

STRUCTURAL CASE, LEXICAL CASE AND THE VERBAL PROJECTION

1. INTRODUCTION

Transitivity is an ambiguous term. It can refer to the argument structure of a predicate, distinguishing monovalent verbs with a single argument, from polyvalent verbs which obligatorily or optionally assign theta roles to more than one argument. It can also refer to morphological and syntactic properties, such as the choice of case and the selection of auxiliary verbs. Ideally, these surface formal markers of transitivity would align with semantic argument structure, and surface properties of the sentence would fall out automatically from the semantic/lexical properties of the predicate. From the statement of the simple X' notion of a VP projection containing objects, in Chomsky (1981), theoretical ideas have evolved about how verbs project a syntactic phrase in which the arguments are assigned theta-roles, have their case licensed and are in the right configuration to account for binding and other relations. The particular issue of syntactic projection of verbs which I will investigate in this paper is whether all (semantically) transitive verbs in Hindi/Urdu have the same kind of syntactic projection of the verb.

In this language, the morphological criteria for transitivity do not all define the same set of sentences, if all the various types of polyvalent verbs are considered. For example, some direct objects and most subjects have nominative case, and can (depending on other conditions in the sentence) trigger verb agreement. Some verb types very clearly define a transitive subject, because it may have ergative case and consistently binds reflexives, but other subjects which bind reflexives must have dative case, and can also behave syntactically as non-subjects. I will propose two kinds of verbal projection, one which is a standard VP shell projection separating the light verb projection including the subject argument from the V and object, and another which is a simple VP, more like an 'unaccusative' projection with an additional argument. The discussion of transitive verbs is wider here than in Mahajan (1990), which first gave an account of syntax and morphology in Hindi. within a Chomskyan grammar based on feature checking.

Mahajan's proposal locates the case and phi features of subject and objects in projections of the head AGR. In this paper I am assuming a version of the Minimalist Program with case and agreement features on TENSE and the light verb *v* within the verbal projection, rather than on separate AGR projections, following Chomsky (1995, chap. 4). I also

adopt the parameterized feature checking theory in Ura (2000), which allows NOM case and phi features to be checked either separately or together in a language, and to differ in the strong/weak property if not checked together. I will assume that subject case is checked with XP before Spellout, while direct object case is checked covertly at LF, with only feature movement. (See Ura 2000: 25–32) for justification of these assumptions). Specifically, nominative direct objects may have their case checked without also checking phi features, but nominative subjects always check phi features.

Polyvalent experiencer verbs in HU select both structural and lexical case but not arbitrarily or introsyncretically. In section 2, I will classify polyvalent psych verbs by which cases they select. The classification yields four classes. I will propose a complex VP shell for the first two classes, of the kind typically proposed for agentive transitive verbs (e.g. Travis 1997, Hale and Keyser 1997, Baker 1997). It requires structural case on the direct object, and also on the subject. For the remaining two classes, I propose a simple VP projection.

Some experiencer verb meanings can be expressed in more than one class. Hence experiencer verbs in Hindi like *deekh-naa* 'see' and *samajh-naa* 'understand' have the phrase structure and case properties of canonically transitive agentive verbs like *tooR-naa* 'break(tr)' and *samajh-aa-naa* 'explain, cause to understand', while others like *maalum hoo-naa* 'know', *dikhaaii dee-naa* 'see, glimpse' and *Dar-naa* 'fear' are similar to unaccusative intransitive verbs, though they are polyvalent. In section 3, I argue that this distinction of VP structures explains the distribution of case on the arguments, and also accounts for a number of syntactic distinctions as well as subtle semantic/aspectual differences (section 4). I extend the description in section 5 to complex predicates. These N-V combinations fall into the same classes as simplex verbs, but with the requirement of checking one more case, so that there is a unified account of the VP structures of both simplex and complex predicates. If it is necessary to propose a vP structure for some experiencer predicates but not others, then VP projections are not fully determined by theta roles, specifically agency.

2. SUMMARY OF VERB CLASSES IN HINDI/URDU

Verbs may be categorized by various formal properties, such as the number of arguments they take, the composition of the verb form (causative or denominal suffixes, complex predicate, etc.), and the case forms of the arguments. The basic classification is ordered by case in (1). Here I will focus on transitive verbs, predicates which take more than one argument¹

¹ This definition is based on the theta grid. Other definitions of transitive are based on structural case; a transitive verb is one which assigns accusative case to an object and nominative case to the subject. In a system like that of Van Valin and LaPolla (1997) and

Most classes have a variety of semantic types of verb, except for Class C, which contains primarily psychological verbs. So I will use psychological verbs in all 4 examples, showing that the differences of classes are fundamentally structural rather than semantic.

These classes may be compared syntactically in sentences (2)–(5) below. Classes A and B are identical for direct object case, but differ in the optionality of ergative marking on the subject. Ditransitives like *dee-aa* 'give' and *bataa-naa* 'tell, inform' belong only to Class A.

(1) *Transitive verb classes, by case (Lexical case in bold)*

	Case of subject	Case of direct object	Case of indirect object
Class A	Obligatorily ergative	Nominative or dative	Dative
Class B	Optionally ergative	Nominative or dative	*
Class C	Dative	Nominative	*
Class D	Nominative	Lexical postposition	*

(2) Class A

bhaaluu-nee apnee daaNtoon-see baccoon-koo
 bear-m.s-Erg self's teeth-from children-m.pl-Dat

Dar-aa-yaa
 fear-Caus-Pf. m.s

'The bear frightened the children with its teeth; caused the children to be afraid of its teeth.'

(3) Class B, optionally ergative subject

a. jab **maiN-nee** maasTar-jii-see sawaal samajh-aa,
 when I-Erg teacher-hon-from question understand-pf
 too maiN-nee usee dubaaraa apnee aap hal
 then I-erg 3s-Dat again self's self solution

kar-kee deekh-aa
 do-prt see-pf

'When I understood the question from the teacher, then I saw it again solved.'
 (Nespital 1997: 1122)

Narasimhan (1998), all other verbs are (syntactically) intransitive, even if the second argument has prepositional case. I use the theta-grid definition of transitivity because in Hindi/Urdu and other Indic languages, syntactic/morphological transitivity is not a clear and consistent cluster of criterial properties (Hock 1985).

- b. maiN yah baat pahlee hii samajh-aa
 I-nom this matter first only understand-pf
 [ki raakeeš apnii zid-par dṛh hai]
 that Rakesh self's obstinacy-on fixed is
 'I understood from the first that Rakesh had become fixed on his
 own obstinacy.' (Ibid.)

(4) Class C

- tabhii usee [eek khaalii rikšaa aa-taa]
 then-only 3s-Dat one empty riksha come-impf
 dikh-aa
 be-seen-pf
 'Just then he saw an empty riksha coming.' (Nespital 1997: 701)

(5) Class D

- baccee bhaaluu-see Dar-tee haiN /
 children-pl-Nom bear-m.s-from fear-Impf-m.pl. be-Pres-3.pl
 Dar ga-yee
 fear go-Pf-impl
 'The children are afraid of the bear/became afraid of the bear.'

Class C requires a dative DP with the experiencer or goal theta role, and I will show below that this DP has subject properties. Only nominative case is possible on the direct object, not structural dative case. Class D requires nominative case on the subject, and the object DP gets a postpositional case. Specific verbs select which of the locative postpositions is required.

2. CASE PROPERTIES IN HINDI/URDU

Case marking in this language has some unexpected properties and peculiarities, shared to some degree by other Indic languages. (Masica 1991). First, all case is realized by postpositions, except for nominative case. Only nominative constituents determine verbal agreement; thus, the presence or absence of ergative case on the subject of (3a, b) affects the PNG features of the verbal complex. Nominative objects determine agreement if the subject is marked with a postposition (3b, 4).

The dative postposition *-koo* has several different properties. It is required and invariant on indirect object (goal) arguments (Class A), and on experiencer/goal subjects (Class C). It is optional on direct objects in Classes A and B. It is preferred when the referent of the direct object DP is animate/human or specific, and anaphoric to discourse. There has been much controversy over whether dative case on direct objects is a separate

'accusative' case. Mohanan uses the term *accusative* for direct objects with optional, pragmatically determined dative marking (87ff). She contrasts structurally determined dative case on direct objects with lexically selected dative case on goals (91–96), showing a difference in behavior in passive sentences. I will adopt Tara Mohanan's conclusion (1993, 1994: 86–101) that nominative case does not have two values in Hindi/Urdu, as nominative on subjects and neutral accusative on direct objects. If nominative were actually accusative case on direct objects, nominative in HU would be an instance of syncretism, the same form having different values in a paradigm of case distinctions, as in Sanskrit or Russian. She concludes that direct objects without postpositions are marked with nominative case, not some alternate form of accusative case.²

The major distinction I want to make here is between structurally determined case and lexical, theta-related case. In (6), the structural cases are summarized for Hindi/Urdu.

- (6) *Structural case (theta independent, assigned by structural position)*
- a. Nominative (subject, direct object)
 - b. Ergative (subject, Classes A and B)
 - c. Genitive (NP and non-finite clauses)
 - d. Dative direct objects
- (7) *Lexical case (theta-related, lexically selected) [bold in (1)–(5)]*
- a. Dative indirect object (Class A), subject (Class C)³
 - b. Genitive (possession; lexically selected)⁴

² I will not use the term *accusative*, but I will retain Mohanan's distinction between direct and indirect object dative case. I will treat direct object dative case as a structural case, and indirect object dative case as a theta-related lexical case. See Mohanan (1993) for an interesting but complex pragmatic argument for unmarked objects as nominative rather than accusative

³ Some verbs may require structural or lexical case, depending on the meaning of the verb. The verb *hoo-naa* 'be, become' in the equational sense assigns no lexical case. Both the subject and predicate NP have only nominative case (ia). The same verb selects the dative *-koo* for the variety of possession of abstract properties (ib), distinct from alienable or inalienable possession of concrete entities:

- (i) a. wo/*usee [acchaa chaatr] *koo hai
 3s-Nom/3sdat good student *Dat be-Pres-3s
 'He is a good student'.
- b. usee [rupayeeee kii zaruurat]*koo hai
 3s-Dat money-Gen need-Nom/*Dat be-Pres-3s
 'He/she has a need of money, needs money.' (Porizka 1963: 277)

⁴ This use of genitive occurs in the expression of inalienable possession:

Class A and B verbs have two occurrences of structural case, on both the subject and direct object. Classes C and D require a lexical case on either the subject (C) or the object (D).

2.1. *Ergative Case as Structural Case*

One of the most controversial assumptions in this paper is that ergative case is a structural case. On this point, I concur with Ura (2000) and disagree with Mohanan (1994: 57) and Butt (1995), who treat ergative case as a semantically determined case associated with the agent theta role. Lexical case has three properties: (i) it is theta related, (ii) it is not checked by a functional projection such as AGR or TENSE, and (iii) it is selected by specific lexical items. There is some lexical selection in that ergative case is possible for only some transitive verbs, Classes A and B. There are also lexical *exceptions*; a few class A verbs which allow dative direct objects may not have ergative subjects (Davison 1999a). I conclude that ergative case is not theta related (Davison 1999b, 2001b), even though many ergative transitive subjects indeed do have the agent theta role.⁵

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- (i) us-kee doo beeTee haiN
 3s-gen-m.pl. two son-m.pl be-pres-3pl
 'He/she has two sons.'

It is also lexically selected by the verb *sooc-naa* 'think of':

- (ii) woo [PRO jaa-nee]-kii sooc rahaa hai
 3s-m go-inf gen-f.s think prog-m.s be-pres-3s
 'He is thinking of [PRO going].'

⁵ Classes A and B contain many perception verbs which have ergative subjects but no obligatory assumption of volition or intention. Some are monomorphemic simplex verbs like *deekh-naa*, which can mean 'see' or the agentive 'look', others are complex predicates formed with like *khaa-naa* 'eat' (Bailey 1963) and *kar-naa* 'do', which require ergative subjects. Combinations like *afsoos kar-naa* 'regret' are used without agentive meaning. See Hook 1979 and especially Bahl (1974), which contains naturally occurring examples from a number of sources. Below are the *khaa-naa* complex predicates, which assign a patient or experiencer role to the ergative subject:

beed khaa-naa 'get caned'
 beeNt khaa-naa 'get beaten with bamboo'
 dhookhaa khaa-naa 'be deceived'
 Gam khaa-naa 'to experience, endure sorrow'
 goolii khaa-naa 'get hit by a bullet'
 Gootaa khaa-naa 'get a ducking, nearly drown'
 juutii khaa-naa 'get hit with a shoe'
 kooRaa khaa-naa 'get whipped'

maar khaa-naa 'undergo a beating'
 maat khaa-naa 'get defeated'
 meel khaa-naa 'to be in agreement'
 qasam khaa-naa 'eat a vow, take a vow'
 Sikast khaa-naa 'be defeated'
 thappaR khaa-naa 'get slapped'
 Thookar khaa-naa 'stumble'

2.2. *Counterfactual Clauses*

Here I offer an argument that ergative case is checked by functional projections, TENSE and ASPECT, while dative case is not. Ergative case is licensed only by finite TENSE and perfective ASPECT.⁶ Counterfactual or irrealis conditional clauses require imperfective aspect, and therefore rule out the ergative subject case. Compare the ergative case required with a finite perfective sentence (8a) with the imperfective conditional clause in (8b):

In contrast, a dative experiencer (9a, b) is not affected by the perfective/imperfective alternation.

- (8) a. tum-nee/*0 mujhee nahiiN bataa-yaa.
 you-Erg/*Nom I-Dat not tell-Pf
 ki tum-koo meeraa kah-naa buraa lag-aa
 that you-Dat my say-Inf bad strike-Pf
 ‘You did not tell me that what I was saying annoyed you.’
- b. tum (*nee) mujhee bataa-**tee** ki tum-koo meeraa
 you-Nom/*Erg I-Dat tell-Impf that you-Dat my
 kah-naa buraa lag-aa, too maiN kahnaa band kar
 say-Inf bad strike-Pf then I-Nom say-Inf shut do
 dee-tii
 give-Impf
 ‘If you had told me that what I was saying annoyed you, then I would have shut up.’
- (9) a. agar **usee** meerii baat burii lag-**ii** **hai**, too woo
 if 3s-Dat my matter bad strike-Pf is then 3s
 mujhee bataa -ee- gii
 I-dat tell -Fut- 3fs
 ‘If she was bothered at what I said, then she will tell me.’
- b. (agar) **usee** meerii baat burii lag-**tii**, too woo
 if 3s-Dat my matter bad strike-Impf then 3s
 mujhee bataa-**tii**
 I-Dat tell-Impf
 ‘If she had been bothered at what I said, then she would have told me.’

⁶ Finite tense and perfective aspect in the sentence are the basic conditions. For a summary of lexical exceptions and other conditions which block ergative case, see Davison (1999a, 2001a).

The functional projections in (9) may have perfective or imperfective aspect without affecting the licensing of dative case, but ergative case is sensitive to the presence of perfective aspect (8a) or its absence (8b).

Ergative case meets two out of the three criteria for being a structural case. It is not linked to a specific theta role, and it is licensed by functional projections TENSE and ASPECT. But it appears to be lexically selected, in that some transitive verbs may have ergative case, and others may not. I suggest that we have looked at this property from the wrong perspective. The occurrence of ergative case is defined by two factors: (1) the presence of two functional projections in some sentences (with Class A and B verbs) and (2) the effect of dative and other lexical cases, which are linked to theta roles. A dative subject is clearly non-agentive, while an ergative subject can be agentive or not.

(10)	<i>Subject case</i>	Dative	Ergative	Nominative
	theta roles	non agentive	non-agentive	non-agentive
		*	agentive	agentive

Since dative-marked subjects can have only a non-agentive interpretation, agentive subjects must necessarily be ergative or nominative. But ergative/nominative subjects can equally well have a non-agentive interpretation – see note 5. It is mistaken, in my view, to see the dative-ergative distinction as a symmetric agentive/non agentive distinction. The asymmetric relation shown in (10) follows from the fact that only dative is a lexical case associated with the experiencer theta role, while ergative is a structural case sensitive to the functional projections with which it is an local relation. The lexical selection of ergative case by classes A and B will be explained as a consequence of verbal projection.

2.3. *The VP Projection*

In this section I propose VP structures for the four classes of verbs I have discussed above. I will assume that subjects are merged within a verbal projection and receive their theta roles at the time of merger (Chomsky 1995, Ura 2000). Structural subject case is checked by the head of a functional projection, necessitating movement. Lexical case is checked in situ at the time of theta discharge.⁷ Classes C and D have single VP projections, with

⁷ Ura (2000: 206–208) proposes this option as a parametric value for structural as well as lexical case. Here I will assume it is only a property of lexical case.

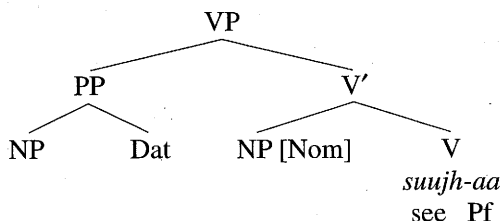
a lexical case required on either the subject (Class C) (11) or the object (Class D) (12):⁸

- (11) mujhee eek upay suujh -aa⁹
I-Dat one means-ms-Nom see -Pf-m.s.

'A solution came to my mind, I saw a solution.'

(Bahri 1992: 670)

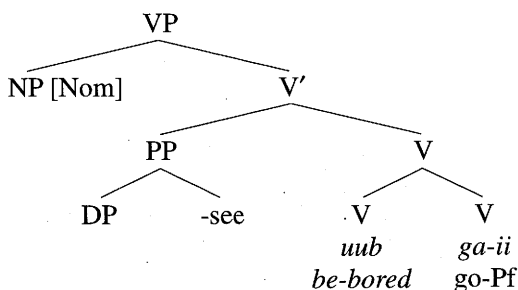
- (12) Class C



- (13) maiN is kitaab-see uub ga-ii
I-Nom-f.s. this book-from be-bored go-Pf-f.s.

'I got bored with this book.'

- (14) Class D



These verb projections look in some ways like the intransitive 'unaccusative' projection with the addition of another argument marked with a lexical case, the dative *-koo* in (11) or the locative *-see* 'from' in (13).¹⁰ The subject

⁸ The tree structures below will all be represented with heads in final position, reflecting surface position. Here I will not take a position on the interesting issues of asymmetric c-command, linear ordering and a universal SVO base raised by Kayne (1994). The question of how head final structures are derived by object movement so far does not have a satisfactory answer (see note 12). Below I return to the question of how direct object case is checked.

⁹ The main verb is compounded with an intransitive 'vector verb' (Hook 1974) which indicates completion, as well as other lexical content. For example the vector verb *uTh-naa* 'rise' conveys that the event was sudden or in response to some other event. What I have to say in this section about VP and light vP projections is independent of the presence or absence of vector verbs. They are included in the examples to provide idiomatic, natural sounding sentences. See Hook (1974) for the contexts in which vector verbs are excluded.

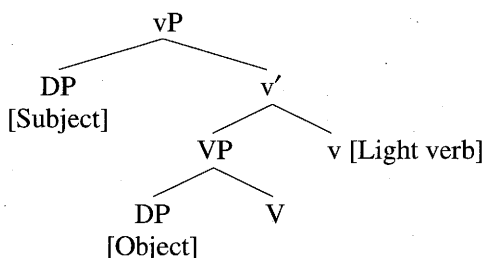
¹⁰ Belletti and Rizzi (1987) refer to their psychological verbs as 'transitive unaccusatives'.

with a nominative case feature in (14) is overtly raised to Spec of TP to check the [Nom] case feature as well as the EPP subject requirement and agreement features. The Dative PP in (12) may also be attracted to the Spec of TP for the EPP, though as a lexical case, it is checked at the time of theta discharge within VP. More options for well-formed sentences exist, to be discussed below.

I will represent Classes A/B with a complex VP shell, with multiple verbal projections. The subject is introduced as the Spec of a 'light' verb, which checks the object case and assigns a subject theta role (Chomsky 1995, Ura 2000):¹¹

- (15) maiN-nee is-laRkee-koo deekh li-yaa
 I-Erg this boy-Dat see take-Pf-ms
 'I saw this boy.'

- (16) Class A¹²



The possibility of dative case on direct objects (if human/animate or specific) is a property which distinguishes Classes A and B from Classes C and D. On this view, the light verb component is responsible for checking structural dative case.¹³

¹¹ I am assuming that indirect object case in Hindi/Urdu is a lexical case, associated with the goal theta role, and not subject to 'absorption' in passive sentences, even optionally. As a consequence, ditransitive verbs in my proposal will be placed as the other argument of VP very much like the dative NP in (13). The presence of IO does not add an additional head to the VP projection. Ditransitive verbs in SOV languages have the surface order Subj-Adjunct-IO-DO-V, which, as Jayaseelan 1995 points out, is not exactly the mirror image of the Larsonian VP shell which yields the order in English of S-V-DO-V-IO V-Adjunct. (Larson 1988). The correct S-IO-DO-V order can be derived by movement. The problem is that Larson (1988) and Speas (1990) assume that the IO is most closely associated with the lexical V in the basic projection of the V, while the DO is next to V in SOV languages. Speas (1990) proposes an alternative surface projection from a related Lexical-Conceptual structure, which places the IO with structural case above the DO. Recent work places the IO in a separate functional projection (e.g. Ura 2000: 29).

¹² The vector verb *li-yaa* 'take' is not represented in this structural diagram.

¹³ I agree with Travis (1997) in assuming a light *v* head which both assigns the subject theta role (including the experiencer role), and also checks direct object structural case. These assumptions have been developed in Ura (2000), which has an empirically well-grounded and detailed concrete account of the options for object case checking in a version of the

Class B verbs allow both the options for subject case shown in (3a, b) and (17):

(17) Class B:

- a. maiN-**nee** is laRkee-koo pahcaan **li-yaa**
 I-Erg this boy-Dat recognize take-Pf-ms

(hai)

be Pres-3s

'I recognized/have recognized this boy.' [Class B verb]

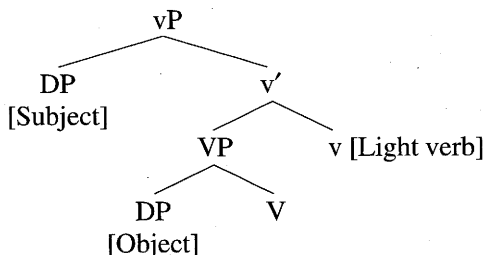
- b. maiN (***nee**) is laRkee-koo pahcaan **ga-ii**
 I-Nom (***Erg**) this boy-Dat recognize go-Pf-fs

(huuN)

be-Pres-1s

'I recognized/have recognized this boy.' [Class B verb]

(18) Class B



Since Class B verbs also assign dative case as an option on direct objects, the verbal projection also contains a light verb. The ability to assign ergative case is also a property of a projection with this light verb. Class B verbs have the option of not assigning ergative case, suggesting that the contents of the light verb in this class are different from what is found in Class A (see note 13). I defer the discussion of this difference to section 4.

3. SYNTACTIC CONSEQUENCES

The principal difference between classes A,B and C,D in this proposal lies in the shape of the verbal projection, whether it consists of just one V head (C,D) or multiple heads (A,B) including a light verb. Dative structural case on the direct object is checked (covertly, at LF) by a case feature

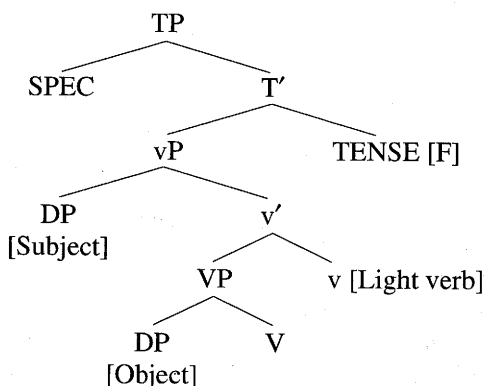
Minimalist Program. In addition, Ura proposes a small number of parametric variations on the assumptions about the mechanisms of feature checking and the nature of nominative case, phi features and the EPP [D] feature which can derive constructions with differing properties in a wide range of languages and language types. See Davison (2001c) for discussion of Ura's concepts applied with some modification to Hindi/Urdu ergative subjects.

on the light verb. The light verb is a part of the verbal projection for only Class A and B verbs. In contrast, the internal argument of Class C verbs must be nominative, and the object of Class D verbs must be marked with a lexical locative case. This contrast in the distribution of structural case is one of the motivations for proposing a complex V shell for Classes A and B, and a single VP projection for classes C and D.

The structural difference between these two verbal projection has the consequence that the subjects of class A and B verbs must have their case features checked by functional projections TENSE or ASPECT, requiring overt movement to the SPEC of TENSE or ASPECT. These heads form different syntactic domains, in effect forcing the objects to remain lower in the clause than the subject, and in a different structural layer of the clause.

The objects check their case within vP and are not to be able to cross the subject in moving to SPEC/TP. The subject DP in SPEC/vP is closer to the head TENSE which has the relevant structural case feature. If the structurally cased direct object did cross the subject, which also has a structural case feature which could be checked by TENSE, this move would violate Equidistance (as defined in Chomsky 1995: 355–356, Ura 2000: 31–32).

(19) Class A



As Classes A/B include many psychological verbs, the projection of the light verb *v* must be able to assign the experiencer as well as the agentive theta roles, contrary to what is proposed in Speas (1990: 93), Hale and Keyser (1993: 96) and Baker (1997: 109ff). I am assuming that involuntary perceptions are not necessarily internally or intrinsically caused, and that there is a distinction between experiencers and agents.

3.1. *Optional and obligatory subject status*

The effect of the Equidistance condition is that the external arguments of class A and B verbs can only be subjects. Reflexives in Hindi/Urdu are

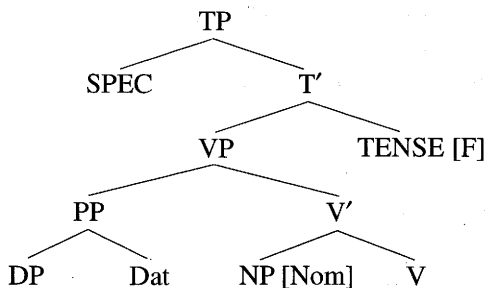
subject oriented.¹⁴ If a reflexive is possible, its antecedent must be a subject. If a pronoun is possible, its antecedent may not be a local subject. This generalization is true of Class A and B verbs (20) but it fails, however, for Class C verbs (21). Anju Saxena (1985), noted that a dative experiencer can bind a pronoun (locally), as well as a reflexive (21). These class C predicates have Class A counterparts whose subjects are coindexed only with a reflexive, not a pronoun (22):

- (20) *baccee_i-nee* [*duusree* *baccee_j-see*] *apnee_{i/j}/us_{*i/j/k}-kee*
 child-Erg second child-from self's/3s-Gen
khilaunee chiin li-ee
 toys snatch take-Pf
 '[One child_i] snatched snatched from [another child_j]
 self's_{i/j}/his_{*i/j/k} toys].' (Davison 2001b: 51)
- (21) a. *moohan_i-koo* *apnee_{i/j}/us-kee_{i/j}* *maaN-baap-kii*
 Mohan-m.sg-Dat self's/3s -Gen mother-father-Gen
yaad aa-ii
 memory-f come-Pf-f
 'Mohani remembered his_{i/j} parents.'
- b. *maalik_i-koo* *apnaa_{i/j}/us_{i/j}-kaa* *kuttaa bhaa-taa hai/pasand*
 master-Dat self's/3s-Gen dog-Nom be-pleasing/Impf
aa-taa hai is
 is/liked come-Impf
 'The master likes self's dog.' (Yamabe 1990)
- (22) a. *moohani-nee* *apnee_{i/j}/*us-kee_i* *maaN-baap-kii*
 Mohan-m.sg-Erg self's/3s-Gen mother-father-Gen
yaad kii
 memory-f do-Pf-fsg
 'Mohani remembered self's_{i/j}/his_{i/j} parents.'
- b. *maalik_i* *apnaa_{i/j}/us_{*i/j/k}-kaa* *kuttaa pasand kar-taa hai*
 master-Nom self's /3s-Gen dog liking do-Impf is
 'The master likes self's_{i/j}/his_{i/j/k} dog.'

By the criterion above, if a DP binds a pronoun, it is not a subject. So the dative-marked experiencers in (20) have dual status. They are subjects because they bind reflexives, but not subjects because they bind pronouns. This contradiction follows from (23):

¹⁴ For discussion of some exceptions, see Mahajan (1990), Davison (2001b).

(23) Class C



Both the Dative experiencer and the nominative theme are equidistant from TENSE with its case, agreement and EPP features. If the Dative PP moves to SPEC/TENSE, it checks the EPP feature, leaving Nom case and the phi features to be checked covertly by the nominative object. This option derives the version in which a reflexive is bound by the dative PP (20). Another option is for the dative PP to remain in place within VP (where its case has already been checked at Merge). The feature complex on TENSE is checked by the nominative NP. In that instance, the dative argument may bind a pronoun.

3.2. *Evading Syntactic Restrictions by Inverting Experiencer and Theme*

Some additional evidence for this kind of 'inversion' comes from two types of sentence with class C verbs. Both types obey language-specific restrictions: (i) reflexive arguments may not be nominative, and (ii) obligatorily controlled dative experiencers may not be dative.¹⁵

The restriction on nominative reflexives is shown in (24a), which is ungrammatical:

- (24) a. *raami-koo sirf apnaa aap_{i/*j} acchaa lag-taa hai
 Ram-Dat only self's self-Nom good strike-Impf is
 'Ram likes only himself.' (Yamabe 1990: 117)
- b. raami sirf apnee (aap)_{i/*j}-koo acchaa lag-taa hai
 Ram-Nom only self's self-Dat like-Impf is
 'Ram likes only himself.' (Ibid.)

¹⁵ These restrictions are common but not universal. Kashmiri allows, in fact requires, nominative reflexives in contexts where the reflexive is direct object and cannot be marked dative (Wali and Koul 1997: 124, 155). Many other languages have the restriction on controlled dative subjects, but languages like Telugu and Oriya allow controlled dative subjects in conjunctive participle clauses (Lalitha Murthy 1994).

- c. [kumaar-kaa apnee aap-koo/khud-koo acchaa lag-naa]
 Kumar-Gen self's-self-Dat/self-Dat good strike-Inf
 swabhaavik hai
 natural is
 'It is natural [for Kumar to like himself].' (Ibid.)

The sentence can be made grammatical (24b, c) by reversing the status of the experiencer and theme. The theme is nominative and also the subject in Spec of TP, and as a consequence it binds the reflexive experiencer in VP. (25) shows the control restriction:

- (25) a. un loogooN-koo yah laRkii bhaa-tii hai
 these people-Dat this girl-Nom please-Impf is
 'These people like this girl.'
- b. *vee loog [PRO yah laRkii bhaa-naa] nahiiN
 3mpl-Nom people this girl please-inf not
 caah-tee haiN
 want-Impf are
 'These people don't want [this girl to be pleasing to PRO (dat)].'
- c.(?)yah laRkii [PRO un loogooN-koo bhaa-naa] nahiiN
 this girl-Nom those people-Dat please-Inf not
 caah-tii hai
 want-Impf is
 'This girl doesn't want [PRO to be pleasing to those people].'

The controlled PRO in the ungrammatical (25b) is has lexical dative case, because of the embedded verb. It is also a subject of the embedded clause, because the dative experiencer satisfies the EPP feature of the embedded TENSE. Reversing the grammatical relations of experiencer and theme yields the sentence (25c) with the theme as the controlled PRO. This sentence is not grammatical for all speakers, but for those who accept it, a possible derivation of the sentence allows the theme to check the EPP feature of the embedded TENSE, and to take on the appropriate case for PRO.¹⁶ The sentence improves if a class C verb is substituted (26c), which

¹⁶ Class D verbs have the same VP projection as Class C verbs, and in principle, the (nominative) subject and lexically cased object are equidistant from TENSE. But reversal of grammatical function is apparently not possible. Raising the lexically cased object to TENSE (for the EPP) does not create any more control properties, since lexically cased DPs are ungrammatical in obligatorily controlled contexts. If in Spec TP, it would bind the

has a nominative theme as controlled PRO. Role reversal is not possible if the embedded clause verb is of class A:

- (26) a. *baccaa* [PRO *billii* *deekh-naa*] *caah-taa*
 child-ms-Nom cat-fs-Nom see-Inf want-Impf-ms
hai
is

'The child wants [PRO to see the cat].'

- b. **billii* [*baccee-kaa* PRO *deekh-naa*] *nahiiN*
 cat-fs-Nom child-Gen see-Inf not
caah-tii hai
want-Impf-fs is

'The cat doesn't want [the child to see PRO].'

- c. *billii* [*baccee-koo* PRO *diikh-naa/dikhaaii dee-naa*]
 cat-fs-Nom child-ms-Nom be-visible-Inf/be-seen-Inf
nahiiN want-Impf-fs is
not caah-tii hai

'The cat doesn't want [the child to see PRO].' (Possible as 'the cat doesn't want [PRO to see the child]'.)

3.3. Subject-oriented Vector Verbs

Main verbs may be compounded with 'vector' verbs (Hook 1974, Butt 1995), adding telicity (Singh 1999) and some aspectual or pragmatic meaning. The verb *baiTh-naa* 'sit', when used as a vector verb, conveys that the event was inadvertent or ill-advised, and should have been avoided by the subject. There is only one choice of subject in a class A verb like *deekh-naa* 'see' (27a), but two choices for class C verbs like *dikh-naa* 'see, be visible to NP' and *dikhaaii dee-naa* 'see, catch a glimpse of' (27b).

- (27) a. *maiN* *pardee-kee* *piichee* *chip-ee* *hu-ee* *baccee-koo*
 I-nom curtain-Gen back hide-Pf be-Pf child-dat
deekh baiTh-ii
see sit-Pf

'I couldn't help seeing/looking at the child hidden behind the curtain.'

nominative argument, creating an ungrammatical nominative reflexive. Reversal in Class D therefore fails to create more derivations which converge and are interpretable. So no 'purpose' is achieved by reversal of grammatical function, even though reversal would not create violations of conditions on movement.

- b. mujhee pardee-kee piichee chip-aa hu-aa baccaa
 I-Dat curtain-Gen back be-hidden-Pf be-Pf child

dikhaaii dee baiTh-aa

sight give sit-Pf

(i) 'I couldn't help seeing the child hidden behind the curtain.'

(ii) 'The child hidden behind the curtain couldn't help being seen by me.'

The two interpretations in (27b) are explained if either the experiencer or the theme can move to Spec/TP, as in a simple V projection in which the two arguments are equidistant from a head which can check a feature on either of the argument phrases.

3.4. Case Correlations and Verbal Projections

The two proposed VP projections for transitive verbs explain two sets of facts: the distribution of structural cases, and the possibility of reversal of grammatical function, which is allowed in class C verbs but never in class A and B verbs. The two sets of facts align with each other in Hindi/Urdu. Grammatical functions are invariant in classes A and B, which associate structural cases with both subject and direct object. I have represented subject and object in a two part vP projection, separated into the domains of two distinct heads. The object cannot move to subject position in Spec TP without violating conditions on movement. In Classes C and D, one argument has lexical case. Both arguments are part of the same verbal domain, and equidistant from Spec/TP. Class C verbs allow reversal of experiencer and theme, as shown by variation in binding, control and vector verbs.

It is necessary to represent at least some psychological verbs as having a vP shell structure with two structural cases available for checking.¹⁷ In other South Asian languages, such as Tamil, some psychological predicates with dative experiencers do allow structural accusative case on their theme/objects (Paramasivam 1979: 65–66, Lehman 1991: 188, Schiffman 2000: 37), while others require nominative case, as in Hindi/Urdu.

4. SEMANTIC ISSUES: THE DIFFERENCE BETWEEN VP AND LIGHT V PHRASE

As I have argued, class A and B verbs contain a light verb projection which is absent in class C and D verbs. The light verb has a number of syntactic/morphological properties: it merges with the subject phrase and

¹⁷ They include simplex verbs of perception and cognition (see (29) below and note 5) as well as complex predicates of emotion, such as *afsoos kar-naa* 'regret', and experience, such as *anubhav/mahsuus/ahsaas kar-naa* 'feel, experience'.

assigns its theta role, as well as covertly checking the dative case of the direct object. Classes C and D contain bivalent verbs of psychological state, and verbs of motion to or towards a goal. They express relational meanings, which are either aspectually stative or telic, and one argument represents an endpoint (Tenny 1994). In class D, the lexically cased argument is an endpoint or source. The stative verbs have a change of state reading when combined with sentence perfective aspect. Psychological verbs often are members of both classes (28). Perception verbs may belong to both class C and A/B (29):

(28)

Class C

NP-koo NP-see Dar hoo-naa 'fear'

NP-koo NP-see uub hoo-naa

'be bored with'

Class D

NP NP-see Dar-naa 'fear'

NP-see uub-naa

'be bored with'

(29)

Class C

maalum hoo-naa 'know'

dikh-naa 'see, be visible'

sunaaii dee-naa 'hear, be audible'

bhaa-naa, pasand aa-naa 'please/like'

NP-koo NP-par kroodh aa-naa

'feel angry at, show anger at'

Class A

jaan-naa 'know'

deekh-naa 'see, look at, watch'

sun-naa 'hear, listen to'

pasand kar-naa 'like'

NP-par kroodh kar-naa

'get angry at'

There are interesting differences of meaning, which could be summed up as a difference between a measured out dynamic event, or accomplishment (class A) and an event which does not unfold gradually. The class C 'hear' and 'see' verbs can refer to incomplete or fragmentary perceptions, while the class A verbs involve complete perceptions, which can be volitional (though they need not be; one can 'see' without intending or expecting to do so). The class C verb 'know' refers to intuitive knowledge or simply a state of knowing, while the class A verb also refers to knowledge built up over time through conscious effort or continual reflection. The resulting state can also be referred to, and these verbs have a derived stative interpretation. We may speculate that this aspectual property is contributed by the context of the light verb in verbal projection, which (i) requires ergative subject case and (ii) allows dative direct objects. This functional projection is what differentiates the vP shell projection of class A/B from the simple VP projection of class C/D verbs, which in effect are unspecified for verbal aspect/Aktionsart.

The contrast between class A and class B verbs is very subtle.

(30)

Class B

bhaaNp-naa

'intuit, guess, see through'

bhuul-naa

'forget, make a mistake'

paa-naa 'find (erg)

manage to (nom/erg)'

pahcaan-naa 'recognize, be'

samajh-naa

'understand, consider'

taaR-naa

'see, make out, conjecture'

jiit-naa 'lose, be defeated'

haar-naa 'win'

Class A bhuul kar-naa

'to make a mistake'

Class C NP-koo NP-kii pahcaan

hoo-naa be acquainted'

Class A NP-kii pahcaan kar-naa

'identify, recognize'

Class C NP-koo samajh aa-naa 'to

(re)gain understanding'

The class B verbs, which are few in number, are clearly telic. They refer to an endpoint, but while they can involve conscious preparation, the reaching of the end point is instantaneous and not under conscious control. These verbs do not have the durative property of accomplishment verbs (Smith 1997). Following Travis (1997), I represent class B verbs as achievements, projecting a light *v* with the property +telic. The class A verbs have this property as well as some further specification which introduces the durative and dynamic properties found in this class (Travis 1997, Smith 1997), for activities and both agentive and non-agentive accomplishments. A full account of content and structure of the class A verbs in Hindi/Urdu is beyond the scope of this paper, but Speas' account of the English dative alternation (1990: 83–90) is suggestive in linking aspectual differences to case differences.

5. COMPLEX PREDICATES

The VP projections proposed for simplex verbs should also be adequate to represent complex predicates, which are abundant in Hindi/Urdu, both as a means of creating new predicates, and also as doublets of existing simplex forms (Verma 1993). N or A is combined with V, as in (21)–(22), (24), (27b). Case assignment remains the same for subjects. Since the N of the N-V combination has the status of an argument, which must have its case feature checked. Since N is nominative, it also may trigger agreement on the verb. The combination of the semantic argument structure and the N-V combination causes a misalignment in the surface syntactic

5.1. Syntactic Derivations of Sentences with Complex Predicates

(31) a. moohan_i-**nee** *us-kee/apnee_i maaN-baap-**kii**
Mohan-m.sg-Erg 3s-Gen/self's mother-father-Gen
yaad **kii**
memory-f do-Pf-

b. isii kaaraN prafeesar kroobar aadii
this reason Professor Kroeber etc.

maanavṣāatriyooN-**nee** is paddhati-par paryaaapt
 anthropologists-Erg this position-on enough
 bharoosaa ki-yaa
 confidence do-Pf

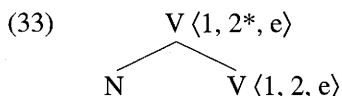
'For this reason, Prof. Kroeber and other anthropologists relied sufficiently on this position.' (Bahl 1974: 116)

(32) a. moohan-**koo** apnee_{ij} maaN-baap-**kii** yaad
Mohan-m.sg-Dat self's mother-father-Gen memory-f
aa-ii
come-Pf-f

'Mohani remembered his_{i/i} parents.'

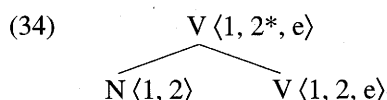
- b. mujhee [kuttooN-kee bhauNk-nee]-see khiijh hai
 I-Dat dogs-Gen bark-Inf-from annoyance is
 'I am annoyed at [the dogs barking].' (Bahri 1992: 133)

The derivation of the transitive syntactic structure proceeds exactly as in the structures (12) and (16) above which have simplex predicates. The first step is merger of the V with a nominal:



The V argument structure contains the event argument *e*, represented as $\langle 1, 2, e \rangle$. The *e* argument in V is theta bound by the tense (Speas 1990: 57). When a theta role is discharged by merger with an argument, it will be distinguished by * to show it is discharged and that argument position in the theta/argument array is saturated (Speas 1990: 65–66). The theta array of the head is projected upwards as the derivation proceeds, until all positions are saturated.

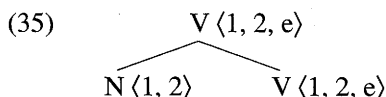
Mohanan and I concur that N in a complex predicate also has an argument structure (Mohanani 1994: 227). I further assume that the N in these combinations lacks an event argument.¹⁸ Since the N combines with a light verb as an argument, it also satisfies at the same time an argument position of the light verb:



¹⁸ The N in (ia) may have a theta grid $\langle 1, 2 \rangle$ but not have an event argument *e*, which would be introduced by V $\langle 1, 2, e \rangle$, and theta-bound by TENSE (Speas 1990: 67–71) I have assumed that N and A as well as V have argument structures, but N and A cannot form a binding domain alone without a V, as in sentences such as (ia). Arguments are coindexed if a light V is present (ib):

- (i) a. *[raami-kaa apnee-koo/kee liyee **dhookhaa**] kaanuun-kee xilaaf nahiiN
 Ram-Gen self-Dat/for sake deception law-Gen against not
 hai
 is
 'Ram's deception of himself is not against the law.' (Davison 2001b)
- b. [raam_i-kaa khudi/*j-koo **dhookhaa** dee-naa] kaanuun-kee xilaaf
 Ram-Gen self-Dat deception give-Inf law-Gen against
 nahiiN hai
 not is
 'It's not against the law [for Rami to deceive himself].' (Ibid)

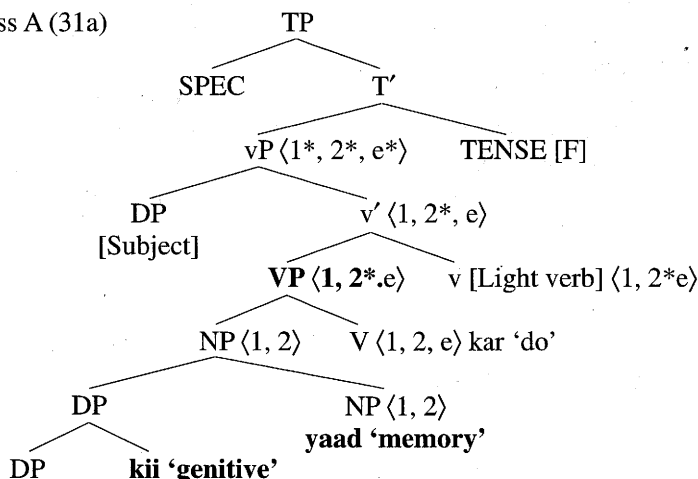
The structure in (32) creates a conflict, if the predicate NP itself counts as an argument of the light verb.¹⁹ One position in the V theta grid is saturated, but the two arguments which are required by the N theta grid need to be theta marked, and these arguments are the 'real' arguments of the N-V predicate. The combination undergoes theta identification (Speas 1990: 97):



More precisely in this instance, the combination in (34) has the V category of the head, but the theta roles of the N. Theta identification allows some options as in (41)–(42) below.

The central problem with complex predicates is the direct object and its case.

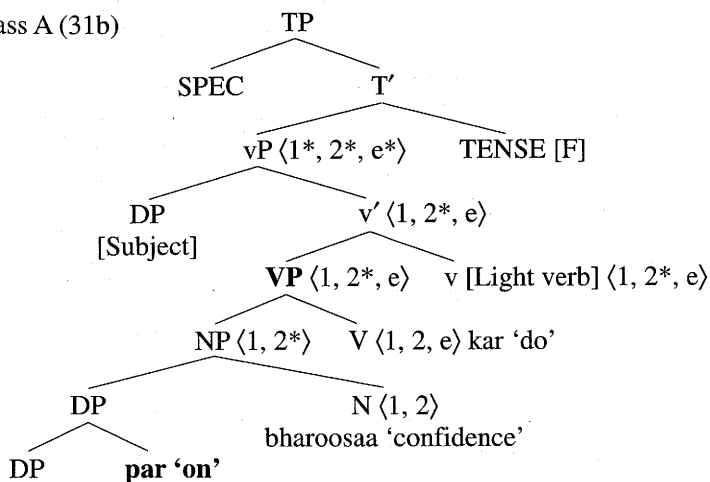
(36) Class A (31a)



The 'extra' argument which is the thematic object is treated in one of two ways. Either it is made the specifier of the N, and gets structural genitive case (31a), (36) or it gets a lexical case (31b), (37). The specifier of N gets theta-marked by N, and then the theta grid of NP is identified with the theta grid of V, in VP (in bold); the theta grid is inherited by the v projection, in which the subject argument is merged and receives its theta role. Both positions are saturated in vP.

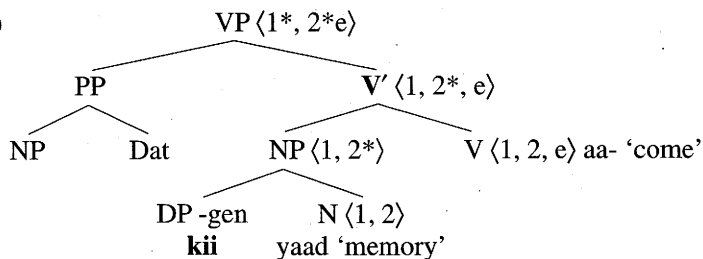
¹⁹ I would argue that the predicate N is an argument because it triggers agreement (31a), (32a). It is a widespread generalization that only nominative DPs trigger agreement, and only arguments have nominative case. Exactly how to derive this generalization from other principles is not clear at present, even in as explicit and parameterized account of case as is Ura (2000).

(37) Class A (31b)

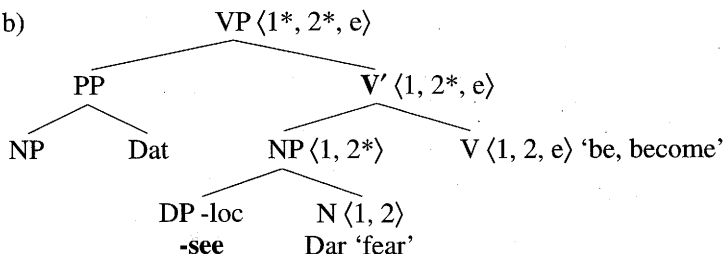


So far this analysis has followed the outlines of Mohanan (1994: 212–219): the predicate N is an argument and has an argument structure, which can introduce and theta-mark another argument. The merger at V' is simply a natural consequence of phrase structure Class C verbs (33a)–(32b) have the same derivation, with a genitive or a locative object:

(38) = (31a)



(40) = (31b)



Genitive case is a default, non-theta related case. Lexical case is selected by N, as it is not selected by the light V in this instance.²⁰

²⁰ An alternative derivation would make a partial combination of the two theta grids, first combining N and V in an argument relation. Instead of saturating the 2 position, the N contributes its own theta grid, requiring a lexical case outside of the N-V combination.

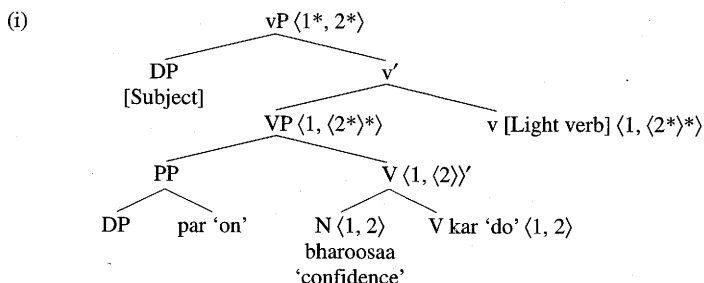
5.2. *Reanalysis/Incorporation*

Some of the complex predicates with genitive objects also allow another derivation. The N and V form a single constituent, and the thematic object has the properties of a syntactic object (the 'disappearing genitive' in Hook 1979). It gets the appropriate structural case, and if it is nominative, it triggers agreement:

- (41) a. moohan_i-nee apnee_i maaN-baap-**koo** yaad
 Mohan-m.sg-Erg self's mother-father-Dat memory-f
 kiyaa
 do-Pf-**msg**
 'Mohani remembered/recalled his_{i/ij} parents.'
- b. moohan_i-**koo** apnee_i maaN-baap yaad
 Mohan-m.sg-Dat self's mother-father-Nom memory-f
 aa-**ee**
 do-Pf-**mpl**
 'Mohani remembered/recalled his_{i/ij} parents.'

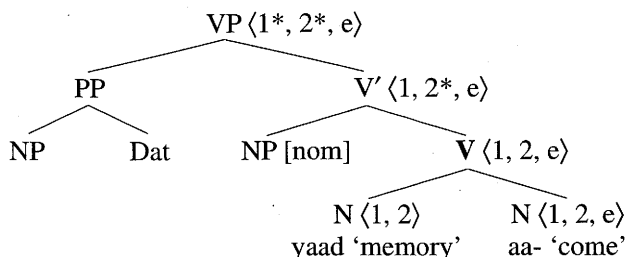
This possibility is not an option for all N-V combination, but those combinations which do allow it are numerous (see Bahl 1974, 1979)

For such lexical combinations, theta identification is an option at the very first merger of N and V, when N satisfies an argument position of V, and also merges its subject and object theta roles.. These predicates are very much like an A-V combination (McGregor 1995), in that they directly check the structural case of the object.



It is unclear whether this partial combination of theta grids is plausible, but it does make a syntactic distinction between the structural case option, which is the normal syntactic default method of combining DP and N, and the lexical case option, which seems to be forced by the need to accommodate another argument in addition to the predicate N. I leave the question open here of which possibility is the best representation, and how early theta identification (incorporation) is associated with specific lexical items.

(42)



6. CONCLUSIONS

In this paper I have subdivided polyvalent experiencer verbs on the basis of combinations of cases. Classes A and B require structural case on both the subject and the direct object, different only in whether the subject ergative case is obligatory (class A) or optional (class B). I have represented verbs of these two classes with a complex verbal projection including VP and a light *v* projection. The light *v* theta marks the subject as an experiencer, covertly checks structural dative case on the direct object, and adds aspectual specification. Classes C and D lack this *v* projection, and require a lexical case on the subject (class C) or the object (class D). Within the VP both arguments are equidistant from Spec/TP, allowing variation in subject properties which are impossible for class A and B verbs.

Without a structural difference between A/B and C/D, it would be difficult to generalize about case distribution, and to explain the variability of subject properties in one class but not the others. This variability is a consequence of two arguments within VP being equidistant from a feature-checking functional head. If equidistance were merely the result of reanalysis of *v*P deriving a VP, it would be entirely arbitrary why equidistance is correlated with a specific case array and prohibited with other case arrays (A/B). Further, reanalysis is not possible for verbs (A/B) which are more fully specified for verbal aspect than others (C/D).

Complex predicates N-V must accommodate an 'extra' argument, as the N itself has argument status.. The V component of a complex predicate contributes the event argument, a theta grid, and subject case. The N contributes a theta grid of the 'real argument' and may also have lexical case properties for the object. The argument structure of N and V are merged, and exactly at what point in the derivation the merger occurs derives different surface outcomes. This account, while it shares many assumptions with Mohanan (1995), does not require a V/V' distinction or additional levels of representation.

The account proposed here offers an explanation for how a verbal meaning can be realized as a complex or simplex predicate, and how similar theta roles can be projected with more than one case array (as a class C

or class A verbs for example). As a consequence, theta roles and their hierarchical ordering is not the sole factor in determining syntactic projection.

ACKNOWLEDGEMENTS

I am very grateful to Paula Kempchinsky for detailed comments on this version of this paper, and to anonymous reviewers for constructive comments and criticism on previous versions. I owe much to Ms Rashmi Gupta, U. of Iowa, for her judgments and comments on the example sentences. The Arts and Humanities Initiative of the U. of Iowa provided partial support of the research on which this paper is based. A part of this chapter was presented at the 2002 LSA meeting.

REFERENCES

- Baker, Mark: 1997, "Thematic Roles and Syntactic Structure." In L. Haegeman (ed.), *Elements of Grammar*, pp. 73–138. Dordrecht: Kluwer Academic Publishers.
- Bahl, K.C.: 1974, *Studies in the Semantic Structure of Hindi*, Vol. 1. Delhi: Motilal Banarsidass.
- Bahl, K.C.: 1979, *Studies in the Semantic Structure of Hindi*, Vol. 2. Delhi: Manohar.
- Bahri, Hardev: 1992, *Learner's Hindi Dictionary*. Delhi: Rajpal and Sons.
- Bailey, T. Grahame: 1963, *Urdu*. London: English Universities Press.
- Belletti, Adriana and Luigi Rizzi: 1988, "Psych Verbs and Theta Theory." *Natural Language and Linguistic Theory* 6, 291–363.
- Butt, Miriam: 1995, *The Structure of Complex Predicates in Urdu*. Stanford: CLSI Publications.
- Chomsky, Noam: 1981, *Lectures on Government and Binding*. Dordrecht: Foris Publications.
- Chomsky, Noam: 1995, *The Minimalist Program*. MIT Press.
- Davison, Alice: 1991, "Feature Percolation and Agreement in Hindi/Urdu." Paper presented at the South Asia Conference, University of Wisconsin, Madison.
- Davison, Alice: 1999a, "Ergativity: Functional and Formal Issues." In M. Darnell et al. (eds.), *Functionalism and Formalism in Linguistics*, Vol. 1 General papers, pp. 177–208. Amsterdam: John Benjamins.
- Davison, Alice: 1999b, "Dependent Structural Case' as a Consequence of VP Structure." *Texas Linguistics Forum*, paper presented at the 1999 Texas Linguistic Society reading, University of Texas, Austin.
- Davison, Alice: 2001, "Long Distance Anaphors in Hindi/Urdu: Syntactic and Semantic Issues." In P. Cole, G. Hermon and C-T.J. Huang (eds.), *Long Distance Anaphors*, pp. 47–82. San Diego: Academic Press.
- Hale, Kenneth and S.J. Keyser: 1993, "On Argument Structure and the Lexical Expression of Syntactic Relations." In K. Hale and S.J. Keyser (eds.), *The View from Building 20*, pp. 53–110. Cambridge: MIT Press.
- Higgenbotham, James: 1985, "On Semantics." *Linguistic Inquiry* 16, 547–593.
- Hock, Hans: 1985, "Transitivity as a Gradient Feature." In A.R.K. Zide, D. Magier and E. Schiller (eds.), *Proceedings of the Conference on Participant Roles: South Asia and Adjacent Areas*, pp. 247–263. Bloomington: IU Linguistics Club.
- Hook, Peter: 1974, *The Compound Verb in Hindi*. Ann Arbor: Michigan Series in South and Southeast Asian Languages and Linguistics No. 1.

- Hook, Peter: 1979, *Hindi Structures: Intermediate Level*. Ann Arbor: University of Michigan Center for South and Southeast Asian Studies.
- Hook, Peter: 1990, "Experiencers in S. Asian Languages." In M.K. Verma and K.P. Mohanan (eds.), *Experiencer Subjects in South Asian Languages*, pp. 319–334. Stanford: CSLI.
- Jayaseelan, K.A.: 1995, "The Larson Proposal and SOV Languages." Hyderabad: Central Institute of English and Foreign Languages unpublished paper.
- Kayne, Richard S.: 1994, *The Antisymmetry of Syntax*. Linguistic Inquiry Monograph Twenty-Five. Cambridge: The MIT Press.
- Larson, Richard: 1988, "On the Double Object Construction." *Linguistic Inquiry* 19, 335–392.
- Lalitha Murthy, B.: 1993, *Participial Constructions: A Cross-Linguistic Study*. Delhi: Delhi University unpublished dissertation.
- Lehman, Thomas: 1993, *A Grammar of Modern Tamil*. Pondicherry: Pondicherry Institute of Linguistics and Culture.
- Mahajan, Anoop: 1990, "The A/A-bar Distinction." MIT unpublished dissertation.
- Masica, Colin P.: 1991, *The Indo-Aryan Languages*. Cambridge: Cambridge University Press.
- McGregor, R.S.: 1997, *Oxford Hindi-English Dictionary*. Oxford: Oxford University Press.
- Mohanan, Tara: 1993, "Case Alternation on Objects in Hindi." *South Asian Language Review* III(1), 1–30.
- Mohanan, Tara: 1994, *Argument Structure in Hindi*. Stanford: CSLI Publications.
- Narasimhan, Bh.: 1998, "A Lexical-semantic Explanation for 'Quirky' Case Marking in Hindi." *Studia Linguistica* 52(1), 48–76.
- Paramsivam, K.: 1979, *Effectivity and Causativity in Tamil*. Trivandrum, India: Dravidian Linguistics Association.
- Porizka, V.: 1963, *Hindi Language Course*. Prague: Statni pedagogicke nakladatelstvi.
- Saxena, Anju: 1985, "Reflexivization in Hindi: A Reconsideration." *International Journal of Dravidian Linguistics* 14, 225–237.
- Schiffman, Harold: 1999, *A Reference Grammar of Spoken Tamil*. Cambridge: Cambridge University Press.
- Singh, Mona: 1998, "On the Semantics of Perfective Aspect." *Natural Language Semantics* 6(2), 171–199.
- Smith, Carlota: 1997, *The Parameter of Aspect*. Dordrecht: Kluwer Academic Publications.
- Speas, M.: 1990, *Phrase Structure in Natural Language*. Dordrecht: Kluwer Academic Publishers.
- Tenny, Carol: 1994, *Aspectual Roles and the Syntax/Semantics Interface*. Dordrecht: Kluwer Academic Publishers.
- Travis, Lisa: 1997, "The Syntax of Achievements." *Proceedings of AFLA III*.
- Ura, Hiroyuki: 2000, *Checking Theory and Grammatical Functions in Universal Grammar*. Oxford: Oxford University Press.
- Van Valin, Robert and Randy J. LaPolla: 1997, *Syntax: Structure, Meaning and Function*. Cambridge: Cambridge University Press.
- Verma, Manindra K. (ed.): 1993, *Complex Predicates in South Asian Languages*. Delhi: Manohar Publications.
- Wali, Kashi and O.N. Koul: 1997, *Kashmiri: A Cognitive-descriptive Grammar*. London and New York: Routledge.
- Yamabe, Junji: 1990, *Dative Subject Constructions in Indic Languages*. University of Tokyo unpublished M.A. thesis.