

Verbal Domain and the Animacy Requirement in Hindi

Abstract

The close examination of a variety of unaccusative and unergative verbs in Hindi reveals that the (in)animacy of arguments determines the behaviour of a particular class of verbs. With respect to the major unaccusative-unergative diagnostics, the bulk of Hindi verb classes turn out to be unaccusative with unergative behaviour being contingent on the animacy of the sole argument of the unaccusative. Based on these arguments the present paper proposes that the feature of animacy has argument promotion properties in Hindi.

The paper is divided into five sections. Section one introduces Hindi verbs including the classification based on Levin & Rappaport Hovav (1995). Section two first presents the unaccusative diagnostics in Hindi and then its application to the verb classes. Section three analysing the verbal domain in Hindi based on the facts revealed by the unaccusative diagnostics. Section four concludes the paper summarizing it.

1. Verbs in Hindi

In Hindi, a modern Indo-Aryan language, verbs participate in transitive alternation employing regular morphologically related forms. For example,

1. i) kʰɔlna ‘boil’ - kʰɔlana
ii) cɔlna ‘walk’ - cɔlana
iii) cəkʰna ‘taste’ - cəkʰana

In the above examples, the morpheme *-a* is a transitivizer that adds a causing event. For example,

2. i) somi hṛṣṭa he
Somi laugh-HAB be-PRS
‘Somi laughs.’

ii) nili somi ko hṛṣṭi he
Nili Somi ACC laugh-HAB.F be-PRS
‘Nili makes Somi laugh.’

However, there are interesting gaps in this apparent regularity – in particular internally caused verbs that (in the sense of LRH 1995) do not have either transitive or causative variants. For example, *kəṛəkna* ‘thunder’, *gurrana* ‘roar’, *ḷərmāna* ‘blush’, *suḷḷna* ‘swell’ etc. One another issue is regarding the decision about what constitutes the base form of a Hindi verb. The vocabulary of Hindi language contains mostly *tatsam* (borrowed from Sanskrit and preserved intact) and *tadbhav* (derived from Sanskrit and modified) words. Irrespective of etymology, however, most of the verb roots would end up being listed as intransitives if one were to make reference to morphology. For example,

3.

| Intransitive | Transitive | Gloss | Root |
|---------------------------|---------------------------|---------|-----------------------------------|
| <i>pisna</i> | <i>pi:sna</i> | grind | √ <i>piḥ</i> (Sans.) |
| <i>k^huḍna</i> | <i>k^hoḍna</i> | dig | √ <i>kṣuḍ</i> (Sans.) |
| <i>luṭna</i> | <i>lu:ṭna</i> | rob | √ <i>luṇṭ^h</i> (Sans.) |
| <i>māna</i> | <i>māna</i> | die | √ <i>mri</i> (Sans.) |
| <i>jāna</i> | <i>jāgana</i> | wake up | √ <i>jagr</i> (Sans.) |
| <i>su:k^hna</i> | <i>suk^hana</i> | dry | √ <i>su:k^h</i> (Hin) |

The infinitive forms of Hindi verbs also indicate that at least morphology considers intransitive, transitive and causatives as distinct. Unlike English infinitives where we have no information regarding the verb class (e.g. *to break*, *to melt*, *to distribute* etc.), Hindi infinitives contain the verb class information as the infinitive suffix *-na* is added not only to the intransitive base only but to the transitive and causative bases too. For example, ‘to scatter’ *bik^harna* (Intransitive), *bik^hrana* (Transitive), *bik^harwana* (Causative).

1.1. Classification of Hindi verbs

Based on LRH (1995)’s classification, Hindi verb classes can be broadly divided into the following ten classes: 1. Emission verbs 2. Verbs of Change of State (includes Verbs of Non-volitional Change of State and Verbs of Change of State) 3. Verbs of Motion (includes Agentive Verbs of Manner of Motion, Verbs of Manner of Motion and Verbs of Inherently Directed Motion) 4. Verbs of Spatial Configuration 5. Verbs of Existence, Appearance & Disappearance 6. Verbs of Contact/ Attachment 7. Verbs of Bodily Process 8. Verbs of Consumption 9. Verbs of Perception 10. Verbs of Image Impression.¹

¹Verbs of bodily process are denominal verbs (Clark & Clark 1979). Hale & Keyser (1993) argue that these have an abstract V with a nominal complement. Verbs of Consumption are transitive verbs describing atelic activities. Verbs of

All the verbs except the last four classes, i.e. Verbs of Bodily Process, Verbs of Consumption, Verbs of Perception and Verbs of Image Impression, are intransitives which is the focus of this paper.

As far as the transitive alternation is concerned, those emission verbs which are purely internally caused and verbs of existence, appearance and disappearance do not have transitive uses.

2. Unaccusative diagnostics

The diagnostics for the unaccusative / unergative distinction tend to yield different results in different languages. It is also debatable exactly what these diagnostics identify -- a syntactic difference between the two classes or a semantic distinction between two predicates. LRH argue that only those diagnostics that reveal syntactic differences between unaccusatives and unergatives, are *actual* unaccusative diagnostics. In other words, a convincing unaccusative diagnostic must test for a syntactic property “whose explanation is tied to the unaccusative syntactic configuration” (Levin & Rappaport Hovav 1995: 16) because unaccusativity is essentially a *syntactic* property, even as it is also semantically predictable. These diagnostics depend either on the absence of an external thematic role or on the movement from an internal argument position to the subject position. Bhatt (2003) notes the following unaccusative diagnostics for Hindi:

A. Unaccusative verbs cannot be passivized: Unaccusatives do not appear in passive constructions because passivization deletes the ‘logical’ subject argument. Given that unaccusatives are defined as a class that lacks a logical subject argument, they are expected to be insensitive to passivization as shown in (4):

4. i) ʃi:ʃa kəl ʈu:ʈa ʈʰa Active
 glass yesterday break_{unacc-PFV} be-PST
 ‘The glass broke yesterday.’
- ii) * kəl ʈu:ʈa gəʃa ʈʰa Passive
 yesterday break_{unacc-PFV} PASS-PFV be-PST
 ‘*Yesterday (it) was broken.’ (Balachandran 1973:46.47)

Perception describe the act of perceiving a state or an event. Verbs of Image Impression describe the act of image creation

However, unergatives can appear in passive constructions:

5. kəl d̪ora gəja t̪ʰa Passive
 yesterday run_{unerg}- PFV PASS-PFV be-PST
 ‘Yesterday (it) was run.’

B. Unaccusative verbs do not allow for inabilitative passive² constructions: Passives in Hindi can also appear in *inabilitative* construction that has an additional modal meaning of ‘someone lacking certain ability.’ Unaccusatives do not appear in the inabilitative passive construction. Unergatives, on the other hand, like transitives, can appear in the inabilitative passives. For example:

6. i) ci:ni: pani mē g^huɽ̪t̪i hɐ (Basic Unaccusative)
 sugar water in dissolve_{unacc}-HAB.F be.PRS
 ‘Sugar dissolves in water.’

- ii)* ci:ni:-se pani mē g^hula nəhĩ: gəja (Inabilitative Passive)
 sugar- INS water in dissolve_{unacc}-PFV NEG PASS-PFV
 ‘Sugar was not able to dissolve (itself).’

- iii) ʃoʃua cəl rəha hɐ (Basic Unergative)
 Joshua walk_{unerg} prog. be.PRS
 ‘Joshua is walking.’

- iv) ʃoʃua-se cəla nəhĩ: gəja (Inabilitative Passive)
 Joshua-INS walk_{unerg}-PFV NEG PASS-PFV
 ‘Joshua was not able to walk.’

C. Unaccusative verbs do not take cognate objects: This is because the D-structure object position of a transitive or unaccusative is already filled with a complement argument and is thus unavailable for taking a cognate object. However, unergatives do not take complements at the D-structure and

²Also termed as ‘capabilitative passive’ (Balachandran 1973), ‘passive of incapacity’ (Hook 1979), ‘inability passive’ (Davison 1982), ‘capacity passive’ (Rosen & Wali 1989).

the position is thus available for taking a cognate object³ (Massam 1990). In other words, as cognate objects are taken to be direct internal arguments,⁴ unaccusatives cannot take cognate objects; but unergatives can, as (7) shows:

7. i)* *aɪs kri:m əcc^hi jəmɑv jəmi*
 Ice cream good freezing freeze_{unacc}-PFV.F
 *‘Ice cream froze a good freezing.’
- ii) *ravəŋ b^həjanək h̥si h̥sa*
 Ravan horrifying laugh laugh_{uerg}-PFV
 ‘Ravan laughed a horrifying laugh.’
- iii) *mihir ek d̥ərd̥nək mət̥ mərə*
 Mihir one painful death die_{unerg}-PFV
 ‘Mihir died a very painful death.’

D. Unaccusatives do not allow ergative subjects: Hindi is an example of split ergativity where the ergative Case is restricted to the perfective aspect. Unaccusatives in Hindi never allow ergative subjects but unergatives do, though marginally:

8. i)* *jəhaʃ-ne du:ba*
 ship-ERG sink_{unacc}-PFV
 ‘The ship sank.’
- ii) *mili-ne zor-se c^hĩ:ka*
 Mili-ERG force-with sneeze_{unerg}-PFV
 ‘Mili sneezed forcefully.’

E. Light verb selectional restrictions: It has been observed in Hindi that not every light verb combines with every main verb (See Butt 2003). Unaccusative ‘go’ (*jana*) can only combine with unaccusatives. Transitive ‘take (i.e. self-benefactive)’ (*lena*) combines with most transitives and

³Hale & Keyser (1993) analyze unergative verbs are always associated with an abstract cognate object.

⁴Hale & Keyser (1987,1993), Macfarland (1995), Massam (1990).

unergatives, but unaccusatives do not. For example:

9. i) bərf asani-se gəl jaṭa he
ice easy-INS melt_{unac} go-PFV be-PRS.SG
'Ice melts easily (completely).'
- ii) *bərf asani-se gəl leṭa he
ice easy-INS melt_{unac} take-PFV be-PRS.SG
'*Ice (is able to) melt easily.'
- iii) ru:na əcc^ha nac leṭi he
Runa well dance_{unerg} take-PFV.F be-PRS.SG
'Runa dances well (is able to).'
- iv) *ru:na əcc^ha nac jaṭi he
Runa well dance_{unerg} go-PFV.F be-PRS.SG
'Runa dances well (is able to).'

F. The perfective participle of unaccusatives can be used as a reduced relative: Reduced relatives represent one environment where a participle can occur without an auxiliary. These constructions supply another syntactic context that distinguishes between external and internal arguments. Reduced relatives with the perfective participle do not allow predicates with an external argument.⁵ Hence, the predicate can be a passive or an unaccusative, but not an unergative one.⁶ In Hindi too, the perfective participle of an unaccusative, unlike unergative, can be used as a reduced relative:

10. i) kaṭa gəja peṭ
cut-PFV PASS-PFV tree
'The cut tree.'
- ii) jəmi hui cəklet
freeze_{unacc}-PFV be-PFV chocolate
'The frozen chocolate.'

⁵In auxiliary-selection languages (e.g., Italian), reduced relatives containing perfect participles are possible with verbs whose participles in the perfect combine with 'be' (supposedly unaccusatives) but impossible with verbs whose participle combines with 'have' (supposedly transitives and unergatives; Burzio 1981, 1986).

⁶See Siloni (1995, 1997).

- iii) *t̪era hua aḍmi
 swim_{unerg.}-PFV be-PFV man
 *‘The swum man.’

*G. The imperfective participles of unaccusatives can occur with or without the genitive marker on the agent:*⁷ The participles of unaccusatives in Hindi can occur both with as well as without the genitive marker *ke*. Unergatives, on the other hand, cannot occur without the genitive marker. For example:

11. i) [d^hu:p (ke) nikāl̪te hi], cəmgəḍ̪ər b^hag gəe
 sun GEN appear-PRS.PTCP EMP bat go away go-PFV.PL
 ‘Bats went away as soon as the sun appeared.’

- ii) [miku */ ke muskur̪te hi], bæcca bhi mukuraja
 Miku GEN smile-PRS.PTCP EMP child also smile-PFV
 ‘As soon as Miku smiled, the child also smiled.’

2.1. Applying these diagnostics to the verbs classes in Hindi shows that all the verb classes behave as unaccusatives except the Agentive Verbs of Motion. However, an unusual picture emerges – unaccusatives show unergative behaviour when their external arguments are animate. For example, The imperfective participles of most of Hindi emission verbs can occur without the genitive marker on the agent:

12. i) [baḍ̪əl (ke) gəṛəḷ̪te hi] vanja ḍər gəi
 cloud GEN thunder-PRS.PTCP EMP Vanya scare go-PFV.F
 ‘Vanya got scared as soon as clouds thundered.’

But with an animate subject, the participle cannot occur without the genitive marker on the agent:

- ii) [ʃer */ ke gur̪r̪te hi] bəṇḍ̪ər b^hag gəja
 lion GEN roar-PRS.PTCP EMP monkey go away go-PFV
 ‘The monkey went away as soon as the lion roared.’

⁷Rajesh Bhatt. p.c.

The imperfective participles of NVCS verbs in Hindi can occur with or without the genitive marker on the inanimate subject, but cannot occur without the genitive marker with an animate subject:

13. i) [p^hu:l (ke) k^hilṭe hi] b^hṛwre a gəje
 flower GEN bloom-PRS.PTCP EMP drone come be-PFV-PL
 ‘The drones came as soon as the flower bloomed.’

- ii) [mili */ ke muskurṭe hi] mṁ k^huḥ ho gəi
 Mili GEN smile-PRS.PTCP EMP mother happy happen be-PFV-F
 ‘Mother became happy as soon as Mili smiled.’

The imperfective participles of verbs of change of state in Hindi can occur with or without the genitive marker on the agent:

14. i) [naw (ke) ḍu:bṭe hi] bæcca rone ləga
 boat GEN sink-PRS.PTCP EMP child cry-INF attach-PFV
 ‘The child started crying as soon as the boat sank.’

However, with an animate subject the participles of verbs of change of state cannot occur without the genitive marker on the agent:

- ii) [piṭa */ ke mṛṭe hi] soḥan b^hag gəja
 father GEN die-PRS.PTCP EMP Sohan fled go-PFV
 ‘Sohan fled as soon as the father died.’

The imperfective participles of IDM verbs in Hindi cannot occur without the genitive marker on the agent:

15. i) [pulis */ ke aṭe hi] cor b^hag gəja
 Police GEN come-PRS.PTCP EMP thief flee go-PFV
 ‘The thief fled as soon as the police came.’

However, with an inanimate subject the participle can occur without the genitive marker on the agent:

- ii) [bəl (ke) girṭe hi] bæcca dər gəja
 ball GEN fall-PRS.PTCP EMP child fear go-PFV
 ‘The child was afraid as soon as the ball fell.’

The imperfective participles of verbs of manner of motion in Hindi can occur with the genitive marker on the inanimate subject, while others with animate subjects cannot:

16. i) [bəl (ke) luṭʰəkṭe hi] somi muskuraja
 ball GEN roll-PRS.PTCP EMP somi smile-PFV
 ‘Somi smiled as soon as the ball rolled.’

However,

- ii) [miku * / ke sərəkṭe hi] somi samne aja
 Miku GEN slide-PRS.PTCP EMP Somi in front come-PFV
 ‘Somi came in front as soon as Miku slid.’

The imperfective participles of verbs of spatial configuration in Hindi cannot occur without the genitive marker on the animate subject:

17. i) [ʃoʃua * / ke ʃʰukṭe hi] bəndər ʃʰuka
 Joshua GEN bend-PRS.PTCP EMP monkey bend-PFV
 ‘The monkey bent as soon as the Joshua bent.’

However, with an inanimate subject the participles can occur with/without the genitive marker on the agent:

- ii) [təhni (ke) ʃʰukṭe hi] bəndər jaga
 branch GEN bend-PRS.PTCP EMP monkey awake-PFV
 ‘The monkey awoke as soon as the branch bent.’

The imperfective participles of verbs of EAD in Hindi can occur without the genitive marker on the agent:

18. i) [t̪əswiːr (ke) ubʰəɽte hi] log čʱke
 picture GEN appear-PRS.PTCP EMP people surprise-PFV.PL
 ‘People were surprised as soon as the picture appeared.’

However, with an animate subject the participles of EAD verbs cannot occur with/without the genitive marker on the agent:

- ii) [ʃoʃua * / ke rəɦte hi] log kʰuʃ hue
 Joshua GEN live-PRS.PTCP EMP people happy be-PFV.PL
 ‘The people became happy as soon as Joshua lived.’

EAD verbs behave as unaccusatives with all the diagnostics. Regarding imperfective the participles, we observe unergative behaviour with animate arguments.

The imperfective participles of verbs of C/A in Hindi can occur with or without the genitive marker on the agent:

19. i) [post̪ər (ke) s̪ətte hi] log a gəe
 poster GEN stick-PRS.PTCP EMP people come go-PFV-PL
 ‘People came as soon as the poster was stuck.’

However, with an animate subject the participles of C/A verbs cannot occur without the genitive marker on the agent:

- ii) [b̪acce */ ke h̪ette hi] miku a gəja
 child GEN sneeze-PRS.PTCP EMP Miku come go-PFV
 ‘Miku came as soon as the child went away.’

3. Verbal Domain and Animacy Requirement

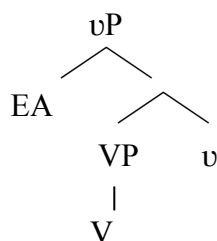
The discussion above reveals an interesting fact about Hindi – most of the notional verb classes must be analysed as unaccusatives at the base. Moreover, if we factor in the observations made in the earlier section into this discussion, an even more unusual picture emerges. Recall that it was found that base unaccusatives in Hindi showed unergative behaviour when their external arguments were animate. For example, though, verbs of emission in Hindi behave as unaccusatives, vis-à-vis the diagnostic regarding the use of the imperfective participle occurring with/without the genitive marker on the agent, emission verbs behave as unergatives if there is an animate agent. Similar pattern is observed with verbs of inherently directed motion as well as with verbs of manner of motion. This behaviour shows up in all verb classes which are unaccusatives at the base. In other words, the specifier position of vP is highly constrained in Hindi, unlike English, by the animacy requirement.

Based on Hindi transitive facts and observations, Hindi verbs can be divided into the following three classes:

- a) Radical unaccusatives - Internally caused emission (Expressives) verbs, Verbs of non-volitional change of state and Verbs of Existence, Appearance & Disappearance
- b) Externally/internally caused unaccusatives - Externally caused verbs of emission, Verbs of change of state, Verbs of manner of motion, Verbs of inherently directed motion, Verbs of spatial configuration
- c) Unergatives - Agentive verbs of motion

Let us look at the structure of these three classes of verbs. For unergatives, (20) is the base structure:

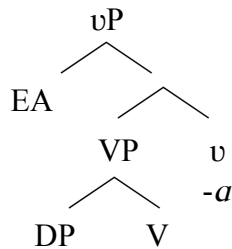
20.



The unergative v has an EPP feature (i.e. the vP has a specifier position). This prevents any external

argument to be added to the intransitive base. Thus, the transitive of the unergatives cannot be derived from the intransitive base structurally. It has to be a separate lexical entry that has the following structure:

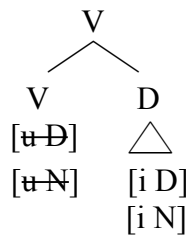
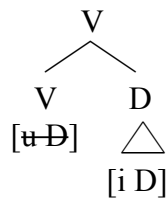
21.



Unaccusative *v*, on the other hand has no EPP feature, hence the *vP* has no specifier position. But we have two different types of unaccusatives – the externally/internally caused unaccusatives which have transitive variants and the purely internally caused structurally indistinguishable, we can distinguish them by postulating different kinds of Agree relations:

22. i) Externally caused unaccusative

ii) Internally caused unaccusative



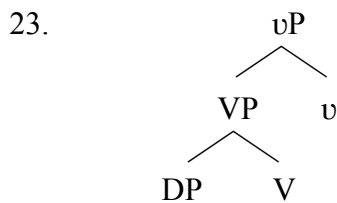
In both (22i & ii), V and D Set-merge to satisfy selectional requirements of the selector V. Though, (22i & ii) are instances of Set Merge, (22i) involves only the categorial features and (22ii) involves both categorial as well as lexical features. Thus, in (22i), V has an uninterpretable D feature and D has an interpretable D feature. Agree holds of V and D, deleting [u D] feature of V. On the other hand, in (22ii), as internally caused unaccusatives have strong restrictions on their sole argument (LRH 1995),⁸ we can argue that V has an uninterpretable D feature as well as an uninterpretable (nominal) [N] feature and D has an interpretable D feature and an interpretable [N] feature. Thus, Agree holds of V and D, deleting both [u D] and [u N] feature of V.

As observed earlier, while externally caused unaccusatives have transitive forms, the purely

⁸ For example, there can be only a certain set of things which can glow or growl or twinkle etc. In other words, these arguments are lexically specified.

internally caused ones do not⁹. The generalization here is that such a VP in which there is Agree that targets only categorial features (see 22i) can be embedded under *v* with full argument structure, however a VP in which there is Agree that involves both categorial and lexical features (see 22ii) cannot be embedded under a *v* with full argument structure. This VP is interpreted as BECOME/HAPPEN as there is no argument in its specifier, in a way similar to Harley (1996)'s Event head without an argument in its specifier.

Now consider the internally caused unaccusative base with *v* merged above it:



Here, two things may happen – (1) the DP may raise to *v*P edge if it is animate given the strong animacy requirement in Hindi and then raise all the way to TP, or (2) if the DP is inanimate it may stay in situ and raise in one full swoop to TP, given Chomsky (2001)'s assumption that phases without EPP specifiers are weak phases. For example in (24i), as the DP is animate it would raise to *v*P edge and then, to TP. On the other hand, in (24ii), the DP is inanimate and so, it will stay in situ and raise to TP:

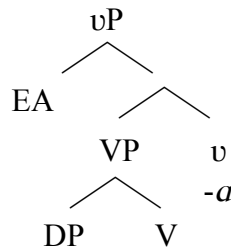
24. i) *fer gurraja*
 lion roar-PFV
 ‘The lion roared.’
- ii) *g^hənti bəɟ-i*
 bell ring-PFV.F
 ‘The bell rang.’

On the other hand, externally/internally caused unaccusatives have transitive forms in Hindi and the transitivizer suffix *-a* adds an external argument in the specifier of *v*P:

⁹In other languages too, like German and Icelandic, we do not have impersonal passives of internally caused verbs as impersonal passives require that event be under full control of the agent. For example:

- | | | |
|----|---|-------------------------|
| 1. | *Er werdt (door the man) gebloed. ‘There was bled (by the man).’ | German (Zaenan 1993) |
|----|---|-------------------------|

25.



4. Conclusion

In the present paper I have explored the domain of intransitive verbs in Hindi. Based on the diagnostics, I have illustrated that in Hindi most transitives have unaccusative bases where the transitivizer suffix *-a* adds an external argument. There is a limited set of verbs in Hindi (Agentive verbs of manner of motion) which are unergatives at the base and thus, have an external argument already in their argument structure. In these verbs, the transitives can not be derived by adding an external argument to the base structure. Thus, I have argued for a separate lexical entry for these intransitives and their transitive counterparts.

Observing that the externally caused unaccusatives have transitive forms, while the purely internally caused ones do not, I have proposed a generalization that such a VP in which there is Agree that targets only categorial features can be embedded under *v* with full argument structure. However, a VP in which there is Agree that involves both categorial and lexical features cannot be embedded under a *v* with full argument structure. So, when the internally caused unaccusative base gets a *v* merged above it, either the DP may raise to *v*P edge if animate and then raise TP, or if inanimate it may stay in situ and raise to TP. Based on the above arguments, in the present paper I have argued that in Hindi the edge of *v*P is highly constrained by the animacy requirement.

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