385–404. New York, NY. Academic Press.

Tuite, Kevin J., Asif Agha, and Randolph Graczyk. 1985. Agentivity, transitivity, and the question of active typology. In *Papers from the Parasession on Causatives and Agentivity at the 21st Regional Meeting of the Chicago Linguistic Society*, ed. W.H. Eilfort, P.D. Kroeber, and K.L. Peterson, 252–270.

Uhlenbeck, C. Cornelis. 1916. Het passieve karakter van het verbum transitivum of van het verbum actionis in talen von Noord-Amerika. *Verslagen en mededeelingen der Koninklijke Akademie van Wetenschappen. Afd. Letteren* 187–216. 5e reeks.

Verma, M. K., and K.P.Mohanan (ed.). 1990. *Experiencer Subjects in South Asian Languages.* Stanford, CA: CSLI Publications.

Wheelock, Frederic M. 1963. *Latin: An Introductory Course Based on Ancient Authors.* New York: Barnes and Noble.

Wierzbicka, Anna. 1981. Case Marking and Human Nature. *Australian Journal of Linguistics* 1:43–80.

Zaenen, Annie, Joan Maling, and Höskuldur Thráinsson. 1985. Case and grammatical functions: The Icelandic passive. *Natural Language and Linguistic Theory* 3:441–483. Reprinted in Joan Maling and Annie Zaenen (Eds.) *Syntax and Semantics 24: Modern Icelandic Syntax,* 95–164. New York: Academic Press. 1990.

Zakharyin, Boris. 1979. On the Formation of Ergativity in Indo-Aryan and Dardic. *Osmania Papers in Linguistics* 5:50–71.