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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, distingishing 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, chapter 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 in deriving a sentence structure in which the subject is always higher than the objects.) 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 arbtrarily or idiosyncratically. In section 2, I will classify polyvalent psych verbs by which cases they select. The classification yields four classes. The first two, for which I will propose a complex VP shell of the kind typically proposed for agentive transitive verbs (eg Travis 1997, Hale and Keyser 1997, Baker 1997), require structural case on the direct object, and also on the subject. The subject in one class is obligatorily ergative (in finite perfective sentences), and optionally ergative in the second class. I will argue that ergative is a structural case, not a lexical or theta-related inherent case. 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 cononically transitive agentive verbs like *tooR-naa* 'break(tr)' and *samajh-aa-naa* 'explian, cause to understand', while others like *maalum hoo-naa* 'know', *dikhaaii dee-naa* 'see, glimpse' and *Dar-naa* 'fear' are similar to unaccusative intranstive verbs, though they are poly valent. 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 unfied 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 argument[1] 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

(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 postpostion**	*

(2)　　　Class A
　　　bhaaluu-nee   apnee daaNtooN-see baccooN-koo   Dar-aa-yaa
　　　bear-.m.s-Erg self's teeth-from   children-m.pl-Dat 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   kar-kee deekh-aa
　　　　then I-erg 3s-Dat again   self's self solution do-prt see-pf
.　　　'When I understood the question from the teacher, then I saw it again solved.
　　　(Nespital 1997:1122)

　　　b. *maiN   yah baat pahlee hii   samajh-aa*
　　　　I-nom this matter first only understand-pf
　　　[ki raakeeš apnii zid-par   dɽRh   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]   dikh-aa
　　　then-only 3s-Dat one empty rikshaa come-impf   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-mpl
　　　'The children are afraid of the bear/became afraid of the bear.'

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. 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 (see Masica 1991 for an overview and comparison of case marking), and by unrelated languages such as Turkish and the Dravidian languages. 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 postpositons 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)   c. Genitive (NP and non-finite clauses)
b. Ergative (subject, Classes A and B)   d. Dative direct objects

(7)   *Lexical case (theta-related, lexically selected) [**bold** in (1)-(5)]*

a. Dative indirect object (Class A),   b. Genitive (possession; lexically
   subject (Class C)[3]   selected)[4]

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).

2.3 ERGATIVE CASE AS A 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, the ones I have called Classes A and B. There are also lexical *exceptions* to the unmarked situation in these classes; a few class A verbs which allow dative direct objects may not have ergative subjects (Davison 1999). Elsewhere I have given reasons for concluding that ergative case is not theta related (Davison 2000, 2001b), even though many ergative transitive subjects indeed do have the agent theta role.[5]

2.4 Conterfactual 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 kah-naa*
              you-Nom/*Erg I-Dat   tell-Impf that you-Dat   my   say-Inf

> *buraa lag-aa,   too maiN kahnaa band kar dee-**tii***
> bad   strike-Pf then I-Nom say-Inf shut do 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 mujhee bataa -ee-**gii***
                  if   3s-Dat my matter bad strike-Pf is then 3s 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 mujhee bataa-**tii***
                  if   3s-Dat my matter bad strike-Impf   then 3s I-Dat   tell-Impf
                  If she had been bothered at what I said, then she would have told me.'

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. Schematically we have a typical 'privative' linguistic opposition (10), in which dative case rules out volitionality, but ergative does not require it.

(10)	*Subject case*	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 for example the verbs in note 5. It is mistaken, in my view, to see the dative-ergative distinction as a symmetric non-gentive-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 (see derivations in section 3).. The lexical selection of ergative case by classes A and B will be explained as a consequence of the structure of the verbal projection selected by the verbs of these classes.

2.5. 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] I will propose a two-way syntactic distinction. First, classes C and D will be represented as single VP projections, with a lexical case required on either the subject (Class C) or the object (Class D).Sentence (11) has a class C verb, whose structure is given as (12)[8]:

(11) .   *mujhee   eek upay   suujh -aa*[9]
            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   VP
                                         ⟋⟍
                                  PP   V'
                               ⟋⟍   ⟋⟍
                           NP   Dat   NP[Nom]   V
                                                suujh-aa
                                                see   Pf

The sentence in (13) has a class D verb, represented by the VP projection in (14):

(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   VP
                                        ⟋⟍
                                 NP[Nom]   V'
                                          ⟋⟍
                                     PP   V
                                   ⟋⟍   ⟋⟍
                               DP   -see   V   V
                                            uub   ga-ii
                                            be-bored   go-Pf

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 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.. We will see in the next section that this structure can give rise to more options in well-formed sentences by virtue of the fact that the subject does not have a structural case, unlike the subjects of all the other classes, which must raise to a position where case can be checked by a functional projection.

   This single VP projection for Classes C and D differs from the structures for classes A and B, which I will represent as 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):

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

(16)   Class A [11]   vP
                                    ⌄
                            DP   v'
                        [Subject]   ⌄
                                    VP   v [Light verb]
                               ⌄
                            DP   V
                        [Object]

The subject is merged as the specifier of a 'light' verb (Chomsky 1995, Ura 2000), while the direct object is part of a VP projection, in which V assigns the object theta role.[12] 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, which I have represented as having only a VP projection without a light verb component. On this view, the light verb component is responsible for checking structural dative cas.[13]
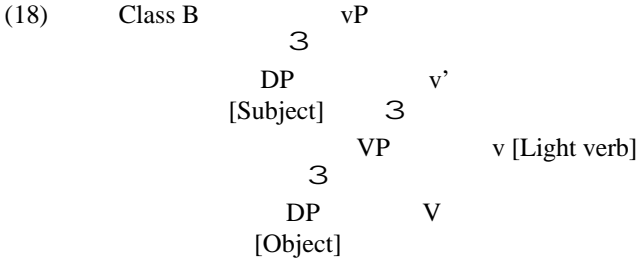
   Class B verbs allow both the options for subject case shown in (3a,b) and (17):

(17)   Class B:
              a. *maiN-nee is laRkee-koo pahcaan li-yaa*   *(hai)*
                  I -Erg   this boy-Dat   recognize take-Pf-ms   be Pres-3s

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

b. *maiN (**nee*)   *is laRkee-koo pahcaan* **ga-ii**   (*huuN*)
I-Nom (*Erg) this boy-Dat   recognize go-Pf-fs be-Pres-1s
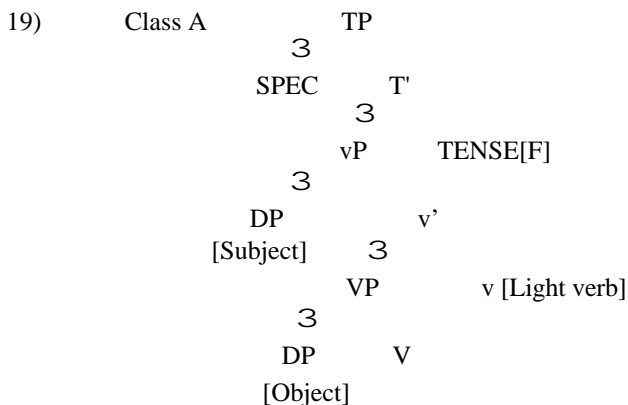'I recognized/have recognized this boy'. [Class B verb]

(18)   Class B   vP
                               ⟍
                      DP   v'
                  [Subject]   ⟍
                              VP   v [Light verb]
                           ⟍
                      DP   V
                  [Object]

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, which differentiates A/B verbs from C/D verbs. 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 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: 355-6, Ura 2000: 31-2).

19)   Class A   TP
                              ⟳
                      SPEC   T'
                                ⟳
                        vP   TENSE[F]
                      ⟳
                  DP   v'
              [Subject]   ⟳
                          VP   v [Light verb]
                      ⟳
                  DP   V
              [Object]

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. Subjects of these verbs may not bind pronouns, only reflexives, which in Hindi/Urdu are subject oriented.[14]

(20)   *baccee$_i$-nee [duusree baccee$_j$ -see] apnee*j/us$_{*i/j/k}$-kee   khilaunee*
          child-Erg   second child-from   self's/ 3s-Gen   toys
          chiin   li-ee
          snatch take-Pf
          '[One child$_i$] snatched snatched from [another child$_j$] self's$_{i/*j}$ /his$_{*i/j/k}$ toys].'
          (Davison 2001b:51)

 If a reflexive is possible, its antecedent is 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.
    This generalization fails, however, for Class C verbs, both the monomorphemic verbs discussed so far, and also the complex predicates which will be discussed below. As Anju Saxena noted (1985), its is possible for a dative experiencer to bind (locally) a pronoun, as well as a reflexive:

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
             'Mohan$_i$ remembered his$_{i/j}$ parents.'

           b. *maalik$_i$ -**koo** apnaa$_{i/*j}$/us$_{i/j}$ -kaa kuttaa   bhaa-taa hai*
                master-Dat   self's/ 3s-Gen   dog-Nom be-pleasing/Impf is/
                / pasand aa-taa hai is
                liked   come-Impf
              'The master likes self's dog.' (Yamabe 1990)

These class C complex verbs require dative experiencers. They have Class A counterparts
which require nominative/ergative subjects coindexed only with a reflexive, not a pronoun:

22)   a.   *moohan$_i$ -**nee**   apnee$_i$ /*us-kee$_i$ maaN-baap -kii   yaad*
                Mohan-m.sg-Erg   self's/3s-Gen   mother-father-Gen memory-f
                kii
                do-Pf-fsg
                'Mohan$_i$ 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 $_{i/j}$ 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 apparently paradoxical fact can be explained
as a consequence of the VP projection for class C verbs:

23)   Class C   TP
                                    3
                        SPEC   T'
                                          3
                              VP   TENSE[F]
                        3
                        PP   V'
                      2   3
                      NP   Dat   NP[Nom]   V

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, where the reflexive is an argument rather than a possessive, and where subject control is required. Both types obey language-specific restrictions:(i) reflexive arguments   may not have nominative case, 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. *$raam_i$-**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. $raam_i$ 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)

        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.   The restriction on dative-marked controlled PRO is shown in (25a)

   (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 caah-tee haiN*
     3mpl-Nom people   this girl   please-inf not   want-Impf are
'These people don't want [this girl to be pleasing to PRO (dat).

c.(?) *yah laRkii [PRO un logooN-koo bhaa-naa] nahiiN caah-tii hai*
     this girl-Nom   those people-Dat please-Inf not 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 , as 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 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   hai*
              child-ms-Nom   cat-fs-Nom see-Inf want-Impf-ms is
              'The child wants [PRO to see the cat].'

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

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

Additional evidence for the reversal of grammatical functions which is possible for class C verbs comes from verbal compounding. 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; it refers to 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 deekh baiTh-ii*
              I-nom   curtain-Gen back   hide-Pf be-Pf child -dat   see   sit-Pf
           'I couldn't help seeing/looking at the child hidden behind the curtain.'

          b. *mujhee pardee-kee piichee chip-aa   hu-aa baccaa dikhaaii*
             I-Dat   curtain-Gen back   be-hidden-Pf be-Pf child   sight
             dee baiTh-aa
             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, and this is possible only in V projections 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 VP projections I have proposed explain two sets of facts: the distribution of structural cases, the dative case on direct objects and ergative on the subject, only possible for classes A and B in Hindi/Urdu, 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, and for this reason I have proposed two different verbal projections for transitive verbs in this language. 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 grammatical phenomena which are sensitive to subject properties (binding, control, subject oriented 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 1979:65-6, Lehman 1991: 188, Schiffman 2000:37), while others require nominative case, as in Hindi/Urdu. The dative-accusative combination in Tamil (ungrammatical in HU) led Ura to propose a complex verbal structure for all psychological verbs, in which the light verb assigns dative or ergative case to its specifier, and also covertly checks case on the theme (2000, ch 4).

Previous proposals by Hale and Keyser, Speas, Travis and Baker equate transitivity with agentive subjects. Ura's proposal equates transitivity with a VP shell projection including a light verb. On this assumption the reversal of grammatical functions found in Hindi/Urdu as well as Dutch is derived as the result of a process of 'reanalysis'. By this process, the head V adjoins to the light verb, forming a single v-V projection in which the arguments are equidistant from SPEC of TENSE (2000: 139-141), just as in the VP projection given for class C verbs in (20) But Ura gives no explanation for reanalysis, except as a spontaneous syntactic or lexical option for Dutch.

Instead, I have chosen a direct representation of a simplex VP for dative experiencer verbs of class C in the language discussed here. Unlike Tamil, Hindi/Urdu always requires nominative case on the object, fact which falls out naturally from the absence of a light verb which could check structural dative/accusative case.. Conversely, the presence of a light verb in the vP projection derives the association of dative direct objects with ergative subjects, as well as some semantic/spectual properties to be discussed below, as well as the absence of reversal of grammatica functions..

4. SEMANTIC ISSUES: THE DIFFERECE 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 assigns its theta role, as well as covertly checking the dative case of the direct object. Some information about its semantic content can be gained in two ways, by comparing semantically similar verbs which belong to different classes, and by trying to find something shared by members of a given class. A full answer to these questions is beyond the scope of this paper, but some preliminary observations can be given.

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   Class D
         NP-koo NP-see Dar hoo-naa 'fear'   NP NP-see Dar-naa 'fear'
         NP-koo NP-see uub hoo-naa 'be bored with   NP-see uub-naa 'be bored with

(29)   Class C   Class A
            maaluum hoo-naa 'know'   jaan-naa 'know'
            dikh-naa 'see, be visible'   deekh-naa 'see, look at, watch'
            sunaaii dee-naa 'hear, be audible'   sun-naa 'hear, listen to'
            bhaa-naa, pasand aa-naa 'please/like'   pasand kar-naa 'like'
             NP-koo NP-par kroodh aa-naa'   NP-par kroodh kar-naa 'get angry at'
                'feel angry at, show anger 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 classA/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'   Class A   bhuul kar-naa 'to make a mistake'
paa-naa 'find ' (erg) manage to (nom/erg)'
pahcaan-naa 'recognize   Class C NP-koo NP-kii pahcaan hoo-naa 'be
acquainted'

                                           Class A NP-kii pahcaan kar-naa 'identify, recognize'
samajh-naa 'understand, consider'   Class C NP-koo samajh aa-naa 'to (re)gain
understanding'
taaR-naa 'see, make out, conjecture'
jiit-naa 'ose', be defeated'; haar-naa 'win'
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 achievments, 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; Speas (1990:83-90) accounts for the English dative alternation with two representations, one more specified for aspect than the other. In Hindi, specification of verbal aspect, is correlated with the ability to check dative direct object case. and also with the option of assigning ergative case to the subject (with a small residue of lexical restrictions and exceptions), a property of the vP shell.

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 (see papers in Verma 1993). They are formed by combining N or A with V; some have occurred in examples above, such as *yaad kar-naa, yaad aa-naa* 'remenber' *dikhaaii dee-naa* 'see, be visible'. The resulting combinations can be assigned on the basis of subject case to the verb classes proposed above. The case of the theme or internal argument undergoes some changes because the N of the N-V combination has the status of an argument, which must have its case feature checked; it may also trigger agreement on the verb. The combination of the semantic argument structure and the N-V combination causes a misalignment in the surface syntactic structure between the semantic arguments and the syntactic grammatical functions in the sentence, with resort to lexical case. In addition, some complex predicates show evidence for optional N incorporation. The alternation of case on the thematic direct object and verbal agreement presents some very difficult questions for formal represention.

Mohanan 1994 gives an account in Lexical Functional Grammar which rests on a general principle of case-linking combined with a distinction of grammatical levels of representation, as well as the standard distinction between a simplex V and a phrasal verb V' . Since the Minimalist Program distinguishes only minimal and maximal projections, and gives no special status to intermediate categories like V', I will propose an alternative account which is based on theta marking of arguments, deriving different outcomes of phrase structure derivation and case checking from the interaction of theta discharge and theta merger, pursuing a proposal in Davison 1991. In the discussion which follows, I refer extensively to Speas' discussion (1990) of the   concepts of theta discharge, theta identifcation and theta binding in Higginbotham (1985).

5.1 Syntactic derivations of sentences with complex predicates

In complex predicates of classes A and C (30)-(31, the N-V combinations formed with light verbs like *kar-naa* 'do, make' retain the obligatory ergative case of the class A main verb (31): [18]

(31)   a..*moohan$_i$ -**nee**   *us-kee$_i$ / apnee$_i$ maaN-baap-**kii**   yaad   kii*
         Mohan-m.sg-Erg   3s-Gen/ self's   mother-father-Gen   memory-f do-Pf-fsg
         'Mohan$_i$ remembered his$_{i/j}$ parents.'

         b. *isii kaaraN prafeesar kroobar aadii maanavšaatriyooN-nee is padati-**par**
paryaapt*
         this reason Professor Kroeber etc.   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)

Class C verbs are formed with intransitive light verbs *hoo-naa* 'be, become', *aa-naa* 'come' , with the lexical dative case of the experiencer.

(32) a *moohan$_i$ -koo   apnee$_{i/j}$ maaN-baap -kii   yaad   aa-ii*
        Mohan-m.sg-Dat self' 's   mother-father-Gen memory-f come-Pf-f
        'Mohan$_i$ remembered his$_{i/j}$ 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:

(33)   V <1, 2*, e>
         $\mathbf{3}$

         N   V <1,2,e>

I will assume in all cases that the surface verb has an argument structure, represented as <1,2,e> for the theta roles assigned by the V in question. When a theta role is discharged by merger with an argument, it with 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. The V argument structure contains the event argument e, which is theta bound by the tense (Speas 1990:57)[19].

I will make the assumption that the N in a complex predicate also has an argument structure, concurring with Mohanan 1994:227. But since the N combines with a light verb as an argument, it also satisfies at the same time one of the argument positions of the light verb:

(34)   V <1, 2*,e >
         $\mathbf{3}$

    N <1,2>   V <1,2,e>

The structure in (32) creates a conflict, if the predicate NP itself counts as an argument of the light verb.[20] 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.   My solution is to invoke another option,   theta identification (Speas 1990: 97), by which the theta grids of a head and a modifier are merged, with the category of the head (just as *walk* and *walk rapidly* are both intransitive verbs).

(35)   V <1, 2, e>
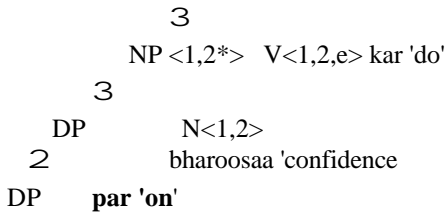   **3**
   N <1,2>   V <1,2,e>

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 can take place at various points in the derivation.

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

36) Class A (31a)   TP
                    3
               SPEC   T'
                          3
                  vP<1*,2*,e* >   TENSE[F]
                3
             DP   v' <1,2*,e>
          [Subject]   **3**
                       VP<1,2*.e>   v [Light verb] <1,2*e>
                   3
                NP <1,2*>   V<1,2,e> kar 'do'
           3
        DP   N<1,2>
      2   yaad 'memory
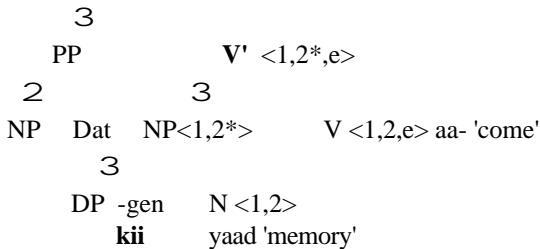   DP   **kii 'genitive'**

Both positions are saturated in vP. Another option is for the N to be subcategorized for a lexical case, instead of allowing the default genitive case, as in the previous instance.

(37) Class A (31b)   TP
                    3
               SPEC   T'
                          3
                  vP <1*,2*,e*>   TENSE[F]
                3
             DP   v'<1,2*,e>
          [Subject]   **3**
                       VP<1,2*,e>   v [Light verb] <1,2*,e>

       3
      NP <1,2*>   V<1,2,e> kar 'do'
    3
  DP   N<1,2>
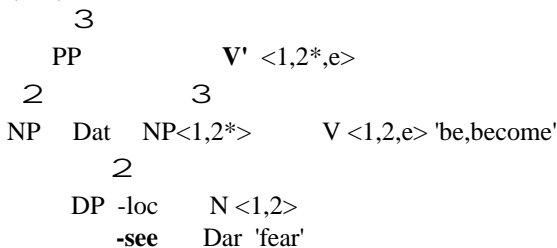 2   bharoosaa 'confidence
DP **par 'on**'

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. Class C verbs (33a)-(32b) have the same derivation, with either a genitive or a locative object

(38)=(31a)   VP   <1*,2*e>
    3
   PP   **V'** <1,2*,e>
  2   3
NP Dat NP<1,2*>   V <1,2,e> aa- 'come'
    3
   DP -gen N <1,2>
    kii   yaad 'memory'

This argument gets either genitive case as a default, non-theta related case, or a lexical case which must be selected by N, as it is not selected by the light V in this instance.[21]

(40)=(31b)   VP   <1*,2*,e>
    3
   PP   **V'** <1,2*,e>
  2   3
NP Dat NP<1,2*>   V <1,2,e> 'be,become'
    2
   DP -loc N <1,2>
    -see   Dar 'fear'

The theta grids are identified in V', on the assumption that the light verbs are semantically transitive. The verb allow an optional goal (in the case of (32) or possessor ((i) in footnote 3)

5.2 Reanalysis/incorporation

In examples (31)-(32), the predicate N has the role of a syntactic argument, triggering agreement and in some sense displacing the 'real' direct object which gets a semantic role from N-V. 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   **kiyaa**
   Mohan-m.sg-Erg self's mother-father-Dat   memory-f do-Pf-**msg**
   'Mohan$_i$ remembered/recalled his$_{i/j}$ parents.'

   b. *moohan$_i$ -**koo**   apnee$_i$ maaN-baap yaad* aa-**ee**
   Mohan-m.sg-Dat self's mother-father-Nom memory-f do-Pf-**mpl**
   'Mohan$_i$ remembered/recalled his$_{i/j}$ parents.'

I treat these options as the result of incorporation of N into V, creating a predicate with a single argument structure. This possibility is not an option for all N-V combination, but those combinations which do allow it are numerous (to judge by examples of N-*kar-naa* combinations in Bahl 1974, 1979). I represent the VP derivation as (42)

(42)   VP   <1*,2*,e>

   PP   V' <1,2*,e>

   NP   Dat   NP[nom]   **V** <1,2,e>

            N <1,2>   V<1,2,e>

      yaad 'memory'   aa- come'

For such lexical combinations, theta identification is an option at the very first merger of N and V. These predicates are very much like A-V combinations, such as *pasand aa-naa ' liked-come'* (McGregor 1995). The A-V combination introduces   theta grids <1,2> without argument status for A or a need for checking case.

6. Conclusions

In this paper I have defined transitivity in HU in terms of argument structure. 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 (most apparent for class C verbs) 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 vP 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).

This distinction of syntactic structure extends to complex predicates N-V, which must accommodate an 'extra' argument: the N itself has argument status. I propose a simple extension of the analysis for simplex verbs. The V component of a complex predicate contributes the event argument , a theta grid, and some case and aspectual properties, depending on whether it is a class A or C verb itself. The N contributes a theta grid of the 'real argument' and may also have some lexical case properties. 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 chares 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.

Acknowledgments

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 (1997)and 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).

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. *woo /*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:

(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 assumption of volition or intention. Some are monomorphemic simplex verbs like *deekh-naa*, which can mean 'see' and as 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'	maar khaa-naa 'undergo a beating'
beeNt khaa-naa 'get beaten with bamboo'	maat khaa-naa 'get defeated'
dhookhaa khaa-naa 'be deceived'	meel khaa-naa 'to be in agreement'
Gam khaa-naa 'to experience, endure sorrow'	qasam khaa-naa 'eat a vow, take a vow'
goolii khaa-naa ' get hit by a bullet	Sikast khaa-naa 'be defeated'
Gootaa khaa-naa 'get a ducking, nearly drown'	thappaR khaa-naa 'get slapped'
juutii khaa-naa 'get hit with a shoe'	Thookar khaa-naa 'stumble'
kooRaa khaa-naa 'get whipped'	

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 1999, 2001a.

7. Ura 2000: 206-8 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.

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'.

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

12.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-10 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(eg. Ura 2000:29.

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 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.

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

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).

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 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.

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'.

18. A solitary exception is *dee-naa* 'give' in combinations *dikhaaii, sunaaii dee-naa* 'see, hear'. The main verb *dee-naa* 'give' belongs to class A, with obligatory ergative case. In this complex predicate, it has lost both the requirement of ergative case and also a durative, dynamic aspectual meaning; the event can be fragmentary, incomplete or instantaneous.

19.The N in (ia) may have a theta grid <1,2> but not have an event argument e, which would be introduced by V <1,2,e>, 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.in sentences such as (ia). Arguments are coindexed if a light V is present (ib):

(i)   a. * *[raam$_i$-kaa apnee-koo/kee liyee **dhookhaa**] kaanuun-kee   xilaaf nahiiN hai*
              Ram-Gen self   -Dat/ for sake deception law   -Gen   against not is
              'Ram's deception of himself is not against the law.' (Davison 2001b)

       b. *[raam$_i$ -kaa khud$_{i/*j}$-koo **dhookhaa dee-naa**] kaanuun-kee xilaaf nahiiN hai*
           Ram -Gen self   -Dat deception give-Inf law   -Gen against not   is
           'It's not against the law [for Ram$_i$ to deceive himself].'(Ibid)

20. 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.

21. The light verb of course might select a locative case. The N *bharoosaa* 'confidence' also combines with *rakh-naa* 'place', which does select *-par* 'on'. The question is how to explain the appearance of a locative on the argument of a verb like *kar-naa* which normally does not allow a locative argument.
          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.
(i)

                         vP <1*,2*>
                  3
            DP   v'
          [Subject]   3
                VP<<1<2*>>*>   v [Light verb] <1<2*>*>
                  3
              PP   V <1, <2>>'
          2   3
        DP   par 'on' N<1,2>   V kar 'do' <1.2>
                         bharoosaa
                         'confidence'

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..

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