

Non-nominative subjects in Hindi/Urdu VP structure and case parameters

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Introduction

Languages differ from one another in the cases which mark arguments, and the lexical and syntactic conditions on specific cases. Languages also differ in how the arguments of a verb are projected syntactically, as subjects or objects or oblique arguments. Verbal agreement is normally associated with subjects, and with nominative case. Linguistic theories which give central importance to a link between the subject grammatical role and nominative case, and verbal agreement, must allow extension of their constitutive principles to accommodate non-nominative arguments with subject properties. For this reason, more importance is given to the basic sentence requirement that there is a subject projected in the clause, specifically the Extended Projection Principle (Chomsky 1995).

In this paper, I will use the Chomskyan grammatical theory as modified in Ura 2000, specifically to account for 'split' subject properties. I will modify and extend this theory to account for the similarities in Hindi/Urdu between ergative and other postpositional cases, and more importantly, their differences. The central difference is the distinction between a structural case (ergative) and lexical cases (dative and other cases selected by lexical cases), which in turn will follow in my analysis from a difference of the verbal projection. The verbal projection contains all the arguments, including the subject, which then raises a VP- external position. The verbal projection itself may consist of a minimal VP project, or a complex vP (light verb projection with internal VPs). The internal structure of the VP projected by a lexical item in this analysis reflect the aspects of its semantic composition which determine case selection and also the grammatical function which each argument may assume. Not all verbal projections, then, are the same syntactically.

Nominative case and agreement

In many languages, subject properties coincide without exception with nominative case on the nominal phrase and person/number (gender) agreement on the finite verb. Hindi/Urdu conforms partially to this pattern. Finite verb agreement in Hindi/Urdu is found only with nominative DPs. This is not an uncommon restriction in languages with a single set of agreement features (number, gender, person, or AGR features), reflected on the verbal complex consisting of V and tense/aspect inflection. But Hindi/Urdu diverges from the pattern which is common in languages with nominative case associated with agreement. Subjects in this language are not uniquely identified by nominative case and agreement. In the following sentences (1)-(4) the AGR

features are determined by some factor other than the PNG of the syntactic subject. The AGR features are determined by a nominative subject, as in (4):

- (1) *bacoonN-nee_i **apnii**_{i/*j} **billii** deekh-ii*
 children-erg self's cat.fs see-pf.fs
 'The children_i saw/looked at self's_{i/*j} cat.'
- (2) *bacoonN-koo_i **apnaa**_{i/*j} **kuttaa** dikhaaii di-yaa (hai)*
 children.mpl-dat self's dog.ms sight.fs give-pf.ms be.pres.3s
 'The children_i (have) caught sightof /seen self's_{i/*j} dog.'
- (3) *baccee-nee apnee maaN-baap -kii **yaad** kii*
 children.mpl-erg self's mother-father.mpl -gen memory.fs do.pf.fs
 'The children remembered/recalled their parents.'
- (4) a. ***baccee** apnii billii-koo khooj-tee rah-tee haiN*
 children.mpl-**nom** self's cat-dat search-impf.mpl stay-impf.mpl be.pres.3pl
 'The children keep on searching for their cat.'
- b. ***Daakuu** haveelii-kaa darwaazaa tooR cal-ee thee.*
 thieves.mpl. mansion-gen door.msg. break go-pf.m.pl be-pst.mpl
 'The thieves were about to break into the door of the mansion.' (Nespital 1997: 677)

The DPs which control agreement (in bold) are all nominative, including direct objects (2), and the N component of a N-V complex predicate (3). The sentence may have no nominative argument, if all DPs have postpositional marking (5).

- (5) *bacoonN-nee_i apnii_{i/*j} billii-koo deekh-aa*
 children-erg self's cat.fs-dat see-pf.ms
 'The children_i saw/looked at self's_{i/*j} cat.'

In that case, the verbal complex has the default 3ms inflection. Agreement is licensed even without a nominative argument, but a nominative argument will always control inflection, possibly in competition with other nominatives. The sentences (1)-(4) show that preference is given to subjects over objects.

Overview of case and subject properties of Hindi/Urdu

In this section, I focus on the crucial properties of case and grammatical function marking in HU. This language has dative case, ergative case, and other postpositional cases, as well as unmarked nominative case. Nominative case occurs only on arguments, which may be direct objects and predicate N, not just subjects. For this reason, agreement associated with nominative case refers to subjects, direct objects and predicate N, so that agreement is not a sufficient condition for identifying subjects.

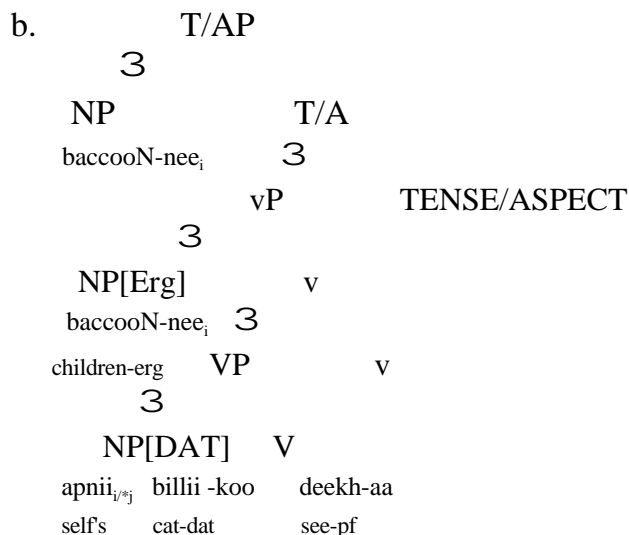
Both nominative and ergative subject case are associated with finite tense. Ergative case is also

associated with perfective aspect. Both tense and aspect are functional categories. Dative case marks specific or human (or animate) direct objects in some types of transitive verb. These are just the verbs which allow or require ergative subjects. We may postulate a functional projection within the verbal projection which licenses dative case on direct objects (such as AGR in Koizumi 1995, or Pred in Bowers 1993, or ASPECT in Travis 1997, Slabakova 2000). Structural case will be licensed by functional projections (Chomsky 1995). Other kinds of case are associated with specific lexical items, and are related to the theta role of a specific argument- for instance, experiencers and goals are associated with dative case. Lexical case is assigned by specific lexical items, verbs or event nominals, and checked at the same time as theta roles are checked (Chomsky 1995, Ura 2000).

Clause structure-basic assumptions for Hindi/Urdu

In the formation of clauses in HU, grammatical functions are defined both by movement for checking structural case and also by the Extended Projection Principle, which requires a subject in the specifier of TENSE. Because DPs with lexical case do not have to move for case checking, there are multiple possibilities for derivation not found in all languages. I will assume the basic clause projection in Hindi/Urdu looks like (6b)

- (6)a. *bacooN-nee_i apnii_{i/*j} billii-koo deekh-aa*
 children-erg self cat.fs-dat see-pf.ms
 ‘The children_i saw/looked at self’s_{i/*j} cat.’



I adopt the general assumption that all types of structural case licensing involves feature checking, so that case features are associated with the DPs which are merged into the syntactic structure, such as [Erg] and [Dat] in (6b), as in Chomsky 1995. Ura 2000 refines this approach to account for a wide range of syntactic variants in the ways which languages may define grammatical functions. Instead of a unitary conception of grammatical functions such as subject, Ura proposes to reduce the subject relation to a number of syntactic relations to functional

projections, which may refer to the same DP, or be divided between two DPs. Below, I sum up the basic assumptions underlying (6b), which will be translated into feature values for HU below in (25)

- (7) a. Theta roles are assigned in the verbal projection by verbal heads.
 b. HU requires a specifier of TP in overt syntax (though the Spec/TP may be null pro).
 c. Nominative case [Nom] and agreement features are associated with each other--only nominative DPs control agreement, as in examples (1)-(4) above.
 d. There are default agreement features 3ms if the sentence contains no nominative argument, as in (5).
 e. Nominative case is found on internal arguments, direct object and complex predicate arguments (1)-(3), as well as on the external argument in Spec /TP. So nominative case is not associated exclusively with the position Spec/TP.
 f. Lexical case (and some component of ergative case) is checked with theta role assignment within VP a. HU requires a specifier of TP in overt syntax (though the Spec/TP may be null pro).

Subject properties

In this section, I review subject properties, and show that these properties are associated with ergative and dative subjects as well as those with nominative case. Subject properties in Hindi/Urdu are based on coindexing relations: reflexive binding, control of PRO in the conjunctive participle, and on construal relations: 'subject orientation', or selective reference to the subject argument of the main verb.

The subject properties of DPs with these cases have been documented for HU in many earlier works. The subject properties of ergative DPs is the topic of Pandharipande and Kachru 1976, Kachru, Kachru and Bhatia 1976, Verma 1976, Davison 1985, Mohanan 1994, etc. The subject properties of dative DPs has been argued for by Davison 1969, Kachru 1970, Davison 1988 and Mohanan 1994. Mohanan 1994 has a more extended review of subject properties, including passive sentences, and the full range of lexical cases (dative, instrumental, locative), which I omit here.

Subject oriented reflexive binding

Reflexive anaphors in Hindi/Urdu are not inflected for PNG features (like English *themselves*, *itself*), and are subject oriented. Anaphors are locally complementary with pronouns (8) with respect to their antecedents.. Reflexives have only subject antecedents, while pronouns may not be coindexed with a local subject. If more than one antecedent is semantically possible, only the subject is coindexed with the reflexive (9). These principles govern both the possessive reflexive (8) and the argument reflexive (9). The reflexive SELF is coindexed only with the subject, but the pronoun is disjoint from the local subject (8):

- (8) *baccee_i-nee* [*duusree baccee_j -see*] *apnee*j/us_{*i/j/k}-kee* *khilaunee chiin li-ee*
 child-erg second child-from self's/ 3sg-gen toys snatch take-pf

'[One child_i] snatched from [another child_j] [self's_{i/*j} /his_{*i/j} toys].' (Davison 2001:51)

- (9) **woo_i** *baccee_j-koo apnee-aap_{i/*j}-see kaisee alag kar sak-tii hai?*
 3s- child-dat self's self-from how separate do be.able-impf is
 'How can she_i separate/remove the child_j from self_{i/*j}?' (herself/*itself)

Ergative subjects consistently serve as antecedents for reflexives (10)-(11)). The subject orientation extends to long-distance (11) as well as local antecedents (10).¹

- (10) **bacooN-nee_i** *apnii_{i/*j} billii deekh-ii*
 children-erg self's cat.fs-nom see-pf.fs
 'The children_i saw/looked at self's_{i/*j} cat.'
 (11) **maaN_i-nee** *raam_j-koo [PRO_j apnee-aap_{*i/j}-koo gumnaam patr*
 mother-erg Ram-dat. self-(self)-dat anonymous letter
likh-nee]- kee liyee manaa kiyaa
 write-inf -gen sake forbid do-pf
 'Mother_i forbade Ram_j [PRO_j to write self_{i/j} anonymous letters].'
 [Simplex] *apnee-koo* = Ram(preferred)/mother
 [Complex] *apnee aap-koo* = Ram/*mother

Dative experiencer DPs may also bind reflexives (12) - (13), with some other possibilities for the sentence type in (13) to be explored below (36-41):

- (12) **bacooN-nee_i** *apnii_{i/*j} billii-koo deekh-aa*
 children-erg self's cat.fs-dat see-pf.ms
 'The children_i saw/looked at self's_{i/*j} cat.'
 (13) **bacooN-koo_i** *apnii_{i/*j} billii dikhaaai dii (hai)*
 children.mpl-dat self's cat.fs sight give-pf.fs be.pres.3s
 'The children_i (have) caught sight/seen self's_{i/*j} cat.'

If reflexive binding of uninflected non-phrasal anaphors is confined to subjects, then we can conclude that the ergative and dative DPs are both in Specifier of TENSE position, or whatever functional projection which is outside the V projection and which hosts the reflexive clitic and its antecedent. One such analysis proposes that non-phrasal reflexives cliticize at LF to a clausal head and agree with the DP specifier, in phi features (Cole, Hermon and Sung 1990, Cole and Sung 1994, for Chinese) or in referential indices, for Hindi/Urdu (Davison 2001).

Controlled PRO as subject, and subject oriented

The null category PRO is obligatory in certain embedded clauses where coindexation with a matrix constituent is required. One such context is the conjunctive participle marked by the suffix *-kar* on a bare (tenseless) verb stem.² The null embedded subject in this construction must be coindexed with the matrix subject, and not with some other referential phrase in the matrix (14)-(15). Though there are two plausible semantic antecedents in (14)-(15), only one, the subject (in bold) counts as the controller antecedent of PRO.

- (14) [PRO_{i/*j} is-baat-koo sun-kar] *pita_i-nee apnee_{i/*k} beeTee_j -koo*
 this matter-dat hear-prt father-erg self's son -dat
maaf kar di-yaa
 pardoned do give-pf
 '[PRO_{i/*j} having heard this news], father_i forgave self'_{s_{i/*k}} son_j.'
- (15) [PRO_{i/*j} is-baat-koo sun-kar] *pita_i-koo apnee_{i/*k} beeTee_j -par taras aa-yaa*
 this matter-dat hear-Prt father-dat self's son -on pity come-pf
 '[PRO_{i/*j} having heard this news, father_i felt pity for self'_{s_{i/*k}} son_j.'

This requirement refers specifically to subjects, not topics or thematically prominent DPs. Hindi/Urdu specifies possible subjects lexically. For example, the goal argument for the verb *mil-naa* 'to get' is a subject, and may bind a reflexive (16). The language does not allow a new grammatical subject to be created by a process like passive (17):

- (16) *us_i -koo apnii_{i/*j} Daak nahiiN mil-eegii*
 3s -dat self's mail.fs not receive-fut.3fs
 'He/she will not receive self's mail.'
- (17) * [PRO*_{i/*j} ghar badal-kar] *us_i-koo apnii_{i/*k} Daak_j pahuNc-aa-ii nahiiN ga-ii*
 house change-prt 3s-dat self's mail arrive-cause-pf.fs not go-pf.fs
 '[PRO*_{i/*j} having moved], he/she_i couldn't be forwarded self's*_{s_{i/*j}} mail.'
 (Grammatical as 'Because I moved, I couldn't forward him/her/ my mail.')

The indirect object goal in (17) does not have the binding and control properties of a subject even though it is the 'highest' argument expressed in the matrix clause. It cannot be the controller of PRO or the antecedent of *apnii*. The grammatical function of subject, as we have seen, is not defined by case alone, but rather by specific syntactic relations, which will be clarified in more detail below. Since no such subject DP is available in (17), it is ungrammatical with a 3rd person antecedent, though for some speakers the sentence has a well-formed interpretation in which the unexpressed agent of the passive sentence, with a default first person meaning, is coindexed with PRO and *apnii*.

Control of PRO by a subject antecedent is required for the conjunctive participle. PRO itself is confined to subjects if the complement clauses is infinitive. There are some interesting consequences for the subject properties of dative experiencers in controlled PRO constructions; they will be explored below (39-41).

Subject-oriented auxiliaries

A third category of subject definition which has not received much notice, as far I am aware, involves auxiliary verbs. While the familiar 'vector' verbs *lee-naa* 'take', *dee-naa* 'give', etc. refer to ergative as well as nominative subjects (Hook 1973), there are others with an auxiliary meaning which are possible with both ergative and dative subjects, as well as nominative subjects. These auxiliaries include *paa-naa* (Lit. 'find') 'manage' (18), *sak-naa* 'be able'(20), and *baiTh-naa* (Lit. 'sit') 'to do inadvertently, to not be able to help doing' (19) and (21).

- (18) *usee dukkh thaa [ki woo apnee parivaar waalooN-kee liyee*
 3s-dat sorrow was that 3s-nom self's family -gen for
bas itnaa hii kar paa-yaa
 enough so much emph do manage-pf
 'He was sad that he managed to do only so much for his family members.'
 (Nespital 1997:804)
- (19) *maiN aap-kii Daak paRh baiTh-aa huuN*
 I-nom you-gen mail read sit-pf am
 'I read your mail inadvertently (before realizing it was not addressed to me); I
 couldn't help reading your mail.'
- (20) *maiN yah taaraa deekh nahiiN sak-ii (huuN)*
 I-nom this star see not be able-pf am
 'I wasn't able to see that star.'

The particular meaning contributed by the auxiliary verb refers to the properties of the referent of the subject phrase rather than the direct object referent. This is redundantly true when the direct object DP refers to something inanimate and inert, as in (18)-(21), but also when the referent is animate. If both the experiencer and theme refer to animate entities, then there two possible arguments which could have the properties expressed by the auxiliary. But these auxiliaries are selective, picking out only the subject. A morphological feature of these auxiliaries is that subjects may not be ergative (19-20). Some speakers allow the subject to be dative (21):

- (21) *mujhee us-par kroodh aa baiTh-aa*
 I-dat 3s-on anger come sit-pf
 'I couldn't help getting angry at him/her.'

For the speakers who accept sentences such as (21), these auxiliaries cut across subject case possibilities. They combine with verbs which otherwise require ergative subjects as well as those which require nominative subjects, and for some speakers, also verbs which require dative subjects.

Summary of subject properties

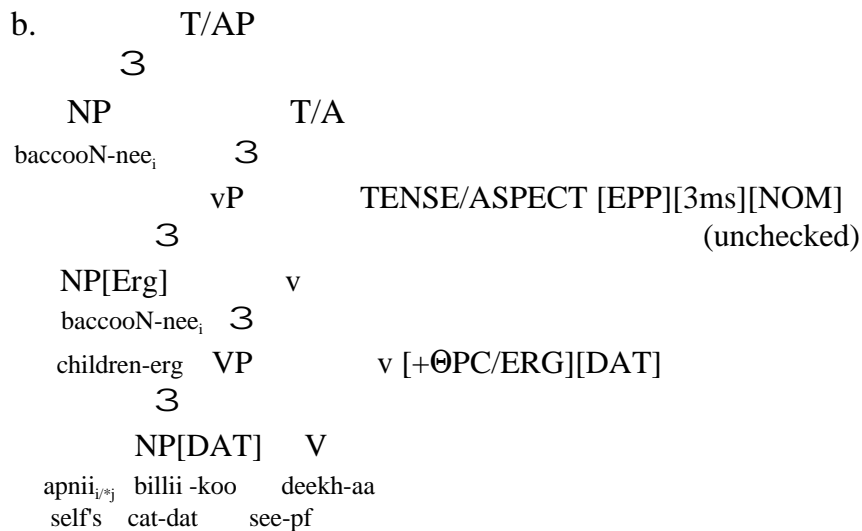
The focus of this section has been to define which syntactic relations are related to the grammatical function of subjects, and what case marking a subject may have. Only ergative case is specific to subjects. Verb agreement is associated with nominative direct objects or predicate N as well as nominative subjects.

- (22) Subject, coindexing and construal properties:
- a. Local/long -distance reflexives (animate, 3p antecedents are only subjects)
 - b. Controller of PRO--V -kar is only a matrix subject; PRO is only a subject.
 - c. Subject -oriented auxiliary verbs:
sak-naa 'to be able',
paa-naa 'to find, to manage'
baiTh-naa 'sit, do something inadvertently, which ought to have been avoided'

Feature values and subject properties

Returning to the derivation of a typical sentence with an ergative subject (24a), I propose that the structure which derives it has the feature values as in (25b). The Case feature on DP subjects is checked by functional heads (TENSE and ASPECT, here combined) which have with those features. This example shows a sentence with default agreement because there is no nominative argument. The [NOM] feature on TENSE need not be checked because Hindi/Urdu belongs to the class of languages which allow 'impersonal' sentences. HU is a language which requires a syntactic subject in Spec/TENSE, whether or not the subject triggers agreement. Agreement is blocked by postpositional case, as in (24), which has an ergative subject and dative direct object:

- (24)a *bacooN-nee_i* *apnii_{i/*j}* *billii-koo* *deekh-aa*
 children-erg self's cat.fs-dat see-pf.ms
 'The children_i saw/looked at self's_{i/*j} cat.'



Sentence derivation

These parametric choices affect the derivation of the sentences in (24a). Theta roles are assigned as the arguments are merged in the verbal projection (a), and the external argument DP in the specifier of the vP projection moves to the Specifier of TENSE to satisfy the [D] categorial feature of TENSE (25b).

- (25) Feature parameters (expressing the generalizations in (7):
- a. *Theta roles are assigned when DP is merged with the verbal projection.*
 Theta roles are assigned in the verbal projection by verbal heads.
 - b. *The Extended Projection Principle [D] category feature (EPP) is strong.*
 HU requires a specifier of TP in overt syntax (though the Spec/TP may be null pro).

In sentence (24a), there is no nominative argument, but default agreement features are licensed

without [Nom] (25d). But if there were a nominative argument, its feature and AGR features would be checked together (25c).

- (25) c. *[Nom] and phi features [AGR] are checked together.* (Ura 2002:54)
Nominative case [Nom] and agreement features are associated--only nominative DPs control agreement. (as in examples (1)-(4) above),
d. *The Impersonal Parameter holds; the [Nom] feature of Tense need not be checked* (Ura 2002:36-38).
There are default agreement features, 3ms, if the sentence contains no nominative argument, as in (5).

HU is consistent in that whatever DP has nominative case can also control agreement features.³ The features are weak, meaning that they features can be checked covertly (by movement or agreement of features), without necessitating overt movement of the full object phrase. Nominative objects remain in place, nominative subjects are in Spec/TENSE because of the strong EPP category feature (b).

- (25) e. *[Nom] and phi features [AGR] are both weak, not requiring overt movement to subject position* (Ura 2000:121).
Nominative case is found on internal arguments, direct object and complex predicate arguments (1)-(3), as well as the external argument in Spec /TP. So nominative case is not associated exclusively with the position Spec/TP.
f. *The Theta Position Checking Parameter holds (+ Θ PC, Ura 2000:36)*
Lexical case (and some component of ergative case) is checked with theta role assignment within VP).

In addition, some specific assumptions need to be made about the postpositional cases of Hindi/Urdu (26):

- (26) a. The Dative case on experiencers and goals is theta-related, and selected by specific predicates. So it is a lexical case assigned by V and checked by V (25f). The same is true for other postpositional lexically selected cases (see Mohanan 1994 for a range of case uses for subjects and objects).
b. Ergative case associated with transitive subjects is a structural case, dependent on finite tense and perfective aspect in functional projections (see Davison 1999a,b, to appear, for support for these conclusions, and Appendix I, III).
c. Dative case on direct objects is a structural case, checked by the v head of VP (Davison 1999b).

If structural dative is possible on the direct object, then ergative is possible on the subject in finite, perfective sentences. Some exceptional verbs allow a dative object, but do not require an ergative subject (Davison Here I will assume that the light v has a weak [dat] feature, so that it can check dative direct object case without overt phrasal movement.

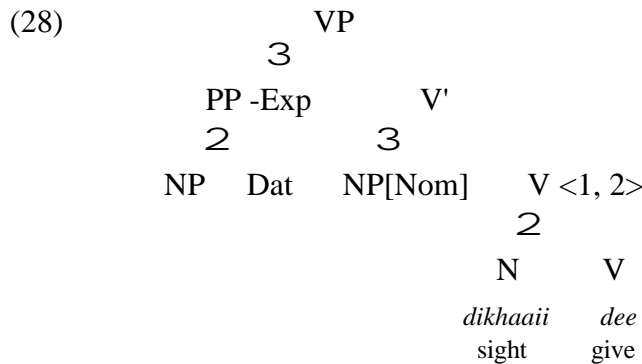
In sentence (24a) above the ergative case is partially checked by the main verb (+ Θ PC/ERG).

and licenses dative structural case on direct objects.

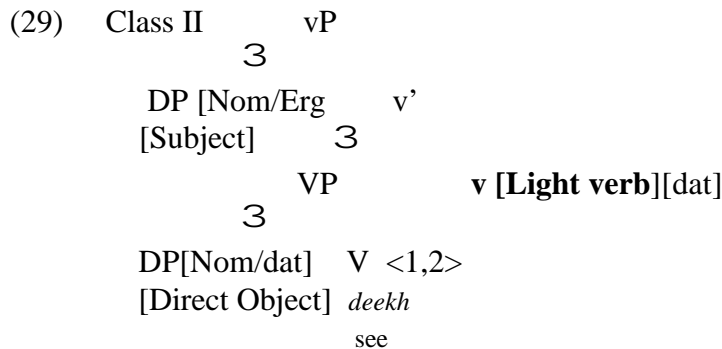
These two structural possibilities produce different classes of verbs, with different case arrays, as well as different possibilities of subject selection. The VP alone is underspecified for aspect. In combination with imperfective sentence aspect (or viewpoint aspect as in Smith 1997), the interpretation is stative. In combination with perfective sentence aspect, the interpretation is perfective, change of state or resulting state. With the light verb projection vP, the verb is specified for +/- *dynamic* (state versus event), +/- *durative* (activity, accomplishment vs. achievement, semelfactive) and +/- *telic* (states and activities versus accomplishments and achievements). In addition, the light verb v projects the external argument as Specifier. It assigns its specifier a theta role (Agent, experiencer, patient, goal). In addition v may have a [dat] structural case feature which licenses dative direct objects.

Verb classes and case arrays

There are at least four lexical classes resulting from this lexical parameter, which I have discussed elsewhere (Davison to appear). Here I will focus on two classes, whose verbal projections are (28) and (29).



The N-V predicate is an 'unaccusative' predicate V' plus a lexically cased 2nd argument. There is no case-licensing functional head which checks the case of the object.



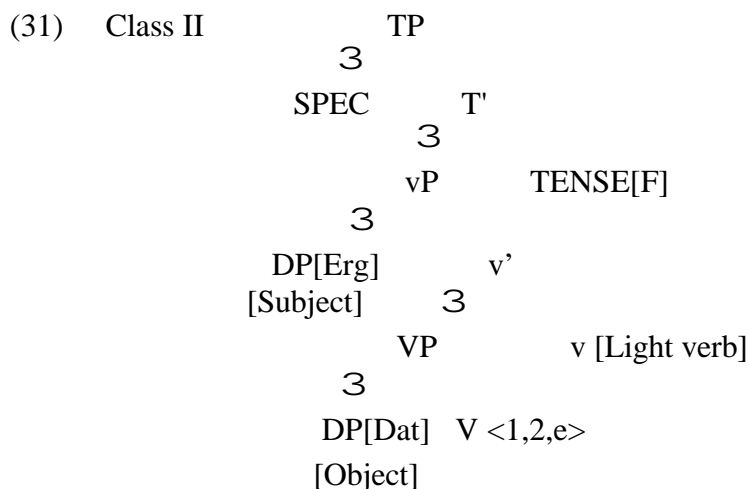
VP class I predicates have the case array in (30a), while vP Class II predicates have a different case array (30b):

- (30) a. VP Dative subject lexical case object or nominative
dikhaaii dee-naa 'be visible, see, glimpse'
suujh-naa 'see, come to mind'
pasand aa-naa 'like, be pleasing', *bhaa-naa* 'suit, like'
khiijh hoo-naa 'irritate, annoy'
Dar hoo-naa 'fear, be afraid of'
maaluum hoo-naa 'know'
yaad aa-naa 'remember, miss someone'
- b. vP Ergative/nominative subject dative/nominative object
deekh-naa 'see, look at'
sun-naa 'hear, listen to'
pasand kar-naa 'like'
bhuul-naa 'forget'
jaan-naa 'know'
yaad kar-naa 'remember, recall'

Class II predicates are associated with structural case on both subject and object. These cases are checked by functional projections. As the tree structure (24b) shows, I assume that the functional projections which assign the subject theta role (v) and subject case (TENSE /ASPECT) are different from the projection which licenses the direct object theta role (V) and case (v). The separation of projections for Class II is shown in (31).

Subject selection

This structure (31) places restrictions on which DP argument of a bivalent predicate may be raised to Spec/TENSE to satisfy the strong EPP feature:



The subject DP (Nom/Erg) is in a different syntactic domain (vP) from the object DP (V). Only the subject DP can be moved to Spec/TP, and serve as an antecedent for reflexives and PRO. In

- a. The Dative experiencer can check the Subject/EPP feature of TENSE.
- b. The Nominative theme can check the EPP feature, Nom/AGR features.
- c. Either the experiencer or theme argument can bind reflexives.
- d. Either argument can be controlled PRO.

Reflexive binding

These predictions are supported by evidence from Hindi/Urdu constructions which refer to subjects. The strongest and most general evidence comes from reflexive binding. Ergative subjects bind only reflexive pronouns; pronouns are obligatorily disjoint in references from local subjects (36).

- (36) a. *moohan_i -nee apnee_i/*us-kee_i maaN-baap -kii yaad kii*
 Mohan.ms-erg self's /3s-gen mother-father-gen memory.fs do-pf.fs
 '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.ms-nom self-'s /3s-gen dog.ms liked do-impf.ms is
 'The master likes self's_{i/*j} /*his_{i/j} dog.'

As Saxena (1985) and Gurtu (1992) observed, dative subjects bind either a reflexive or a pronoun. (37).

- (37) *moohan_i -koo apnee_{i/j}/*us-kee_{i/j} maaN-baap -kii yaad aa-ii*
 Mohan.ms-dat self's/ 3s -gen mother-father-gen memory.fs come-pf.fs
 'Mohan_i remembered self's/his_{i/j} parents.' (cf. Saxena 1985)

:

As the binding evidence in (36) shows, if a DP is a subject, it cannot locally bind a pronoun. So if dative DP locally binds a pronoun, it is not a subject. The dative DP in (37) is either a subject binding a reflexive or not a subject, binding a pronoun. Lexically cased dative DPs have the option, therefore, of not raising to Spec/TP to satisfy the EPP requirement. This option of subjects to remain in VP is forced by a language-specific constraint, that reflexives cannot have nominative case (38a). The internal argument of a dative experiencer predicate has nominative case.

- (38)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) [Experiencer as subject]
- b. *raam_i sirf apnee (aap)_{i/*j}-koo acchaa lag-taa hai*
 Ram-nom only self's self -dat good strike-impf is
 'Ram likes only himself.' (Ibid) [Theme as subject]
- c. *[kumaar apnee aap-koo/khud-koo acchaa lag-naa] swabhaavik hai*

Kumar-nom self's-self-dat /self-dat good strike-inf natural is
 'It is natural [for Kumar to like himself].' (Ibid) [Theme as subject]

To avoid this constraint on nominative reflexives, the internal argument or theme may raise to Spec/TP for the EPP feature, while the dative argument stays within VP. The reflexive argument is therefor dative in (38b-c), bound by the nominative subject.

Subject control and the 'Dative effect'

A second class of evidence comes from control. Only subjects can be controlled PRO. There is a language-specific constraint that dative experiencer subjects cannot be PRO in contexts of obligatory control (the 'Dative Effect'). The class I verb *bhaa-naa* 'like, suit' requires a dative experiencer (39a):

- (39)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]', or
 'These people don't want [/PRO to like this girl].'
- c. (?) *yah laRkii [PRO un loogooN-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.]' or 'this girl
 doesn't want [those people to like PRO.]' [cf. Hook 1990]

If the dative experiencer is put in an embedded infinitival context where subjects must be coreferent, the results are robustly ungrammatical, a judgement which is widely shared by speakers of Hindi and Urdu (39b). For some speakers, it is possible to embed a sentence like (39a), but with the nominative theme NP as the PRO controlled subject (39c) (Hook 1990).

This possibility is not available for any speakers if the embedded verb is of class II, with a vP projection. The sentence (40a) is robustly ungrammatical for all speakers consulted.. Objects in vP projections are not controlled, because they cannot move for the EPP feature to Spec/TP (40b) without violating Equidistance (33):

- (40) 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 [baccaa PRO deekh-naa] nahiiN caah-tii hai*
 cat.fs-nom child.ms-nom see-inf not want-impf.fs is
 'The cat doesn't want [the child to see PRO].'
 NOTE: possible as 'the cat doesn't want [PRO to see the child]', with dative case on the direct object.

The Class II verb *deekh-naa* 'see' has Class I near synonyms *dikhaaii dee-naa*, *dikh-naa* 'be seen, see, glimpse'. With the VP projection containing both arguments, the dative control restriction can be avoided, for some speakers, as in (41):

- (41) *billii [PRO baccee-koo diikh-naa/dikhaaii dee-naa] nahiiN caah-tii hai*
 cat.fs- child.ms-dat be-visible-inf/be-seen-inf not want-impf.fs is
 'The cat doesn't want [the child to see PRO/PRO to be visible to the child].'

Subject oriented auxiliaries

Subject-oriented auxiliaries are also sensitive to subject status, and allow some variation what the subject is, at least for some speakers. These auxiliaries refer to some property of the subject (18)-(21), such as ability, success in carrying out an intended act, and in failing to avoid an unfortunate event. The auxiliary *baiTh-naa* 'sit' conveys the meaning that the subject inadvertently did something which should have been avoided (19) and (21). Class II vP verbs select just one subject, so that the sentence (42) is unambiguous--the speaker should go along with the child's game of hiding, but can't avoid seeing the child.

- (42) 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 dee baiTh-aa*
 I-dat curtain-gen back hide-pf- be-pf child 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.'

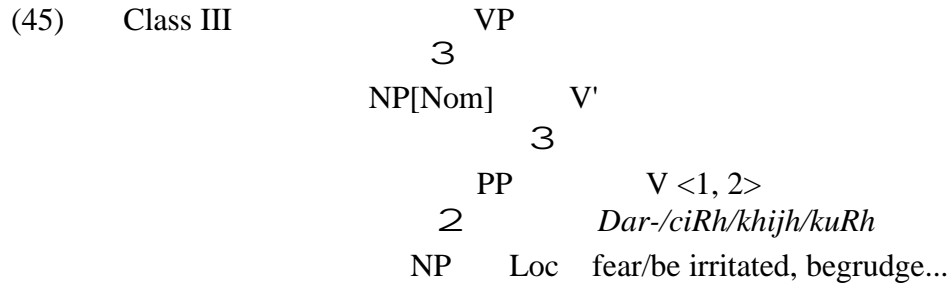
But Class I VP projections have two choices of subject, and so there are two interpretations, one involving referent of the experiencer and inability to avoid seeing, and the other referring to the theme, and inability to avoid being seen. (This judgement is not universally shared, however.)

Other class options for VP

The same VP structure I have proposed for Class II offers other case possibilities. Another case array is possible, what I call Class III (43)-(44), which has the VP structure (45). Like Class I verb, these verbs are underspecified for verbal aspect/Aktionsart. They get a default interpretation from the sentence aspect- they are telic with perfective aspect or stative with imperfective aspect. Class III sentences have nominative subjects and an oblique theme or source.

- (43) *baccee kuttee-see Dar ga-ee*
 children-nom dog-from fear go-pf.mpl
 'The children got frightened of the dog.' [change of state, resulting state]
 (44) *maiN apnee (aap)-see ciRh -tii huuN*
 I-nom self's-self -from be irritated impf am

'I have an aversion to myself, I am irritated with myself.' [stative]
 also *khijh-naa* 'be irritated (at)', *kuRh-naa* 'begrudge, resent'



Both arguments are equidistant from TENSE and its [D] category EPP feature, so that either argument could be selected as a subject in Spec TP. But there is no advantage to selecting the theme/source as subject. If the arguments are coindexed, there is no violation of a constraint if the locative DP is a reflexive (44). The experiencer DP may be controlled PRO, the locative DP may not, so there is no advantage to be gained by raising it to satisfy the EPP feature.

Summary of subject selection and verbal projection

In summary, we have seen in this section that Class II verbs projected as complex vP shells (13). Subject selection is stable; there is only one choice of subject which can bind a reflexive, be controlled PRO, and be related to a subject-oriented auxiliary.

On the other hand, Class I verbs projected as a simple VP show variability of subject choice. Either the experiencer (the default) or the theme can have the subject properties of binding a reflexive, be controlled PRO and be related to a subject-related auxiliary. The experiencer *can* therefore fail to be a subject. If the theme is selected as subject, then the experiencer DP can bind a pronoun, be lexically projected rather than PRO, and not be related to the auxiliary.

Subject fluidity in the Class I verbal projection is a consequence of a single VP projection which contains both the experiencer and theme arguments. The VP contains nothing which could license structural case. V assigns a lexical case to one argument, leaving the other argument to get Nom case licensed by TENSE (with or without overt movement).

The Class II complex vP projection has an internal projection ('light' verb(s)) which check the structural case on the direct object. Lexical cases may be assigned to the indirect object (not discussed in this paper) or other oblique arguments. Some part of the 'light' verb complex assigns case, and some component of it adds aspectual meaning. There are some indications about what that specification might consist of, indicated in the following minimal pair of Class I and Class II verbs which overlap in meaning (46)

- (46) a. *woo ghooRee jaan-taa hai* (class I)
 3sm horses know-impf is
 'He knows horses (intuitively, just by experience).'

- b. *usee ghooRee maalum haiN (class II)*
 3s-dat horses known are
 'He knows horses (through systematic and concerted learning).'

The paraphrase of the Class I predicate *maaluum hoo-naa* 'know, be acquainted with' suggests a kind of intuitive state or change of state meaning for the aspectually underspecified VP, while the vP class II version *jaan-naa* 'know, come to know' seems to involve incremental stages of knowledge. This evidence is only suggestive, and clearly far more systematic study of Class I/ClassII contrasts is needed.

The Dative subject parameter

The choices of ergative structural case on transitive subjects and of dative lexical case on experiencer external arguments has been characterized in an earlier section as choices of lexical parameters. The principal difference is that dative case in Hindi/Urdu is a lexical or inherent case, associated with a specific semantic role goal/experiencer, while ergative and nominative case are structural cases, sensitive to position and functional heads like TENSE, and not restricted to specific semantic roles. I have argued that ergative DPs must be subjects, and dative DPs may be subjects. If structural case checking of ergative DPs necessarily involves movement to TENSE, then ergative DPs are necessarily subjects. If checking of lexical or inherent case is different from structural case checking, and does not require movement to TENSE, then there are two options: (a) Dative experiencer DPs move to the Specifier of TENSE for some other reasons--to meet the requirement of TENSE for a syntactic subject--or (b) dative DPs do not move to the Specifier position of TENSE and are never syntactic subjects. I argue that Hindi/Urdu and many other languages make the first choice, while other languages may make the second.

Jayaseelan (this volume) argues that Malayalam is among the latter, because it is a verb-final language, with freedom of constituent order, and a null category may occupy the syntactic subject position. Many other languages have these parametric choices, including Hindi/Urdu, and other languages of South Asia. In fact dative subjects are a feature of the South Asian linguistic area (Masica 1976). Jayaseelan's parametric choices may not be sufficient to narrow down just the languages which do or do not have dative subjects. But in the spirit of his arguments, I want to propose a Universal Grammar parameter for languages with inherent dative case. The proposed parameter is the following:

- (47) Dative subject parameter
 Lexical dative case may/may not move to Spec/TENSE to check a Formal Feature such as EPP. Formally, DP[dat] does/does not match the [D] feature on TENSE.

Languages like Hindi/Urdu, Icelandic (Sigurðsson this volume), and Russian (Kondrashova 1994, Kallestinova 2002) have a positive value for (47). These and many other authors, show that reflexives and participles treat dative experiencer DPs as subject.

Languages which are very similar may show a positive or negative value. Hindi/Urdu is head final, has freedom of word order and allows null subjects. It also has ergative case on transitive subjects in finite, perfective sentences. Very close counterparts are Georgian, with ergative subjects in finite aorist sentences (Harris 1981), and Basque, which has ergative case in finite clauses (Ortiz de Urbina 1989). Georgian has dative subjects of transitive verbs in the aorist tense, and dative experiencer subjects in all tenses (48a), while Basque does not allow the dative experiencer DP to be a subject at all. In Georgian, dative experiencers antecede subject oriented reflexives (Harris 1981:205-8):

(48) [Georgian]

- a. *vanos uqvars tavsı tavi*
 Vano-dat he.loves.him.I.4 self's self-nom
 'Vano loves himself.' (Harris 1991:208)
- b. **tavis tavs uqvar vano*
 self's self-dat he.loves.him Vano
 'Vano loves himself.' Ibid

Georgian allows nominative reflexives (48a), and does not allow the nominative DP to be subject (48b), so that Georgian seems not to have the fluidity of subject selection found in Hindi/Urdu Class I predicates.

Basque, in contrast, requires the nominative DP to be subject, and does not allow dative subject experiencers.(49):

(49).[Basque]

- mere buru-ari (ni) nazgagarri natzaio*
 my head-dat I-abs disgusting be.pres.1sabs.1sdat
 'I am disgusting to myself.' Ortiz de Urbina 1989:37/Oihane Barrenetxea.p.c.

50)[Basque]

- ez diot [PRO nire burua-ri nazkagarri izan] nahi*
 not 1s.erg.3sdat my head-dat disgusting be.part. want
 'I don't want [PRO to be disgusting to myself.]' (Oihane Barrenetxea, p.c.)

The absolutive DP *ni* 'I' is the subject, c-commanding the reflexive dative DP in (49). The absolutive DP refers to the theme of the predicate 'be disgusting'. Some additional confirmation comes from (50), in which the absolutive theme corresponds to the controlled PRO, which is a subject --on the assumption that only subjects of non-finite clauses may be controlled PRO. Note that the dative experiencer remains within the embedded VP. This language, like Georgian, allows nominative reflexive subjects which are based on the lexical noun 'head'.

Sanskrit is of particular interest. Dative, accusative or genitive case may be selected by experiencer verbs such as *ruc* 'like, please', *tap* 'burn, cause pain'.. There are several different devices for reflexive coindexation including the noun *ātman* 'soul, self', which seem not to be consistently coindexed with a subject antecedent. The conjunctive participle marked with . -*tvā* or -*ya* 'having V-ed' requires a nominative or instrumental subject antecedent in the main clause. Tikkanen (1987) cites sentences from the Rgveda in which a participle subject is coindexed with

a matrix non-nominative subject, such as (51), and others (Hook 1985, Tikkanen 1987:147-52, Hock 1991).

(51) [Sanskrit]

[PRO striyam dṛṣtvāya] kitavam tatāpa

woman-acc see-prt player-acc causes pain

'[PRO having seen (this) woman] it distresses the player; the player feels pain.'

(RV 10.43.11a; Tikkanen 1987: 150.)

Hook (1985) notes that the grammar defined in the Paninian tradition does not allow for such a combination, but attested sentences of this type occur. In fact there could be ambiguous coindexing with either the experiencer or the theme (Hook 1985). Tikkanen and Hock show that there was much inconsistency in Sanskrit in these 'subject' oriented processes, perhaps reflecting dialect variation. It would be interesting to correlate the values of (47) with other formal properties of a language, such as strict subject orientation of reflexives and participles, the absence of a nominative reflexive, etc, but resolving this question is beyond the scope of this paper.

Conclusion

The starting point of this paper has been a proposal by Ura (2000) to state the parameters by which languages vary in defining grammatical functions. These parameters are expressed as conditions on the checking of case, agreement and EPP features, assuming that these features are checked in a syntactic relationship to various functional heads, particular TENSE and the light verb in the vP projection. The checking relation to these functional heads defines a subject or object property.

In this paper, I have surveyed the subject properties of non-nominative subjects in Hindi/Urdu, a language which has ergative subject case, and dative and other lexical cases on subjects. Subject properties involve coindexing relations, with subject-oriented reflexives, and the null subject of the conjunctive participle; subject oriented auxiliaries also refer to non-nominative subjects. Agreement, however, is not a subject-defining relation, as it broadly covers all nominative DPs, objects as well as subjects. I have defined the values for Hindi/Urdu for Ura's repertory of feature-checking parameters.

Most of these values are not very different from other languages of South Asia and elsewhere. What distinguishes Hindi/Urdu are some lexical parameters. One lexical parameter is the presence of ergative and dative postpositional case. Another lexical parameter is a possibility of projecting a bivalent V as a simple VP projection, rather than a complex vP which merges the subject and object in different maximal projections. This parameter choice allows several different types of V projection. The vP projection has a fixed subject, while the VP projection contains both arguments in the same maximal projection. Some latitude is possible in subject selection. Either argument may move to TENSE to satisfy the [D] requirement/EPP requirement on TENSE, which requires a specifier/subject.

Finally, a larger, perhaps lexical, parameter determines whether a dative DP may move to Spec. TP. Hindi/Urdu, Georgian, Icelandic, Russian and many other languages have a positive value, while languages like Basque prohibit dative subjects. Sanskrit shows many different coindexings for reflexives and conjunctive participles, though the traditional Paninian grammar disallows oblique subjects as antecedents (except for instrumental subjects). The syntactic coindexing principles in Sanskrit may not have been consistently fixed. The variation among languages described above leads to further questions, not answered in this paper, about what other properties of a language may entail a positive or negative value for this parameter.

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Appendix I -Ergative as a structural case

Here I present additional semantic and morphological arguments for the conclusion that ergative case in Hindi/Urdu is a structural case. It can be associated with a non-agent role, as in (1). The main verb is a complex predicate: N + **kar-naa** 'do N', **mahsuus kar-naa** 'to feel, experience'. This combination requires the ergative subject, because of the light verb *kar-naa* 'do'. But the semantic role of the subject is contributed by *mahsuus* 'feeling', which specifies an experiencer, not an agent.

- (1) *kanyaa-nee mahsuus ki-yaa [ki woo jiivan-meeN pahlii baar kisii puruS-kee*
 Kanyaa-erg feeling do-pf that 3s life-in first time some man-gen
aakarSaNpaash-meeN puurii taur-par bandh ga-ii hai.
 attraction-snare-in full state-in tied go-pf
 'Kanya felt for the first time in her life that she was completely snared in the trap
 of attraction to some man.' (Bahl 1974: 253).

A morphological argument rests on the use of imperfective aspect for counterfactual conditionals, even with perfective meaning. If the clause in (2) with obligatory ergative case is combined with a consequent clause as in (3), the ergative case is ungrammatical.

- (2) tum *(nee) mujhee bataa-yaa ki tum-koo meeraa kah-naa buraa lag-aa,

- you-*nom/erg I-dat tell-pf that you-dat my say-inf bad strike-pf
 'You told me [that you didn't like what I was saying.]'
- (3) Counterfactual conditional-imperfective aspect in both clauses.
*tum (*nee) mujhee bataa-taa ki tum-koo meeraa kah-naa buraa lag-aa,*
 you-Nom/*erg I-dat tell-impf that you-dat my say-inf bad strike-pf
too maiN kahnaa band kar dee-tii
 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.'

A perfective dative-subject sentence (4) can be made into an imperfective conditional without change of subject case (5):

- (4) Counterfactual--dative subject
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.'
- (5) (*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.'

This contrast follows from the fact that ergative case is sensitive to values of ASPECT, while lexical dative case is independent of the values of the functional projections outside of VP.

Appendix II Dative experiencer, accusative theme

The VP/vP projections proposed for verb classes in Hindi/Urdu make the prediction that the dative direct objectcase (licensed by the light verb *v*) is impossible with a dative experiencer, licensed by VP without vP. This prediction is correct for Hindi/Urdu, which does not have a distinct accusative case and for Japanese (Ura 2000:104ff), which does have accusative case..

- (1) [Japanese]
- a. *John-ga Mary-ga/-o shimpai-da*
 John-nom Mary-nom/acc anxious-cop
 'John is anxious about Mary (Ura 2000:106)
- b. *John-ni Mary-ga/*-o shimpai-da*
 John-dat Mary-nom*/acc anxious-cop
 'John is anxious about Mary (Ura 2000:107)

Tamil, however, has accusative case on the theme of a dative experiencer predicate (Ura 2000, K. Paramasivam 1979, Umarani (this volume):

- (2) [Tamil]
kumaar-ukku raajav-aip pitikk-um

Kumar-dat Raja -acc like-imp.
'Kumar likes Raja.' (Lehmann 1993: 184; Umarani, this volume).

Bangla also has accusative objects of predicates with genitive experiencer subjects:

(3) [Bangla]

amar o-ke bhOg lage

I-gen 3-acc fear feel

'I am afraid of him.' (Sengupta, this volume)

Ura accounts for sentences like Tamil (2) as the result of a parameter choice for the vP projection, a structure like (29), which has the option of assigning lexical dative case to its specifier (2000:118-125), and either nominative or accusative object case. In language like Dutch, this vP structure may undergo reanalysis, yielding a single V projection which has the consequence that the two arguments are in the same minimal domain and equidistant from TENSE (Ura 2000 139-142).

So far, however, it has not been shown that the sentences in Tamil and Bangla which have accusative case (2-3) have the same kind of subject fluidity shown for Hindi/Urdu Class I predicates. But it is logically possible that these languages have Class I predicates (Dat-nom), and two varieties of vP projections, which we can call Class IIa, 'standard' transitive verbs, and IIb. One Class II has Nom-Acc, the other Dat-Acc, with reanalysis a possibility for Class IIb. I have chosen to express the difference among transitive verbs as a basic structural difference which entails different case arrays. This approach avoids the intermediate step of reanalysis for a language like Hindi/Urdu, in which accusative case is not possible with dative subject. Reanalysis in Hindi/Urdu would have no independent motivation, other than it results in the correct surface cases. If further investigation gives a fuller account of the [dat-acc] verb classes in Tamil and Bangla, then the new class IIb with a vP projection will be supported, especially if some independent factor motivating reanalysis can be found which is so far absent..

Appendix III Licensing ergative case in perfective finite clauses

It is necessary in Hindi/Urdu for ergative case to be the subject case within a finite perfective sentence. Both finiteness and perfective sentence aspect are required; otherwise the subject must be nominative. Finiteness is required because perfective aspect also marks non-finite participles. These participles are used as DP modifiers, or as the complement selected by certain verbs, such as *deekh-naa* 'see' and *jaan paR-naa* 'seem, appear', in which ergative case is not possible (though see Mahajan 1990 for an exception). (See also Davison 1999a for further cases involving V-V compounds, which also affect subject case.)

Ergative case is not possible, even when the sentence is perfective and finite, if there is an auxiliary verb which intervenes between V and the sentence aspect. Examples include (18) and (42a). The core generalization is that ergative subjects are possible only when the sentence perfective aspect is directly adjacent to the main verb:

- (1)a *tumharee puurvaj* (**nee*) *ghaas* *chiil-aa* *ki-ee*
 your ancestors.mpl-Nom *erg grass.f scrape-pf do-pf.mpl
 'Your ancestors were in the habit of cutting grass.' (McGregor 1995:151)
- b. *niinaa-nee apnee liyee bhii santaraa chiil li-yaaa/chiil-aa*
 Nina-erg self -for also santra peel take-pf /peel-pf
 'Nina peeled a santra for herself as well.' (Nespital 1997:515)

The combination of the ergative subject verb *kar-naa* 'do' with V-pf in (1a) expresses an aspectual meaning 'to be in the habit of V-ing', without an ergative subject. With the same main verb, the subject in (1b) is ergative because the sentence aspect is directly linked to *chiil* 'peel, cut, scrape'. This is not the case in (1a), in which the aspectual verb intervenes between the sentence aspect as V. The perfective on *chiil* is selected by *kar-naa* to form the aspectual verb. It is not the 'real' sentence perfective aspect, which expresses a relation between the event time E and reference time R (Giorgi and Pianesi 1997).

Ura (2000: 205, 218-9) proposes an account of split ergative licensing which depends on a selection relation between sentence aspect and the feature properties on vP, expressed as features of the v head of vP. He proposes a parameter allowing case to be checked (without movement) in the same position as the theta role, or Θ Position Checking parameter (25f). I have used the feature $+\Theta$ PC as a property of V to account for lexical dative case. For ergative subjects, it would make sense to put this feature on vP which is selected by perfective aspect, especially if the semantic contents of v can be specified for telicity and duration. The vP distinguishes between the verbs which have nominative subjects and those which have ergative subjects.

Notes

1. Pronouns may also have a subject antecedent, provided that the subject is non-local. For a more extensive overview of coindexing/binding conditions for Hindi/Urdu see Davison 2000a, and Wali et al. (2000) for extensive data on a number of South Asian languages.
2. A small number of exceptions is found in which there is a lexical subject distinct from the matrix subject (Davison 1981). The default judgement of HU speakers is that PRO is required, and it is coindexed with the matrix subject.
3. The nominative DP which actually controls agreement is the highest argument--subject if available, direct object if the subject is not nominative, the predicate N if both the subject and object are non-nominative, otherwise default agreement, illustrated in (1)-(5).
4. For class II verbs, ergative case is required for DP subjects if the sentence aspect is perfective and the clause is finite. Finite tense may be overt in the form of a present/past tense copula or future tense suffix. Tense may be implied in sentences in which perfective aspect is used alone as an aorist/ simple past (Davison 2002). The sentences discussed here are all of this type.

Even if the TENSE/ASPECT conditions are met, nominative case is required on the subject if the main verb is combined with an auxiliary, such as the subject oriented auxiliaries in (18)-(21), a verb compound (Hook 1973) or a main verb used as an aspectual verb (Bailey 1968, Shapiro

1989, Barz and Yadav 1993). The crucial condition for ergative subject case is that the sentence aspect is combined with the main verb in a finite context. I will leave these issues aside here. The crucial condition seems to be that the main verb (or V -Vector Verb compound) and the perfective sentence aspect must be adjacent and form a word (see Appendix III).

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