Dative Subjects

Miriam Butt, Scott Grimm and Tafseer Ahmed University of Konstanz¹

> NWO/DFG Workshop on Optimal Sentence Processing Nijmegen, June 2006

1 Introduction

Relational Scales as in (1) have been identified as important for the realization of arguments.

(1) Relational Scale: Subject > Non-Subject

Animacy Scale: Human > Animate > Inanimate

Definiteness Scale: Pronoun > Proper Name > Definite >

Indefinite Specific > Nonspecific

Within Optimality Theory (OT), these scales are translated into violable constraints (e.g., (Aissen 1999, Aissen 2003)), which can be related directly to constraints on processing/production.

Within the PIONEER project, the constraints CASE, PRECEDENCE and PROMINENCE have been proposed (e.g., (Hendriks et al. 2005, Lamers and de Hoop 2005)).

Most of the work has concentrated on basic agentive (di)transitive constructions, very little has been done for contexts in which dative subjects arise (mainly psych verbs).

Purpose of this talk: examine dative subjects from a historical and processing perspective.

1.1 Dative Subjects

Dative Subjects appear to be a fairly unstable part of a language's grammar (cf. Dative Sickness in Icelandic).

- The dative case, that is, the case of the second object of ditransitive "give" verbs, is canonically a case of objects.
- Yet, dative subjects are found crosslinguistically and are a standard part of South Asian languages (Verma and Mohanan 1990).
 - (2) use ye xıyal baha-ya Pron.3.Sg.Dat this.Nom idea please-Perf.M.Sg 'This idea pleases him.' (Urdu)
- But historically, dative subjects did not always exist in South Asian languages: no evidence for dative subjects in Sanskrit has been adduced.

¹This research is supported by the DFG (Deutsche Forschungsgemeinschaft) via the SFB 471, Project A24.

1.2 Questions

- How do Dative Subjects arise?
- Can we involve processing pressures as part of the explanation?
- More particularly, what are the characteristics of the dative subject constructions?

1.3 Hypothesis

Experiencers can be interpreted both:

- 1. spatially as locatives (goals) on a spatial dimension (see Figure 1, (Butt 2006))
- 2. as *participants* in an action (orientationally) on a control dimension (see Figure 1, (Butt 2006)), in which case they are neither quite a Proto-Agent or a Proto-Patient.

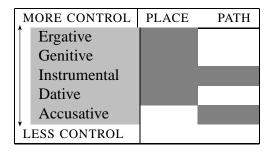


Figure 1: Space and Agency

Both types are compatible with the grammatical role subject (cf. locative inversion, (Bresnan and Kanerva 1989)).

But pure locatives are only good subjects under certain circumstances (i.e., when focused in the Bantu languages).

There are two distinct interpretive possibilites:

- a. Given that stimuli are usually not sentient, but experiencers are, a relational comparison on the control axis preferentially identifies experiencers as more prominent than the stimulus and, therefore, often as subjects.
- b. Given that experiencers *undergo* some experience, they can be interpreted as more patientlike and therefore are preferentially realized as objects.

These different interpretative possibilities result in conflicting preferences: one set of preferences yields dative subjects, the other accusative/dative objects. Situations are also predicted to arise in which both possibilities are synchronically available.

A comparison of data from two closely related South Asian languages, Urdu and Marathi, illustrates the possible patterns.

2 Case Study: Marathi

- Joshi (1993) shows that dative arguments in Marathi can be realized either as subject or as objects in certain constructions:
 - 1. non-volitional transitives (e.g., find (3), like (4));
 - 2. passives of simple ditransitives (e.g., passive of give);
 - 3. passives of causativized transitives (causative ditransitives, e.g., causative of *eat*, *drink*).
- Subject tests in Marathi include: conjunction reduction, prenominal present participial relatives, syntactic control of adjunct clauses (Joshi 1993).
- (See (Keenan 1976) for a first comprehensive discussion of how to establish subject tests for a language).
- We here concentrate on the non-volitional transitives.
 - (Joshi 1993) divides non-volitional transitives into two classes: the *find* vs the *like* class.
 - (Deo 2003) shows that the dative arguments of the *find* class appear to make better subjects than the *like* class (the latter fails the prenominal participal relative test).

'find' class: DAT SUBJ or NOM SUBJ

(3) sumaa-laa ek pustak milaale Suma-Dat one book.Nom got 'Suma got a book.'

(Marathi)

'like' class: DAT SUBJ (?) or NOM SUBJ

(4) sumaa-laa aaitsaa upades patlaa Suma-Dat mother's advice agreed 'Mother's advice became acceptable to Suma.'

(Marathi)

All the verb classes involved are summarized in Table 1.

Non-volitional Transitives **Passive Ditransitives** 'like' class aawadne 'to like' dene 'to give' samadzne 'to realize' paathawne 'to send' umangne 'to understand' bharawne 'to feed' disne 'to notice' wikne 'to sell' 'find' class **Passive Ditransitive Causatives** saapadne 'to find' aikawne 'to hear.Caus' aadhalne 'to come across' 'hungawne 'to smell.Caus' milne 'to get' sikawne 'to learn.Caus' laabhne 'to come to possess' paadzne 'to drink.Caus'

Table 1: Subject/Object Alternation Verb Classes

2.1 Optionality Analysis

(Asudeh 2001) analyzes the Marathi data in terms of *optionality* within OT.

- His constraints are derived from the Subject/Non-Subject and Proto-Agent/Proto-Patient alignment scales.
- We believe his analysis is on the right track, but that the relationship between Proto-Role properties and Subject/Object realization needs to be explored in more semantic detail.

2.2 The Diachronic Dimension

This is partly done by (Deo 2003), who provides a reconstruction of the diachronic path taken by the different types of non-volitional transitives in Marathi.

Deo's Analysis:

- Sanskrit did not license dative subjects, only nominatives.
- There are three different historical sources in Sanskrit for dative subjects in Marathi:
 - 1. Intransitive verbs with an oblique goal NP (locative source) (Class 1);
 - 2. Transitive verbs which followed a nom-acc pattern ("mental/psych" verbs) (Class 2);
 - 3. Transitive verbs with inanimate causers (**Class 3**).

Class 1:

SANSKRIT			OLD MARATHI			MODERN MARATHI		
ROOT	ARG-ST	C.	ROOT	ARG-ST	C.	ROOT	ARG-ST	C.
gam go		N	gam like	<exp, th=""></exp,>	D-N	gam like	$\langle \exp, th \rangle$	D-N
ruc shine		N	ruc like	<exp, th=""></exp,>	D-N	ruc like	$\langle \exp, th \rangle$	D-N
vṛt be		N	vāṭ feel	<exp, th=""></exp,>	D-N	vāṭ feel	<exp, th=""></exp,>	D-N
dṛś be seen		N	dis appear	<exp, th=""></exp,>	D-N	dis appear	$\langle \exp, th \rangle$	D-N
sam-pad occur		N	sāpaḍ find	<exp, th=""></exp,>	D-N	sāpaḍ find	<exp, th=""></exp,>	D-N
bhās shine		N	bhās $appear$	<exp, th=""></exp,>	D-N	bhās appear	$\langle \exp, th \rangle$	D-N
pac mature		N	pac mature		N	pac digest	$\langle \exp, th \rangle$	D-N
			jam settle		N	jam be able	$\langle \exp, th \rangle$	D-N

Class 2:

SANSKRIT			OLD MARATHI			MODERN MARATHI		
ROOT	ARG-ST	C.	ROOT	ARG-ST	C.	ROOT	ARG-ST	C.
smr recall	<exp,th></exp,th>	N-A	smar recall	<exp,th></exp,th>	N-A	smar recall	<exp,th></exp,th>	N-A, D-N
ut-kal expel	<ag,th></ag,th>	N-A	ukal solve	<exp,th></exp,th>	N-A	ukal solve	<exp,th></exp,th>	N-A, D-N
sādh obtain	<go,th></go,th>	N-A	sādh obtain	<go,th></go,th>	N-A	sādh obtain	<go,th></go,th>	N-A, D-N
pra-ir propel	<ag,th></ag,th>	N-A	pel direct	<ag,th></ag,th>	N-A	pel bear	<exp,th></exp,th>	N-A, D-N
samdnyā know	<exp,th></exp,th>	N-A	samaj realize	<exp,th></exp,th>	N-A, D-N	samaj realize	<exp,th></exp,th>	N-A, D-N
labh obtain	<go,th></go,th>	N-A	lābh obtain	<go,th></go,th>	N-A, D-N	lābh obtain	<go,th></go,th>	N-A, D-N
pra-āp obtain	<go,th></go,th>	N-A	pāv obtain	<go,th></go,th>	N-A, D-N	pāv obtain	<go,th></go,th>	N-A, D-N
budh percieve	<exp,th></exp,th>	N-A	bujh realize	<exp,th></exp,th>	N-A, D-N	bujh realize	<exp,th></exp,th>	N-A, D-N
sūc reveal	<exp,th></exp,th>	N-A	suc reveal	<exp,th></exp,th>	N-A, D-N	suc occur	<exp,th></exp,th>	D-N
kal observe	<exp,th></exp,th>	N-A	kal realize	<exp,th></exp,th>	N-A, D-N	kal realize	<exp,th></exp,th>	D-N
bhāvaya think	<exp,th></exp,th>	N-A	bhāv appear	<exp,th></exp,th>	N-A, D-N	bhāv appear	<exp,th></exp,th>	D-N
mānaya think	<exp,th></exp,th>	N-A	mānav suit	<exp,th></exp,th>	N-A, D-N	mānav suit	<exp,th></exp,th>	D-N

Class 3:

SANSKRIT			OLD MARATHI			MODERN MARATHI		
ROOT	ARG-ST	C.	ROOT	ARG-ST	C.	ROOT	ARG-ST	C.
jambh snap at	<ag,th></ag,th>	N-G	jhomb sieze	<ag,pt></ag,pt>	N-A	jhomb hurt	< exp, th>	D-N
dah burn	<ag,pt></ag,pt>	N-A	dāj <i>harass</i>	<ag,pt></ag,pt>	N-A	dāj <i>harass</i>	$< \exp, th>$	D-N
bādh pain	<ag,th></ag,th>	N-A	bādh pain	<ag,pt></ag,pt>	N-A	bādh trouble	< exp, th>	D-N
bhṛj <i>fry</i>	<ag,pt></ag,pt>	N-A	bhāj roast	<ag,pt></ag,pt>	N-A	bhāj feel hot	< exp, th>	D-N
			bheț meet	<ag,th></ag,th>	N-A	bheț find	<exp,th></exp,th>	D-N
			āḍhaļ <i>hit</i>	<ag,th></ag,th>	N-A	āḍhaļ find	<exp,th></exp,th>	D-N

- The Class 1 verbs show a shift from an intransitive verb of location to a transitive experiencer verb. This is mainly due to a shift in the lexical meaning of the verb.
- The Class 2 and Class 3 verbs show a pattern in which all verbs to do with mental activities or feeling are reinterpreted as experiencer verbs, rather than as agentive (albeit with inanimate causers) or locational verbs more and more dative subjects by analogy.

(Urdu)

• Our analysis: This historical development is accompanied by a transitional period in which more than one alignment of thematic roles to grammatical relations is possible.

3 Case Study: Urdu

This section provides an overview of all the available dative-subject constructions in Urdu in order to provide a point of comparison with Marathi.

For the establishment of subject tests in Hindi/Urdu, see (Mohanan 1994).

3.1 Form I: Dative Subjects with Copula (Possessive Structures)

NP-DAT NP-NOM (N-)HONA(BE)

These constructions denote (temporary) states.

- (5) a. muj^he buxar hε
 Pron.1.Sg.Dat fever.M.Nom be.Pres.3.Sg
 - 'I have a fever.' (Urdu)
 - b. mujhe kıtabê pasand hê Pron.1.Sg.Dat book.F.Pl.Nom liking be.Pres.3.Sg 'I like books.'

'I like books.' (Urdu)

c. mujhe (ye) xabar/pata/malum hɛ
Pron.1.Sg.Dat this.Nom news/address/knowledge be.Pres.3.Sg
'I have news/address/knowledge (of this).'

(Urdu)

Note: In (5c), the predicate is actually a N-V complex predicate. Although Urdu freely allows for Adj-V complex predicates as well as N-V predicates, dative subjects only occur with N-V complex predicates.

3.2 Form II: Dative Subjects with Verbs of Motion/Location

NP-DAT NP-NOM (N-)VERB

- (6) a. mujhe γusa a-ya
 Pron.1.Sg.Dat anger.M.Sg.Nom come-Perf.M.Sg
 'I got angry.'
 - b. nadya=ko dar lag-a Nayda=Dat fear stick 'Nadya got scared.' (Urdu)

- (7) a. laṛke=ko kahani yad a-yi
 boy.F.Sg=Dat story.F.Sg.Nom memory come-Perf.F.Sg
 'The boy remembered the story. (lit. the story came to the boy)
 (Urdu)
 - b. laṛke=ko ye kitab accʰ-i lag-i
 boy.F.Sg=Dat this.Nom book.F.Sg.Nom good-F.Sg stick-Perf.F.Sg
 'The boy liked the book.'

 (Urdu)

Note: The examples in (7) again are examples of complex predicates. This time, both N-V and Adj-V formations are allowed with dative subjects.

3.3 Form III: Dative Subjects with Simple Transitive Verbs

NP-DAT..... NP-NOM VERB

- (8) a. mojhe ye bat sujh-i
 Pron.1.Sg.Dat this.Nom matter.F.Sg.Nom strike-Perf.F.Sg
 'This matter struck me.' (Urdu)
 - b. use ye xıyal baha-ya
 Pron.3.Sg.Dat this.Nom idea please-Perf.M.Sg

 'This idea pleases him.' (Urdu)
 - c. vs-e sitara dıkʰ-a
 Pron.1.Sg-Dat star.M.Sg.Nom appear-Perf.M.Sg
 ' He saw a star (a star appeared to him).'

 (Urdu)

3.4 Observations

- In comparison to Marathi, Urdu has very few simple verbs which take a dative subject (the ones listed above, along with *lagna* 'stick' and *parna* 'fall').
- Most dative subjects are found in periphrastic constructions whereby verbs of motion or location (including the verb *hona* 'be') place something in relationship to an experiencer.

3.5 Historical Scenario

- Sanskrit had inflectional case morphology.
- This eroded in Middle Indo-Aryan until there was only a distinction between nominative and oblique left.
- (Beames 1872–79, §56) reconstructs the Urdu *ko* to the <u>locative</u> of Sanskrit *kaaksha* 'armpit, side'
- He cites a host of examples from Old Hindi in which an older form $k\tilde{o}$ is used as a dative.

• Most languages of South Asia have similarly derived datives (e.g., Sindhi *khe*, Bengali *ke* and Oriya *ku* while other languages use l/n words (e.g., Punjabi *nu*, Gujurati *ne*, Marathi *laa* and Nepali *lai*). Beames again derives these from a spatial verb: *lag* 'to stick'.

4 Analysis

4.1 Psych Predicates and Experiencers

4.1.1 The Notion of "Experiencer"

- Experiencers are defined as the sentient argument which is mentally affected.
- They are taken to occur mainly with psychological and perception predicates.
- It has long been established that experiencers are mental/abstract locations of some sort (see (Mohanan and Mohanan 1990) for an analysis of experiencer subjects in Malayalam as *goals*.)
- The idea that experiencers are (mental) locations and that the experiencer of psych-predicates is a locative of some sort has recently been taken up by Landau (2002).
- This accords with what is known of the etymology of the dative (section 3.5).

4.1.2 Classification of Psych-Verbs

The traditional classification of psych-verbs is shown in (9).

- (9) Class I: Nominative experiencer, accusative theme. John loves Mary. Class II: Nominative theme, accusative experiencer. The show amused Bill. Class III: Nominative theme, dative experiencer. The idea appealed to Julie. (Landau 2002), following (Belletti and Rizzi 1988)
 - Dative Subject constructions of section 3 roughly correspond to Class III.
 - Class I can appear as a Nom-Acc construction:
 - (10) hasan nadya=ko cah-t-a hε
 Hassan.M.Sg.Nom Nadya.F.Sg=ACC want-Impf-M.Sg be.Pres.3.Sg
 Hassan loves Mary.' (Urdu)

As well as with the instrumental case on the object:

(11) vo sãpõ=se dar-t-a hε
Pron.3.Sg.Nom snake.M.Pl=Inst fear-Impf.M.Sg be.Pres.3.Sg
'He fears snakes.' (Urdu)

• Class II, when intentional, appear as Erg-Acc structures.

(12) sãp=ne hasan=ko dɑr-a-ya snake.M.Sg=Erg Hassan.M.Sg=Acc fear-Caus-Perf.M.Sg 'The snake frightened Hassan.' (Urdu)

4.1.3 Relationship between Classification and Dative Marking

It is tempting to claim that dative subjects in Hindi/Urdu mark a semantic role "experiencer" and so experiencer subjects are dative subjects.

Problems:

- Not all experiencers are subjects.
 - (13) vs=ne mvj^he yvsa dil-a-ya
 Pron.3.Sg.Obl=Erg Pron.1.Sg.Dat anger.Sg.M.Nom give-Caus-Perf.M.Sg
 'He made me angry.' (Lit. 'He put anger to me.') (Urdu)
 - (14) sãp=ne hasan=ko dar-a-ya snake.M.Sg=Erg Hassan.M.Sg=Acc fear-Caus-Perf.M.Sg 'The snake frightened Hassan.' (Urdu)
- Not all experiencer subjects are datives, e.g., the "experiencer" is marked with the ergative in (15b) and with the nominative in (15c).
 - (15) a. us-e sitara dıkʰ-a
 Pron.3.Sg-Dat star.M.Sg.Nom appear-Perf.M.Sg
 'He saw a star (a star appeared to him).'
 (Urdu)
 - b. vs=ne sitara dekh-a
 Pron.3.Sg=Erg star.M.Sg.Nom see-Perf.M.Sg
 'He looked at a star.' (Urdu)
 - c. mɛ̃ (ye) jan-t-a hũ Pron.1.Sg.Nom this.Sg.Nom know-Impf-M.Sg be.Pres.1.Sg 'I know (this).' (Urdu)
- Begs the question: what makes for a good dative experiencer and why can they be realized as subjects?

Question 1: What do the experiencer uses have in common with the non-experiencer uses?

Question 2: What distinguishes the dative subject uses from the non-subject uses?

4.2 Example: milna

• Take the case of *mulna* 'to touch < to meet, to find, to get'.

• Experiencer uses:

(16) a. mujhe xabar mıl-i
Pron.1.Sg.Dat news.F.Sg.Nom meet-Perf.F.Sg
'I got the news.'

(Urdu)

b. mujhe xuši mıl-i Pron.1.Sg.Dat happiness.F.Sg.Nom meet-Perf.F.Sg 'I got happiness.'

(Urdu)

Non-Experiencer uses (in these cases the dative is an object):

(17) a. darya samandar=ko mil-a river.M.Sg.Nom sea.M.Sg=Dat meet-Perf.M.Sg 'The river met/touched the sea.'

(Urdu)

b. afisər logõ=ko mıl-a officer.M.Sg.Nom people.M=Dat meet-Perf.M.Sg 'The officer met (with) the people.

(Urdu)

The stative use requires a perfect participle.

(18) darya samandar=ko mil-a hua hɛ river.M.Sg.Nom sea.M.Sg=Dat touch-Perf.M.Sg be.Perf.M.Sg be.Pres.3.Sg 'The river meets the sea.' (stative) (Urdu)

Question: What licenses the use of dative subjects as in (17) vs. dative locations, as in (18)?

Answer:

- 1. The possibility of interpreting spatial locations with respect to a participant/control hierarchy (see Figure 1). So locative objects can be interpreted as experiencer subjects.
- 2. The possibility of reinterpreting patients as experiencers. So patient objects can be realized as experiencer subjects.
- 3. The lack of a "better" subject.

4.3 Semantic Characteristics of Dative Subject Constructions

The Urdu and Marathi verb classes identified in sections 3 and 2.2 point towards some semantic generalizations, in essence, that dative subject constructions deviate substantially from the typical transitive paradigm:

• Control

- The subjects are all non-volitional.
- This has been argued to be the underlying characteristic of the constructions (Masica 1991).

• Event Structure

- Psychological predicates have been argued to be achievements (Voorst 1992).
- Class III have been argued to be "statives" (Landau 2002, Arad 1998).
- While these classifications do not seem to be settled, it is clear that classes I and III do
 not fit into the transitive paradigm of dynamic actions.

• Telicity

- Psych/Perception verbs do not "measure out" their affected arguments: *These remarks halfway struck me as really strange.
- Have been argued to be atelic (Voorst 1992, Filip 1996).

• Semantic Entailements

- In terms of Proto-Roles (Dowty 1991), classes I and III only have restrictions on the experiencer: *Sentience* and *Change*.
- One argument is mid-way between agent and patient and the other is without entailments
 - ⇒ Equal opportunity for either to be Subject or Object

Generalization: The semantic characteristics of the constructions in sections 3 and 2.2 are unanimously low in transitivity as per (Hopper and Thompson 1980), i.e., removed from the (causal) transitive schema for which languages have clear rules about what should be subject and what should be object.

Expectation: There should be instances of fluctuation between subject and object—this is borne out by data from both Urdu and Marathi.

4.4 Stimuli, Not Agents

Many of the above conditions on Dative Subject constructions are simultaneously constraints on the agentivity level of the stimuli and the experiencer. This can be modeled via an 'Agentivity Lattice', following previous work (Grimm 2005), shown in Figure 2.

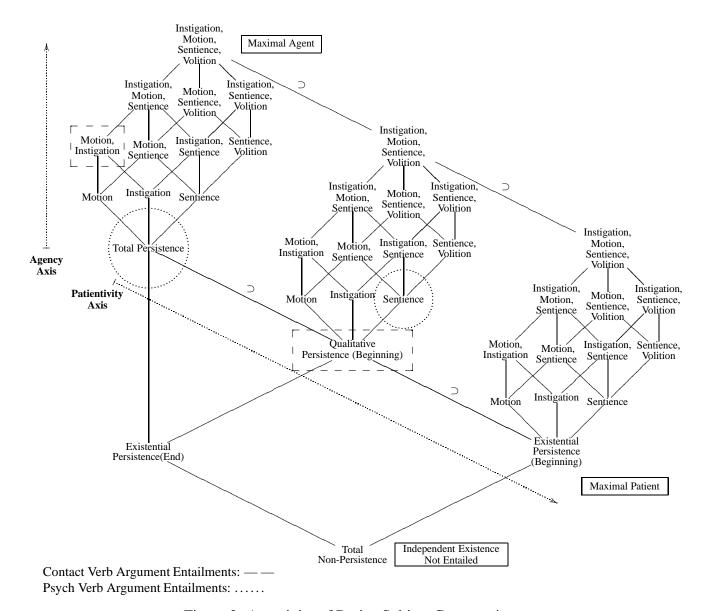


Figure 2: Agentivity of Dative Subject Constructions

- Composed of (Dowty 1991)-like primitives, hierarchically structured: *instigation, motion, sentience, volition* and different degrees of *persistence* w.r.t. the event: *existential persistence* at the beginning and/or end of the event and *qualitative persistence* at the beginning and/or end of the event.
- Source of psych constructions are 'verbs of contact', e.g., "to touch", "to stick".
 - Instigation, motion entailed for subjects ('stative' use requires a different light verb); permits volitionality, but not entailed.
 - Objects may not persist throughout the event unchanged.
 - Less transitive, but similar to standard transitives (to kill).

- "Toucher"/"Sticker" higher node of the lattice (= more agentive) than "touchee"/"stickee".
- When extended to psych interpretations:
 - Experiencers must be sentient and non-volitional.
 - Changed by the event—do not persist qualitatively.
 - Stimulus is abstract—cannot properly instigate or be volitional.
 (Achievement structure in general occludes initiation of event, and thus, instigation.)
 - Neither stimulus nor experiencer dominate one another in terms of the lattice—neither
 is clear-cut winner for agenthood nor for subjecthood (cf. also the Role and Reference Grammar analysis of dative as an elsewhere condition that could be anything,
 (Van Valin and Polla 1997), (Narasimhan 1998)).

4.5 Processing Pressures, Diachronically Speaking

Renewal of Case Marking and Lexical Semantics

- The decay of the Sanskrit case system created a window of opportunity for a reinterpretation of the semantic roles of some non-volitional transitives: patients could also be seen as experiencers.
- In Urdu/Hindi, much of the verbal inventory from Sanskrit was lost.
 - Instead, periphrastic expressions were used.
 - With respect to psych predicates, this meant using verbs of location/motion in an abstract sense (creating mental locations).
- This is consistent with the 'metaphorical extension' phase of grammaticalization ((Bybee et al. 1994), (Sweetser 1991)).
- Contact verbs are extended to have mental locations
- These mental locations were marked by an original locative, which was pressed into service as a dative (and then later as an accusative).

Agreement and Prominence

- The loss of the original tense system meant that the original subject-verb agreement with nominative subjects was also lost.
- Processing pressures cause the more prominent argument to be reanalyzed as a subject, rather than as an object.
- The semantic characteristics of the predicate classes low in transitivity permitted grammatical function fluctuation, analogous to the present-day situation in Marathi.
- Hindi had, and still has, relatively free word order, dictated by topicality.

- With all else equal for determining grammatical function, the unmarked scenario is that *sentient* arguments are more topical than non-sentient arguments.
- Given that mental locations refer to sentient beings, experiencers are more animate (prominent/topical) than the stimuli.
- This inequality relates directly to constraints on processing/production.
- The subject/object alternation stabilizes on dative subjects as a result of processing pressure: sentient arguments should come first.
- An instance of the "emergence of the unmarked".
- Over time, more and more psych verbs and verbal construction conform to the dative subject pattern (see the Marathi data in section 2.2).

With respect to the constraints CASE, PRECEDENCE and PROMINENCE proposed by Hendriks et al. (2005) and Lamers and de Hoop (2005), PROMINENCE emerges as the primary constraint.

CASE and PRECEDENCE are merely reflections of PROMINENCE.

4.6 Addendum—After the Workshop

Results presented by Ina Bornkessel at the Workshop suggest that hearers prefer clues which allow them to recognize transitive sentences as early as possible.

With respect to Dative Subjects, this provides another motivating factor for sentence-initial datives. Consider (19):

• if the nominative argument comes first, the sentence might also simply turn out to be intransitive (e.g., *this idea arose*).

```
(19) a. ye xıyal use baha-ya this.Nom idea Pron.3.Sg.Dat please-Perf.M.Sg 'This idea pleases him.' (Urdu)

b. use ye xıyal baha-ya Pron.3.Sg.Dat this.Nom idea please-Perf.M.Sg 'This idea pleases him.' (Urdu)
```

 On the other hand, when the dative argument is first, the construction is not likely to be intransitive, but transitive (all dative experiencer constructions are transitive), thus providing a welcome clue as to what processing effort may be needed for the upcoming parts of the sentence.

References

Aissen, Judith. 1999. Markedness and Subject Choice in Optimality Theory. *Natural Language and Linguistic Theory* 17:673–711.

Aissen, Judith. 2003. Differential Object Marking: Iconicity vs. Economy. *Natural Language and Linguistic Theory* 21:435–483.

Arad, Maya. 1998. Psych-notes. In *UCL Working Papers in Linguistics*, ed. John Harris and Corinne Iten. University College London.

Asudeh, Ash. 2001. Linking, Optionality and Ambiguity in Marathi. In *Formal and Empirical Issues in Optimality Theoretic Syntax*, ed. Peter Sells. 257–312. Stanford, CA: CSLI Publications.

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

Belletti, A., and L. Rizzi. 1988. Psych Verbs and Θ -theory. *Natural Language and Linguistic Theory* 6:291–352.

Bresnan, Joan, and Jonni Kanerva. 1989. Locative Inversion in Chicheŵa: A Case Study of Factorization in Grammar. *Linguistic Inquiry* 20:1–50.

Butt, Miriam. 2006. The Dative-Ergative Connection. In *Proceedings of the Colloque Syntax-Semantique Paris (CSSP)* 2005, ed. Patricia Cabredo-Hofherr. To Appear.

Bybee, Joan, Revere Perkins, and William Pagliuca. 1994. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World.* Chicago: The University of Chicago Press.

Deo, Ashwini. 2003. Valency Change and Case Marking: Marathi Dative Experiencers. Handout from PIONEER Workshop on 'Case, Valency and Transitivity'.

Dowty, David. 1991. Thematic Proto-roles and Argument Selection. *Language* 67:547–619.

Filip, Hana. 1996. Psychological Predicates and the Syntax-Semantics Interface. In *Conceptual Structure*, *Discourse and Language*, ed. A. E. Goldberg. CSLI.

Grimm, Scott. 2005. The Lattice of Case and Agentivity. Master's thesis, Universiteit van Amsterdam. ILLC Master of Logic Series MoL 2005-9.

Hendriks, Petra, Helen de Hoop, and Monique Lamers. 2005. Asymmetries in language use reveal asymmetries in the grammar. In *Proceedings of the Fifteenth Amsterdam Colloquium*, ed. Paul Dekker and Michael Franke. 113–118. ILLC.

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

Joshi, Smita. 1993. Selection of Grammatical and Logical Functions in Marathi. Doctoral dissertation, Stanford University.

Keenan, Edward. 1976. Towards a Universal Definition of Subject. In *Subject and Topic*, ed. Charles N. Li. 303–333. Academic Press.

Lamers, Monique, and Helen de Hoop. 2005. Animacy Information in Human Sentence Processing: An Incremental Optimization of Interpretation Approach. In *Constraint Solving and Language Processing*, ed. H. Christiansen, P. Rossen Skadhauge, and J. Villadsen. Lecture Notes in Artificial Intelligence, Vol. 3438, 113–118. Springer-Verlag.

Landau, Idan. 2002. The Locative Syntax of Experiencers. ms.

Masica, Colin. 1991. The Indo-Aryan Languages. Cambridge University Press.

Mohanan, K.P., and Tara Mohanan. 1990. Dative Subjects in Malayalam: Semantic Information in Syntax. In *Experiencer Subjects in South Asian Languages*, ed. M. K. Verma and K.P. Mohanan. 43–57. Stanford: CSLI Publications.

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

Narasimhan, Bhuvana. 1998. A Lexical Semantic Explanation for 'Quirky' Case Marking in Hindi. *Studia Linguistica* 52(1):48–76.

Sweetser, Eve. 1991. From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure. Cambridge: Cambridge University Press.

Van Valin, Robert D., and Randy J. La Polla. 1997. *Syntax: Structure, Meaning and Form.* Cambridge: Cambridge University Press.

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

Voorst, Jan Van. 1992. The Aspectual Semantics of Psychological Verbs. *Linguistics and Philosophy* 15:65–92.