

MORPHOLOGICAL CODING AND SYNTACTIC ROLE IN THE GRAMMAR OF PANJABI COMPLEX SENTENCES

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Introduction. In South Asian languages, morphology and agreement patterns are characteristically skewed and do not seem to align very clearly with syntactic roles. Such roles, reflected in traditional grammar notions like subject and object, have been routinely identified by reference to the overt 'surface' coding properties word order, case marking and agreement, and an absence of alignment with these properties in a given language may be enough to throw the very existence of such grammatical relations into doubt. In the wake of Keenan's influential cataloging of subject properties (Keenan, 1976) a number of researchers in the area have brought to bear the full battery of covert behavioral properties to argue that a particular argument of the verb may or may not be a 'subject' or 'object', or indeed whether or not these relations were actually viable categories in a particular language (cf. Verma, ed., 1976 inter alia). This paper will attempt to address some of these issues in another South Asian language, Panjabi, an Indo-Iranian language spoken by around 37 million people in northwestern India and Pakistan.¹

Several English language grammars of Panjabi exist, but they are pedagogically oriented, and limited to main clause syntax (Cummings & Bailey, 1925; Shackle, 1972). The one descriptive grammar (Gill & Gleason, 1963) concentrates almost exclusively on phonology and is somewhat lacking in clarity. Not surprisingly, these traditional grammars have relatively little to offer concerning the questions mentioned above.

My purpose in this paper is thus to try to use certain complex constructions to shed some light on the aforementioned problem of case marking and syntactic relations. In Panjabi and related languages this problem particularly surfaces in attempts to provide a functional description of the so-called 'dative subject construction'. Briefly, since the dative case marker used in this construction also appears with other syntactic roles (primary and secondary objects), and the subject role appears to have other morphological marking, the 'subjecthood' of the dative subject is suspect. I will argue, based on evidence provided in my description of complex constructions, that Panjabi does in fact possess a syntactic role 'subject' revealed in the patterning of some covert behavioral properties, especially the ability to control and undergo deletion in complex clauses, and that the dative-marked 'subject' in general behaves no differently than other subjects with regard to these constructions.

Subject coding in the main clause

Word order. That Panjabi is, like its sister languages, a verb-final language, is both uncontroversial and mundane. To call it an SOV language without further qualification however, is perhaps to beg a nagging theoretical question regarding the status of grammatical relations such as 'subject' in the world's languages. I shall in this section use the terms 'subject' and 'object' in a pre-theoretical sense to refer to the elements thus identified in the traditional grammars. Subject is the single argument of an intransitive verb, and the agent or (lacking an agent) the experiencer argument of a transitive verb; in general the same as the English translation subject. Objects are any other arguments (besides subject) within

the valence of two and three place verbs, generally the patient or goal. Further distinctions will be made below. Whether such relations as subject or object actually do exist as independent syntactic entities in Panjabi and exactly which constructions may be identified with them will be one focus to be developed in the remainder of this paper.

Word order is one of the primary coding devices used to distinguish the subject relation in the languages of the world. While the three English language grammars of Panjabi each identify the neutral order of constituents as SOV, they all mention the considerable flexibility in word order that characterizes spoken Panjabi:

The flexibility of spoken Panjabi is, however, extraordinary and there is hardly any order in which the words of a sentence are not found. The order changes according to emphasis. (Cummings & Bailey, 1925 p.98)

This flexibility is illustrated in the following examples taken from a spoken text*:

- | | | | |
|-----|-------------------------------------|-----|--|
| (1) | janwər ne bandər nu kʰa lea | | |
| | animal ERG monkey DAT eat TAKE(PST) | SOV | |
| | 'The animal ate the monkey' | | |
| (2) | kute nu bili ne fard lea | | |
| | dog DAT cat ERG catch TAKE(PST) | OSV | |
| | 'The cat caught the dog' | | |
| (3) | mukore nu kʰa lea ciri ne | | |
| | insect DAT eat TAKE(PST) bird ERG | OVS | |
| | 'The bird ate the bug' | | |
| (4) | bandər vekʰ rea ya janwər nu | | |
| | monkey see PROG COP animal DAT | SVO | |
| | 'The monkey is watching the animal' | | |

Flexibility is thus such that word order *per se* may not be a wholly reliable indicator of grammatical relations in Panjabi. As we shall see, the other major coding properties, case marking and agreement also show a degree of indeterminacy in this regard.

Case marking and agreement. When they have no surface morphological case marking, nouns are said to be in the *direct* form, and appear as described above. When found in combination with any post-positions, including case markers, the noun and any of its attributes that agree exhibit a special *oblique* stem.² In most nonperfective main clauses, both intransitive and transitive subjects appear in the unmarked *direct* form, and their number and gender are cross referenced on the verbal participle or auxiliary. (The one exception to this, the so-called 'desiderative infinitive', will not concern us in this paper.) For example:

*Glossing Conventions:

ABL	Ablative	CP	Conjunctive Participle	IMPER	Imperative
ALL	Allative	DAT	Dative	INF	Infinitive
COP	Copula	ERG	Ergative	NEG	Negative
IMP	Imperative	FUT	Future	PST	Past
COMP	Complementizer	GEN	Genitive		

- (5) mina ron-di e
mina(f) weep-IMP(sf) COP
'Mina weeps/is weeping'
- (6) ram sotī tor-da e
ram(m) stick break-IMP(sm) COP
'Ram breaks/is breaking a stick'

In tenses formed using the past participle (and with the *desiderative* infinitive), the agreement system in Panjabi follows an *ergative-absolutive* pattern for transitive clauses. (For descriptions of such 'split-ergative' systems see Givón, 1984; Anderson, 1985.) Under these circumstances the verb no longer cross references the subject; agreement is instead with an unmarked object (i.e. an object in the direct form) if one is present. If no such object is present, the verbal elements appear in a 'neutral' form (3rd person masculine singular). The case marking morphology for subjects is also affected: in the ergative pattern 3rd person subjects appear in the oblique form with the postposition *ne*; 1st and 2nd person subjects, however, are unmarked.

- (7) mæ piala vekʰ-ea
1s cup(m) see-PST(sm)
'I(masc.) saw the cup'
- (8) mæ kursi vekʰ-i
1s chair(f) see-PST(sf)
'I(masc.) saw the chair'
- (9) ram-ne sotī tor-i
ram-ERG stick(f) break-PST(sf)
'Ram broke the stick'

Objects may either be *direct*, i.e. unmarked, or they may be *oblique*, i.e. accompanied by a postposition. (Note that 'direct' and 'oblique' here refer to the *form* of the object conditioned by the presence or absence of a postpositional casemarker, and not to its *role*, as does for example 'direct object' in English.) Very often what would be considered intuitively to be the primary object (e.g. the patient in a transitive clause) will surface as an oblique object in Panjabi, marked with the dative casemarker *nu*. Thus the English primary object (English "direct object") might translate either as a direct *or* an oblique object in Panjabi. This variation in case assignment is at least partly responsive to extra-syntactic criteria, both semantic and pragmatic, and may be explained with reference to the following notions:

1. Animacy: *nu* marks all *pronominal* objects, as well as those nominal objects whose referents are animate.
2. Definiteness: according to Shackle (1972), direct objects whose referents are *inanimate* may on occasion appear with *nu*, in which case a distinction in definiteness is often indicated (data from Shackle p.70):

- (10) ó nili kitāb nu mez te rakkʰ-o
that blue book DAT table on put-IMPER
'Put that blue book on the table!'

- (11) koi kitāb mez te rakk^h-o
 some book table on put-IMPER
 'Put some book on the table!'

In addition a third, syntactic, restriction interacts with these two, which will prove central to certain of my arguments to follow. A recipient/benefactive argument which is the third argument of trivalent verbs like 'give' is obligatorily marked with nu, as for example:

- (12) mæ ó-nu kitāb dī-ti
 1s 3s-DAT book give-PST(sf)
 'I gave him a book'

A general rule of the grammar however, restricts dative marking to one core NP per clause, which means that a potential conflict arises when a clause contains both a recipient and an animate patient. This conflict is resolved as follows: in a clause with both a recipient and another animate object, we find that the recipient takes precedence, and the other object will necessarily be unmarked (the same rule restricting double marking operates in clauses with the putative dative subject, see below):

- (13) mæ bæ^he nu vek^h-ea
 1s child DAT see-PST
 'I saw the child'
- (14) mæ me-ri ma nu bæ^ha(*nu) vək^hā-ea
 1s 1s-GEN mother DAT child see(CAUS)-PST
 'I showed the child to my mother'

The Dative Subject Construction. The so-called 'dative subject construction', which has come to be known as an areal trait of South Asian languages (Masica, 1976), is notoriously recalcitrant to classification (cf. Verma ed., 1976). In Panjabi, as in neighboring languages, certain group of predicates take an oblique 'subject' marked with the dative marker nu. These predicates may be nominal or adjectival as well as verbal, and include (but are not limited to) predicates of perception, knowledge, liking and disliking, finding, wanting, hoping, needing, obligation, and certain temporary physical states (hunger, thirst etc.). For example:

- (15) mæ-nu pukk^h lægg riā
 1s-DAT hunger attach PROG
 'I am hungry'
- (16) mæ-nu gobi psand a
 1s-DAT cauliflower liking COP
 'I like cauliflower'

This rather disparate set subsumes several semantic classes of predicate. For some of the predicates involved, the dative marking is obligatory in every context. Others may also take an unmarked subject, but with a telling distinction in meaning. Compare:

- (17) ó-ne ctt^h hī ləbb-i
 3s-ERG letter find-PST(sf)
 'He found the letter' (he was looking for it)

- (18) ó-nu ctt^h hī ləbb-i
 3s-DAT letter find-PST(sf)
 'He found the letter' (he came upon it)
- (19) ó ctt^h hī ləbb-uga
 3s letter find-FUT(sm)
 'He will find the letter'

Many of the predicates whose subject must be in the dative have a counterpart that takes a direct (or ergative) subject. In these pairs the dative predicate generally conveys a sense of non-volitionality on the part of the actor:

- (20) mæ kuri-nu vek^h-ea
 1s girl-DAT see-PST(sm)
 'I saw the girl'
- (21) mæ-nu kuri dis-i
 1s-DAT girl see-PST(sf)
 'I saw the girl (inadvertently)'

It would thus appear to be not so much the semantic class of the predicate which provides a common denominator for the dative marking, but rather the semantic role of the NP as experiencer/recipient, having no active control over the event or situation. Certain predicates are invariably associated with this role (e.g. hunger), others may be as well, according as context demands (e.g. finding) (cf. Sridhar, 1979 for discussion). Unfortunately the situation in Panjabi is not so clear-cut and a number of anomalies can be found (e.g. sneeze, which we are tempted to conceptualize as nonvolitional, takes a non-dative subject, as does weep -- cf. ex [5]). Since a complete semantic analysis of Panjabi predicates has, to my knowledge, not yet been undertaken, this characterization of dative subjects on purely semantic grounds must be taken as merely suggestive.

Agreement in the dative subject construction is with the direct NP, if there is one, as is demonstrated in (21). In the absence of an unmarked NP, the verb appears in the default 3rd person singular masculine form. Once again the restriction on case doubling applies: only one NP may receive the dative marking, and in a situation with two animates, the left-most one (the putative subject) takes precedence:

- (22) mæ-nu kuri (*nu) dis-i
 1s-DAT girl (*DAT) see-PST
 'I saw the girl'

Discussion. As word order, case marking and agreement are the major coding devices used in languages of the world to indicate grammatical relations (cf. Keenan, 1976), it is natural in a given language to ask just what grammatical function, if any, is being accomplished by a particular piece of coding. Word order does provide one commonality for the various elements identified as subjects, in Panjabi, but as we have seen, word order is flexible to the point that it may not be a totally reliable indicator of grammatical relations. It should be evident, in light of the above description, that the case marking morphology in Panjabi cannot be encoding grammatical function either, at least in the surface structure of the clause.³ Those elements identified as subjects in the traditional grammars (as well as by native speaker intuition) far from sharing any consistent morphological marking, actually appear in three quite distinct morphological cases-direct (absolutive/nominative), ergative, and dative. Conversely, with the exception of the ergative, which may perhaps be

'explained' by positing a completely separate case marking system for 3rd person perfective clauses, morphological case does not seem to be isomorphic with any specific core syntactic functions. Both subject and primary object may appear with Ø marking, and subject, object and secondary object (3rd nuclear argument of a trivalent verb) may all receive the dative marker *nu* (albeit subject to a hierarchy of assignment).

The third of these overt 'coding properties', agreement, at first blush seems to stand a better chance of actually coding something syntactic. If we separate the agreement patterns into two systems, ergative and nominative, they dovetail fairly well with our expectations. That is, in tenses formed with the past participle, the verb cross references intransitive subjects and primary objects (both unmarked), thus following a typical ergative pattern (although, as we have seen only 3rd person receives ergative case marking). In other tenses, transitive and intransitive subjects alike govern agreement, thus displaying a nominative pattern. But where are we then to fit the dative-marked 'subject'? In this construction, the verb cross references the object (often the semantic patient), if one is available, but it seems counterintuitive (if not an outright contradiction in terms) to group these constructions with the ergative system. If we place them in the nominative camp, agreement patterns suggest that the unmarked object may be in fact acting more like a subject, in turn casting doubt on the subjecthood of the oblique dative argument. While this is certainly a possibility to be considered, we shall see below that other *behavioral* evidence weighs against such an analysis.

One approach to describing the agreement situation would simply posit a general 'mechanical' rule prohibiting the cross referencing of any case marked NP, and assign control of agreement to unmarked NPs following the hierarchy SU < OBJ. This is possibly the most practical solution, but has the disadvantage of shedding no light whatsoever on the grammatical status of the dative 'subject', and furthermore (unlike Hindi and other related languages) cannot be generalized to 1st and 2nd person subjects in the ergative, which in Panjabi are not case marked and yet are still unable to control agreement.

A number of questions are thus raised by these facts of Panjabi main clause syntax which may perhaps be illuminated with reference to more complex constructions. In the following sections I shall examine aspects of two such areas, verb complementation and adverbial clauses, and I will attempt to address the following issue: Are there any syntactic entities definable by their *behavior* (as opposed to morphological *coding*, which is inconclusive) which in subsuming more than one semantic or thematic role can lay legitimate claim to the status of grammatical relations in Panjabi?

Verb Complementation

The Indicative Complement. Certain complement taking predicates (hereafter *CTPs*) in Panjabi take a completely unreduced or sentence-like complement, in which the core arguments of the subordinated verb appear overtly, and appear in the same relation to the predicate as they do in a declarative main clause. Verb agreement is accomplished in the normal (as per main clause) manner, and the tense/aspect of the subordinate verb is relatively unrestricted (although the semantics of particular CTPs may impose some restrictions, as we shall see below). The indicative complement type is associated with utterance predicates (say, agree), and propositional attitude predicates (believe, think, doubt etc.), which impose no syntactic restrictions.

Main clause:

- (23) ó pá-r-uga
3s read-FUT
'He will read'

Complement clause:

- (24) mæ man-da [ke mohan pá-r-uga]
1s believe-IMP COMP mohan read-FUT
'I believe that Mohan will read'

Of these CTPs, several, especially those expressing the speaker's propositional attitude, are realized with dative subjects. In terms of their ability to take a complement, these dative subject CTPs behave no differently from their non-dative counterparts:

- (25) ó-nu pə-ta ke munda skul jan-da ya
3s-DAT know-PST COMP boy school go-IMP COP
'He knew that the boy went to school'
- (26) mæ-nu amid a ke ó pá-r-uga
1s-DAT hope COP COMP 3s read-FUT
'It is my hope that he will study'

Neither is the dative subject construction restricted from appearing in the indicative complement:

- (27) mæ-nu ləg-da ke
1s-DAT feel-IMP COMP

ó-nu inya kana cəŋga ləg-da
3s-DAT india food good feel-IMP
'I think that he likes Indian food'

- (28) ó-nu pata ya ke mina-nu ó piara ya
3s-DAT know COP COMP mina-DAT 3s like COP
'He knows that Mina likes him' (i.e. someone else)

The Subjunctive Complement. Somewhat more dependent than the indicative complement is another sentence-like complement structure, the *subjunctive* complement, used with some desiderative and manipulative predicates. Although the subjunctive complement also has many of the features of main declarative clauses, its verb must appear in the subjunctive, reflecting dependent time reference vis à vis the main clause verb, as it indicates *potential* events or states.⁴ It is negated with a special negative particle *na* rather than the normal *nei* used for main clauses and indicative complements:

- (29) mæ munci nu kea ke ó tər-e
1s teacher DAT tell(PST) COMP 3s swim-SJV
'I told the teacher that he should swim'

- (30) ó-ri kwaš si ke munda skul ja-we
 3s-GEN desire COP(PST) COMP boy school go-SJV
 'His desire was that the boy go to school'

Some dative subject predicates normally take a subjunctive complement:

- (31) ó-nu cá-ida si ke munda skul na ja-we
 3s-DAT want-IMP COP COMP boy school NEG go-SJV
 'It was his wish that the boy not go to school'

The subjunctive complement typically imputes varying degrees of control, or potential control to the matrix subject, which appears to restrict certain of the dative subject predictions from occurring in the subjunctive:

- (32) *mæ-nu cá-ida ya ke ó-nu bəraf cá-we
 1s-DAT want-IMP COP COMP 3s-DAT ice want-SJV
 'I want him to want ice-cream'
- (33) *mæ ó-nu kea ke ó-nu pùkk^h lægg-e
 1s-DAT 3s-DAT tell(PST) COMP 3s-DAT hunger feel-SJV
 'I told him to feel hunger'

Such a constraint, of course, is readily amenable to a semantic explanation. Most of the dative subject predicates seem to encode an intimate state of experiencing, which cannot normally be the result of manipulation or desire on the part of an outsider. (As we shall show below, dative subject predicates are not even available as complements to verbs of perception, the most intimate is the experience encoded therein.) On the other hand, if there is a plausible possibility of manipulation, dative subject predicates may occur in the subjunctive:

- (34) mæ-nu cá-ida ke ó-nu dukk^h lægg-e
 1s-DAT want-IMP COMP 3s-DAT pain feel-SJV
 'I want that he feel pain'

In the above sentence, it is understood that the speaker probably has the power to inflict the pain. Similarly in the following the speaker has 'set up' the nonvolitional event to follow:

- (35) mæ-nu cá-ida si ke ó-nu ctt^hi dis-i
 1s-DAT want-IMP COP COMP 3s-DAT letter see-PST
 'I wanted that he see the letter' (so I left it there)

Although both the indicative and the subjunctive complements are relatively independent of syntactic control by the main clause, the indicative is somewhat more so than the subjunctive, which is dependent in its time reference. For this reason the subjunctive complement is used with CTPs that encode a greater degree of emotional commitment or potential control (i.e. 'want', 'hope', 'tell' etc.), thus aligning with the now-familiar hierarchy of 'binding' (cf. Givón, 1980, Foley and VanValin, 1984 inter alia). Although we have noted certain semantic constraints on these structures, there is no evidence of any syntactic restriction on dative subject predicates.

Infinitival Complements. Panjabi has two types of reduced complement structures. The one with the widest distribution is formed with the infinitive, the other is formed with the imperfect participle.

The infinitive in Panjabi has many nominal qualities, and by some criteria might be better labelled a 'verbal noun'. It is formed by adding the suffix -n(a) to the verb root, and has both an inflected and an uninflected form. The inflected form cross references unmarked objects in the normal agreement paradigm and has the special form -ne before the ergative case marker ne, thus paralleling the formation of nominal oblique stems.⁵ It may not, however, occur in combination with the dative case marker nu, or with any other postpositions (besides ne).

The uninflected form is simply formed without the final vowel (a schwa is inserted between consonant final stems and the uninflected suffix to maintain proper syllable structure). This form is typically, although not exclusively, found before postpositions, and has been variously called the "prepositional infinitive" (Cummings & Bailey, 1925), the "conditional infinitive" (Gill & Gleason, 1962) and the "oblique infinitive" (Shackle, 1972). To avoid this terminological morass, I will simply refer to it as the uninflected infinitive.⁶ Both the direct infinitive and the oblique infinitive occur as object complements (the ergative form, of course, being restricted to subject position).

Inflected: (direct)		Uninflected:	
ja-na(-ni, etc)	(ergative)	ja-n	'to go'
jit-na	ja-ne	jit-ən	'to win'
par-na	jit-ne	par-ən	'to read'
tur-na	par-ne	tur-ən	'to walk'
	tur-ne		

For a certain group of predicates in Panjabi ('fear', 'try', 'begin', 'learn' etc.), elipsis of complement subjects is required under identity with matrix subjects. Thus the following, where the co-referential subject has not been deleted, is ungrammatical:

- (36) *ram ó tər-ən tū dar-da ya
 ram [3s swim-INF ABL] fear-IMP COP
 'Ram_i is afraid of *him_i swimming'

This provides us with one ready diagnostic for subjecthood, i.e. the ability to control and undergo deletion, which can be applied to the dative subject construction. A number of these 'equi' predicates take their subjects in the dative, hence the dative displays subject-like behavior in controlling deletion:

- (37) mæ-nu par-ən da absōs a
 1s-DAT study-INF GEN regret COP
 'I regret studying'
- (38) mæ-nu par-ən k^hərāb læg-da
 1s-DAT study-INF bad feel-IMP
 'I hate to study'

While the semantics of individual predicates make it somewhat difficult to find felicitous examples, it is also possible for the dative argument to be the victim of deletion. Consider:

- (39) mæ-nu dukk^h læg-da
1s-DAT pain feel-IMP
'I feel pain'
- (40) mæ dukk^h læg-ən tū dar-da
1s pain feel-INF ABL fear-IMP
'I'm afraid to feel pain'
- (41) ô dukk^h læg-ən nu sîk-da
3s pain feel-INF DAT learn-IMP
'He is learning to feel pain' (e.g. after anesthesia)

Conversely, it can be shown that the unmarked argument in the dative subject construction is (despite case marking) behaviorally not a subject by this criterion, since it cannot be deleted in such constructions:

- (42) ô-nu mina dis-i
3s-DAT mina see-PST
'He saw Mina (involuntarily)'
- (43) *Mina-ne ô-nu ∅ dis-ən di košîš kî-ti
3s-ERG [3s-DAT ∅ see-INF GEN] attempt do-PST
'Mina_i tried for him to see her_i' (to be seen by him)

Another small group of predicates taking infinitive complements appears to require deletion of the complement subject under coreference with the primary main clause object. This might be referred to as 'raising to object', thereby implying that these arguments somehow reside in different levels or strata in the sentence. As we shall show, the evidence in Panjabi is not totally supportive of such a view. This type of syntactic situation, where the notional subject of a subordinated predication appears as a core argument of the matrix clause is typical of CTPs which may be placed at the high end of a hierarchy of semantic control or binding (cf. Givón, 1980, Foley and Van Valin, 1984). These are verbs like 'order', 'ask', 'allow', 'stop', 'teach' etc., all of which encode a pronounced degree of control over the agent in the complement:

- (44) mæ munci-nu ter-ən nu kea
1s teacher-DAT swim-INF DAT tell-PASTsm
'I told the teacher to swim'
- (45) mæ ô-nu filəm vek^h-ən de-ta
1s 3s-DAT film see-INF give-PAST
'I allowed him to see the film'

Since control is an essential semantic attribute of these CTPs, we would not expect any of them to take their subjects in the experiential dative case, and indeed none of them do. In addition, dative subject predications of any sort may not appear in the embedded clause. Thus the following are ungrammatical:

- (46) *mæ ô-nu cîtt^hi dis-ən di-ti
1s 3s-DAT letter see give-PSTsf
'I allowed him to see (involuntarily) the letter'

- (47) *mæ ô-nu pûkk^h læg-ən nu kea
1s 3s-DAT hunger feel-INF DAT tell(PST)
'I told him to feel hunger'

The reason for this restriction is transparent, once again following from the semantics of control: the subjective experience encoded by these predicates is simply not amenable to direct manipulation.

A further syntactic constraint on this construction offers some suggestive evidence regarding the 'raising' analysis. A direct object in the complement remains in its normal case relation and does not in any way affect the apparent 'raising' or deletion of the subject argument, as is shown in example (45) above as well as the following:

- (48) mohan ne ô-nu cîtt^hi pej-ən di-ti
mohan ERG 3s-DAT letter send-INF give-PST
'Mohan allowed him to send a letter'

The inclusion of a dative marked recipient within the complement, however, yields ungrammatical results. Compare:

- (49) ô-ne minanu cîtt^hi pej-i
3s-ERG mina-DAT letter send-PST
'He sent Mina a letter'
- (50) *mohan ô-nu mina nu cîtt^hi pej-ən di-ti
mohan 3s-DAT mina DAT letter send-INF give-PST
'Mohan allowed him to send a letter to Mina'

This is not simply a matter of there being too many arguments in the complement, since the insertion of other non-core (i.e. adverbial) participants has no effect:

- (51) mæ ô-nu mina waste cîtt^hi pej-ən di-ti
1s 3s-DAT mina for letter send-INF give-PST
'I allowed him to send a letter for Mina'

Instead, it would appear to result from the general rule restricting dative marking to one NP per clause (see discussion of main clause syntax above). More evidence supporting this analysis comes from sentences where an animate primary object, which in a main clause would normally appear in the dative, is constrained to appear in direct case in a complement to one of these predicates. Compare:

- (52) muṇḍa kuri nu cum-ea
boy girl DAT kiss-PST
'The boy kissed the girl'
- (53) mæ muṇḍe nu kuri (*nu) cum-ən di-ti
1s boy DAT girl kiss-INF give-PST
'I allowed the boy to kiss the girl'

This holds even for definite NPs (definiteness is another factor contributing to dative marking of objects according to Shackleton [1972]):

- (54) mæ munḁe nu ó kuri (*nu) cum-ən di-ti
 1s boy DAT that girl kiss-INF give-PST
 'I allowed the boy to kiss that girl'

Since the restriction on dative marking can be demonstrated to operate at the clause level rather than the sentence level (it does not, for example, hold across clauses in the indicative or subjunctive complements), these facts suggest that the putative 'raised' argument is still in fact a surface argument of the embedded clause.

Summary. In the preceding discussion of the infinitive complement it was noted that certain constraints on coreferential deletion in this construction necessarily make reference to the notion 'subject of'. Those constraints were then used to test the oblique 'subject' of the dative construction, and the results obtained appear to confirm that it is indeed a subject by this behavioral criterion, even though overt coding is ambiguous. It was suggested that these restrictions that do apply to the dative subjects are most likely of a semantic nature, having their bases in notions of 'control' and 'volition' (the typically dative-marked experienter incapable of either). Some observations were forwarded regarding the apparent 'raising to object' required by certain CTPs which suggested that the integration of the embedded clause subject into the case frame of the matrix verb in this construction is less than complete.

The Participial Complement. The imperfect participle in Panjabi is formed by adding the morpheme *-da* to the verb root (*-nda* to vowel-final roots). It is used in formation of the present and past imperfect tenses, and also regularly appears reduplicated in an adverbial function as in:

- (55) ó paj-da paj-da girp-ea
 3s run-IMP run-IMP fall-PST
 'As he was running he fell down'

In addition, it may be used to form complement clauses of verbs of immediate perception, as for example:

- (56) mæ ó-nu paj-da vek^h-ea
 1s 3s-DAT run-IMP see-PST
 'I saw him running'

As this example demonstrates, the notional subject of the participial appears with morphological coding characteristic of the matrix object (appearing in the dative as is normal for definite animate objects). This syntactic situation is thus parallel to that of the manipulative predicates described in the previous section, although here the strong binding appears to result from the implicative nature of the verb rather than any control imposed by the matrix predicate (cf. Givón, 1980 for discussion).

As with the manipulative predicates, and for presumably similar semantic reasons, it is not possible to embed a dative subject predication as a participial complement:

- (57) *mæ ó-nu dukk^h læg-da vek^h-ea
 1s 3s-DAT pain feel see-PST
 'I saw him feeling pain'

Similarly again, the restriction on multiple dative marking applies. Here, however, the inclusion of a dative marked object of any sort (primary or secondary) within the

valence of the complement predication serves to block dative marking on the (raised?) complement subject, and it simply remains unmarked:

- (58) mæ admi (??nu) kutte nu mar-da vek^h-ea
 1s man dog DAT beat-IMP see-PST
 'I saw the man beating the dog'
- (59) mæ admi (*nu) kutte nu hədi de-nda vek^h-ea
 1s man dog DAT bone give-IMP see-PST
 'I saw the man giving the dog a bone'

Once more this would seem to argue against the dative case marking of the complement subject being the result of some kind of 'raising' operation.

In the specific case of the CTP dis 'to see' (involuntarily), the only one of these CTPs whose subject must itself be in the dative, the subject of the complement clause must remain in the direct case:

- (60) mæ-nu ó hīl-da dis-ea
 1s-DAT 3s move-IMP see-PST
 'I saw him moving'

At first glance one might be tempted to suggest that this construction actually offers an argument for raising, since the constraint on dative marking could have applied in the matrix clause. However, because the direct case is shared by intransitive subjects and 'objects' in the dative construction the case marking is ambiguous and thus offers no conclusive arguments either for or against a raising analysis.

On the other hand, a rather striking agreement pattern in this construction does offer slightly more to go on. Whereas we have seen that case marking usually blocks agreement, the participial complement of dis always agrees in gender and number with its subject, even where the only overt mention of its subject is case marked:

- (61) mæ mina-nu bəraf kərid-di vek^h-ea
 1sm Mina-DAT ice buy-IMPsf see-PSTsm
 'I saw Mina(f) buying ice-cream'
- (62) mæ mohan-nu bəraf kərid-da vek^h-ea
 1sm Mohan-DAT ice buy-IMPsm see-PSTsm
 'I saw Mohan(m) buying ice-cream'

These data suggest that we must reject a blanket restriction on the cross referencing of case marked elements in favor of one that is clause-internal. Under such a constraint, control of agreement is possible for a case marked argument, but only if its case marking is not part of the morphological case frame governed by the agreeing verb; in other words the case marking must be imposed on the argument by virtue of its participation in another predication. In this view, the 'raised' argument would actually be a concurrent surface argument of both the matrix and complement clauses.

Summary. A fundamental rule of Panjabi grammar was described early in this paper, which dictates that no more than one argument in each valence pattern may receive the dative marker nu.⁷ In the preceding section it was pointed out that certain variations in case marking within embedded complements, both infinitive and participial, may in fact

result from the application of this rule. In both of these constructions, morphological coding indicative of the strong control of the matrix is imposed on the complement subject. (Thus, as we have mentioned, is fully consonant with cross-linguistic evidence for a 'binding hierarchy' [cf. Givón, 1980]). In both constructions as well, there is evidence that the complement subject has not been removed from or 'raised out of' the valence of the embedded clause. Two types of arguments were used to support this analysis:

- 1) In complements of immediate perception verbs the complement subject retains control of agreement on the embedded participle whether or not it has received coding as a core argument of the matrix.
- 2) In both participial and infinitive complements the additional case marking imposed by the matrix triggers the clause-level constraint on nu marking within the embedded clause.

While the constraint on nu marking can be shown to apply in both these types of constructions, it affects each of them differently. It turns out that this difference correlates nicely with our intuitions regarding the degree of binding imposed by these two types of CTP. One might expect the control imposed by the implicative verbs of perception which take participial complements to be weaker than that imposed by the various manipulative predicates taking the infinitive, and this seems to be borne out in the data. As shown in examples (58) and (59), when either a primary or secondary object carrying the dative marker appears in the participial complement and thus conflicts with the marking imposed by the matrix, it is in each case the case marking governed by the matrix which is dropped.

By contrast, the dative marking imposed by the manipulative predicates is unyielding. In the face of conflict it is the complement object which is forced to back down, animate primary objects appearing unmarked, and secondary objects simply being barred from occurrence (see examples [53] and [50]).

The 'ke' Participle. Conjunctive participles are mentioned by Masica (1976) as a characteristic feature of South Asian languages. Typically in these languages, a series of clauses may be conjoined by reducing all of the verbs in a sentence except the final one to participles, and deleting all of the subjects except one. The state of affairs described in a clause thus subordinated in Panjabi is interpreted as having been completed just prior to that expressed in the final finite clause, thus forming part of a 'chain of events'. It may or may not also carry with it some inference of causation. These sentences may in many cases be felicitously translated using nonfinite participial clauses in English: e.g. 'Having done x, she did y'. In Panjabi the participle in question is formed by adding the indeclinable ending -ke to the verb stem:

- (63) kuriā kaṇa k'hā-ke cel-iā giā
girls meal eat-CP leave-PST GO(PST)
'The girls having eaten dinner, left'
- (64) kār pōnc-ke munde ne apne pio nu lāb-ea
house arrive-CP boy ERG REFL father DAT look:for-PST
'Having returned home, the boy looked for his father'

Notice that in this construction a strong constraint operates requiring the subjects of all clauses so conjoined to be coreferential. Thus in the following sentence, even though common sense inference might point to the recipient of the money as the controller of deletion, such an interpretation would be infelicitous:

- (65) kam kōtām kar-ke
work complete do-CP

ram-ne mohan nu pāse de dī-ta
ram-ERG mohan DAT money give GIVE-PST

'Ø_i *_j having finished the work, Ram_j paid Mohan_j'

This constraint thus offers yet another test for subjecthood. We have seen in sentence (65) above, that the ergative subject can operate as the controller of deletion, and therefore behaves as a subject by this criterion. The test may also be applied to the dative subject both as controller and victim of deletion. In (66), the dative subject is shown to control deletion of another dative subject:

- (66) cīt'hī dis-ke ó-nu yad a-ea
letter see-CP 3s-DAT memory come-PST
'Having seen the letter s/he remembered'

- (67) ó-nu cīt'hī dis-ke yad a-ea
3s-DAT letter see-CP memory come-PST
'Having seen the letter s/he remembered'

While on the surface in sentence (67) it would appear to be the main clause subject that has been deleted (the subject of yad a- 'to remember'), it can be demonstrated via the dative case marking peculiarities of Panjabi that it is in every case the subject of the ke clause that has in fact been deleted, the variation in order being simply due to the fact that the ke clause may either appear fronted or in the normal adverb position between subject and object. For example in the minimal pair below, case marking variation on the overt subject and object responds to the variation in main-clause predicate (vek^h vs. dis), the ke clause in each case remaining constant:

- (68) mæ kāmre āndār var-ke ó-nu vek^h-ea
1s room inside enter-CP 3s-DAT see-PST
'Having entered the room I saw him'

- (69) mæ-nu kāmre āndār var-ke ó dis-ea
1s-DAT room inside enter-CP 3s see-PST
'Having entered the room I saw him (involuntarily)'

Example (69) demonstrates in addition that a dative subject in the main clause may control deletion of a coreferential non-dative subject in the ke clause (the subject of var). Consider also:

- (70) kāpra c'hāk-ke ó-nu sapp dis-ea
Ø cloth lift-CP 3s-DAT snake see-PST
'Lifting the cloth s/he saw a snake'

- (71) ó-nu nuṇ k'hā-ke pūkk^h lāg-i
3s-DAT salt eat-CP hunger feel-PST
'Having eaten salt he felt hungry'

Interestingly, the converse situation, i.e. the deletion of a dative argument under coreference with a non-dative in the main clause, does not occur. It is again possible that this is a semantic restriction, the relevant parameter being once again that of control.

basically, if the action or event in the main clause is perpetrated under the conscious control of the subject, then so, it seems, must the preceding predication in the *-ke* clause. Dative arguments in the dative tend to be *experiencers* rather than agents, they cannot fulfill this requirement:

- (72) *pùkk^h ləg-ke ó-ne kəna k^há-da
hunger feel-CP 3s-ERG food eat-PST
'Feeling hungry he ate dinner'
- (73) *ó cɪt^hi dis-ke paj gea
3s letter see-CP run GO(PST)
'Having seen (involuntarily) the letter, he ran away'

On the other hand, if the subject of the main clause is non-agentive, control is no longer required of the *-ke* clause subject. The conjoining of two dative subject predications thus grammatical. Each of the logically possible combinations is exemplified below. *dek^h* and *yad kɪ-ta* are the agentive versions of 'to see' and 'to remember', while *dis* and *a-ea* are their dative subject counterparts):

- (74) cɪt^hi dek^h-ke ó-ne yad kɪ-ta
letter see-CP 3s-ERG memory do-PST
'Seeing(+ control) the letter s/he remembered(+ control)'
- (75) cɪt^hi dek^h-ke ó-nu yad a-ea
letter see-CP 3s-DAT memory come-PST
'Seeing(+ control) the letter s/he remembered(-control)'
- (76) cɪt^hi dis-ke ó-nu yad a-ea
letter see-CP 3s-DAT memory come-PST
'Seeing(-control) the letter s/he remembered(-control)'
- (77) *cɪt^hi dis-ke ó-ne yad kɪ-ta
letter see-CP 3s-ERG memory do-PST
'Seeing(-control) the letter s/he remembered(+ control)'

Summary. The ability to control and undergo deletion in the *ke* participle proves to be a strong diagnostic for subjecthood in Panjabi, and we have shown that the oblique 'subjects' fact behave syntactically like other subjects in this construction. By contrast, the *direct* argument in the dative construction, which by criteria such as case marking and agreement might be suggested as a possible candidate for the subject relation, fails the test:

- (78) kəmre əndər var-ke mə-nu mina dis-i
room inside enter-CP 1s-DAT mina see-PSTsf
'G_i, j coming into the room I_i saw Mina_j'

sentence (78) *Mina* cannot be interpreted as coreferential to the deleted subject of *kəmre əndər var-ke*.

While certain specific semantic constraints may apply to individual predicates,⁸ the *general* restrictions that are found on dative subjects in this construction appear to result from the dative subject's *experiencer* role.

Conclusion. Panjabi has two morphologically oblique arguments which are perceived by grammarians and native speakers alike to be 'subjects', i.e. the so-called ergative and dative subjects. Pandharipande & Kachru (1977) have argued that ergativity in Hindi, a cognate language with very similar syntax in this area, is merely 'surface', *morphological*, ergativity, since the ergative subject has all of the covert behavioral properties typical of non-ergative subjects. While I have not in this paper examined the ergative subject, there is every indication that this is also the case in Panjabi. I have, however, undertaken to test the *dative* oblique subject against various behavioral properties of subjects in Panjabi, and have reached a very similar conclusion. That is, in behavioral tests such as equi-deletion and coreferential deletion in *ke* participles, the dative does indeed pattern with unmarked and ergative subjects.

This is not to overlook the fact that the dative subject does *not* pass some other traditional tests for subject. For example, it is impossible for the dative subject to be the addressee of an imperative. Compare:

- (79) cɪt^hi na dek^h
letter NEG see(IMPER)
'Don't see the letter!'
- (80) *cɪt^hi na dis
letter NEG see(IMPER)
'Don't see the letter! (involuntarily)'

This restriction, along with those already mentioned, serves only to reiterate an obvious but important observation that was made early on in this paper, that the dative subject is a less than typical subject with respect to its *semantics*. Several times I have had recourse to the semantic notions 'control' and 'volition' in describing the behavior of the dative subject. While a characterization encompassing *all* dative predicates must await further semantic analysis, the typical dative subject predication is a physical or emotional *state*, or a nonvolitional *event*, beyond the control of the actor, *or someone manipulating him/her*. This helps explain restrictions on the dative subject in *manipulative* complements, as well as in the imperative above.

These notions also provide a link between the coding of dative subjects, and uses of the dative to mark those objects which are 'raised' out of a complement clause. Thus as has been shown, the ability to impose and maintain dative marking on the subject of an embedded complement in the face of potential conflict from a dative-marked object in the embedded clause varies with the degree of *control* imposed by the complement taking predicate.

I hope to have demonstrated that the subjecthood of the dative subject enjoys a measure of grammatical as well as psychological reality in Panjabi. Subjecthood, however, at least as it emerges in Keenan (1976), is not a unified property, but rather a conjunction of overt coding, syntactic behavior and semantic and pragmatic attributes (see also Schachter [1976]). Therefore before unconditionally conferring the category label 'subject' in a given case we must ask in what proportion these properties must be present for the categorization to be valid. The jury is still out on this question, but ultimately the answer should emerge from cross-linguistic research. It may indeed turn out to be the case that the subject category is not a useful one. In the meantime, descriptive efforts like the present one continue to provide the evidence which cumulatively will tip the scales to one side or the other.

NOTES

¹All of the data for this paper were collected during a graduate class in linguistic field methods at the University of Oregon in 1985-86. My principal Panjabi consultant was not himself from the Punjab, but was raised in a Panjabi speaking emigrant community in East Africa. I have seen nothing in the various grammars which would lead me to believe that his dialect diverges significantly from that spoken in rural Punjab, whence his parents hail.

²In this description, the terms 'direct' and 'oblique' will be used to refer to the morphological case of nuclear arguments. Arguments appearing with postpositions which are outside the valence of a given predicate will be termed 'adverbial' rather than oblique. (Although all postpositional phrases are formed with the oblique stem described here).

³I am here making a conscious theoretical decision in avoiding an abstract, 'multi-stratal' analysis such as might be pursued by followers of some formal schools such as Relational Grammar.

⁴The subjunctive is also used in some conditional sentences, as well as in forming polite questions, as for example:

ó kədū a-we
3s when come-sv
'When should he come?'

⁵I have found no reference to this special ergative form of the infinitive suffix in any of the grammars I have so far consulted. It is entirely possible that it is idiosyncratic to the dialect of my consultant.

⁶A final liquid or retroflex *ŋ* in the root causes a loss of retroflexion in the the infinitive suffix, which is then realized as an alveolar.

⁷This constraint applies only to nu functioning as a nominal case marker. That use may be distinguished from a complementizing use marking clausal complements with several classes of CTP, e.g. 'tell' or 'forget', which is evident in several examples above. In some cases the nu marking of complements is optional, and conveys a contrastive sense. For example, the participial clause may optionally be marked with nu, which serves to emphasize the act over the agent (the participle then appears in the oblique form):

mæ mohan nu bəɾəf kəɾid-de nu vek^h-ea
1s mohan DAT ice buy-INF DAT see-PST
'I saw Mohan buying ice cream' (not doing something else)

⁸For example, the dative subject predicate ca 'to want', may not control deletion of an agentive subject:

*ó-nu nūn k^ha-ke paŋi cá-ida si
3s-DAT salt eat-CP water want-IMP COP
'Having eaten salt he wanted water'

That this is not a blanket restriction on dative subject predicates is shown in (70) above.

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