RESEARCH ARTICLE

THE CAUSES OF VERB-BASED MORPHOLOGICAL INFLECTIONS IN ENGLISH-HINDI TRANSLATION

(SHORT COMMUNICATION)

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ABSTRACT

The objective of this study is to give a brief account of why and how verbal inflections take place while translating an English syntax into Hindi. In doing so, the study collected a syntactic corpus randomly and tried to decode possible inflections in relation to seven sub-systems namely subject-based inflection, object-based inflection, valency-based inflection, passive-based inflection, complementizer-based inflection, mood-based inflection and compound verb-based inflection. The significance of this study lies in the fact that it presents a contrastive knowledge base (CKB) accounting for the reasons of inflections while translating English text into Hindi.

Keywords: *Verbal Inflections, Translation, Syntax, English, Hindi.*

INTRODUCTION

Both English and Hindi are inflectional languages as they add inflectional morphemes to their words either as prefix, infix, or suffix. However, Hindi is more inflectional as it abounds in terms of nominal inflection, case inflection, and verb inflection. Given the brevity of this study, the objective of this study (in the form of short communication) is to concentrate only on seven major types of verb inflections namely subject-based inflection, object-based inflection, valency-based inflection, passive-based inflection, complementizer-based inflection, mood-based inflection, and compound verb-based inflection. This study is significant for two main reasons. First, it presents a contrastive knowledge base (CKB) that accounts for why a particular inflection occurs. Secondly, the CKB will prove a handy reference not only for English-Hindi translators but also for the non-native learners of Hindi. Contrastive knowledge base (CKB) being the backbone of translation for any pair of languages is of paramount concern to ensure and enhance the degree of translatability. Lack of contrastive knowledge base may not only cause poor translation but also no translation especially in machine translation.

A symmetrical paradigm for verbal inflection is of utmost concern in both English-Hindi human and machine translation. Here a paradigm of verb (i.e. English verb translated into Hindi verb) is being created in order to form Hindi verb inflectional rules. The following paradigm establishes symmetry to show verbal inflections in Hindi with respect to six probable forms of English verbs namely *simple present unmarked* (V1), *simple past tense* (V2), *present perfective aspect* (V3), *present progressive aspect* (V4), *simple present marked* (V5), and *non-finite form* (V6).

Verbal inflections in Hindi are mainly used to show various distinctions of tense, aspect, mood, and voice. As part of the present study, six major areas of verbal inflections have been discussed below.

1. SUBJECT-HEAD-BASED VERBAL INFLECTION

A
(i) My thesis came to an end.   *merī thīsis pūrī ho gayī*

(ii) Tomorrow, Deccan College will remain closed.   *kal Dekkan kālej band rahegā*

B
(i) Ram, Shyam, and Radha will be coming.   *rām, ∫yām, ōr rāDhā ā rahe hõge*

(ii) You and I know the answer.   *mẽ ōr tum uttar jānte hẽ*

C
(i) Gandhi ji wanted to see his school.   *gãdhī jī apnā skūl dekhnā cāhte the*

(ii) This gentlsman has just come.   *ye sāhab abhī āye hẽ*

CONTRASTIVE KNOWLEDGE BASE

Subject head based verbal inflection is found in present, future, and past tense with intransitive verbs taking inanimate subject. In case of **single subject**, the verb inflects according to the gender and number of the subject as in (Ai) and (Aii).

In case of **compound subjects** of different gender connected with **and**, the verb inflects for plural masculine form as in (Bi). In case of **compound subjects** of different persons connected with **and**, the number of verb inflects for plural as in (Bii). No matter whatever be the order of pronominal subjects in English, the preference of order in Hindi is **first-second-third** person.

In addition to the use of plural forms (as in Bi, Bii), Hindi shows the use of plural inflections even for the singular subject if it is honorific. Examples in block (C) illustrate this point. More precisely, the use of plural form in terms of respect not only inflects the verb for plural as in (Ci) but also the modifiers of the honorific subject, e.g. *yah* in (Cii) inflects into /*ye*/ because of the honorific subject 'sajjan'.

2. COMPLEMENT-HEAD-BASED (DIRECT OBJECT) VERBAL INFLECTION

A

(i) Ram ate the <u>bread</u> — *rām ne rotī khāyī*

(ii) The woman left her <u>house</u> — *strī ne apnā ghar choṛā*

B

(i) The **boys**/girls read the books. — *laṛkõ / larkiyõ ne pustakẽ paDhī̃*

(ii) Mohan ate four mangoes. — *mohan ne chār ām khāye*

(iii) Ram **has** to buy a horse — *rām ko ghoṛā kharīdnā hē*

(iv) Ram **has** to buy a cow — *rām ko gāv kharīdnī hē*

C

(i) Ram (brought, forgot) the book — *rām pustak lāyā (bhulā)*

(ii) Sita (brought, forgot) the book — *sītā pustak lāyī (bhulī)*

CONTRASTIVE KNOWLEDGE BASE

The CKB for (Ai) and (Aii) says that no matter subject be masculine or feminine, it's the complement head, which decides the gender or number of the verb in simple past. The CKB for (Bi) suggests that the Hindi verb gets nasalized *(e.g. paDhī̃)*, if the complement head (in the form of direct object) is feminine plural, (e.g. *pustakeẽ̃*). As for (Bii), it says that verb will remain in plural form *(e.g. khāye)* if the complement head is masculine plural (e.g. *ām*). (Biii) also shows verbal inflection as per the gender and number of the complement head especially when the complement head is governed by deontic semi-auxilary verbs like 'has to', 'have to', etc. (Ci) and (Cii) explore an exception that verbal inflection in the case of verbs like **bring** and **forget** (occurring in past form) will be governed by subject head rather than complement head. So the need is felt to develop a prescriptive paradigm, which could predict the inflection of Hindi with valid conditions in terms of complement head and subject head.

JOINT COMPLEMENTS/OBJECTS-BASED VERBAL INFLECTON

A

(i) I bought rice and <u>vegetable</u>. — *mẽne cāval ōr sabji <u>kharidī</u>*

(ii) I bought vegetable and <u>rice</u>. — *mẽne sabjī ōr cāval <u>kharidā</u>*

(iii) He showed great prowess and <u>valour</u>. — *usne barā parākram ōr vīrtā <u>dikhāī</u>*

B

(i) The lion ate an elephant and a fox. — *ʃer ne hāthī ōr lomṛī khāye*

(ii) The elephant saw a lion and a fox. — *hāthī ne lomṛī ōr ʃer dekhe*

CONTRASTIVE KNOWLEDGE BASE

The contrastive knowledge base for the examples in block (A) makes first a general declaration that *if the English verb is in simple past or V2 form followed by two accusatives or joint objects connected with 'and', the gender and number of the Hindi verb inflects according to the gender and number of the second accusative.* The knowledge base makes further two subcategorizations. First, if the joint objects are <u>inanimate</u> as in (Ai) and (Aii) or abstract as in (Aiii), the gender and number will be governed by the gender and number of the second or last accusative. For example, the Hindi verb *kharīdī* in (Ai) has inflected for singular feminine form because the second object (i.e. sabjī) is singular and feminine. Likewise, the verb in (Aii) and (Aiii) have inflected for singular masculine and feminine as *kharīdā* and *dikhāī* respectively because of the gender and number of *cāval* and *vīrtā*.

On the other hand, the CKB for (Bi) and (Bii) says that if the two accusatives connectd with 'and' are animate then verb inflects for masculine plural form, viz, *khāye* and *dekhe* respectively in (Bi) and (Bii).

3. VALENCY-BASED VERBAL INFLECTION

A

(i) The king <u>appointed</u> Balram general.

   rājā ne balrām ko senāpatī niyukt kiyā

(ii) He <u>made</u> Pataliputr, the kingdom of his wide empire.

   unhõne pāTliputr ko apne viʃāl sāmrājy ki rājdhānī banā<u>yā</u>

B

(i) Uddhav <u>told</u> the gopis.   *uddhav ne gopiyõ se kah<u>ā</u>*

(ii) I <u>gave</u> my sister a mango.   *mẽne apnī bahan ko ām diy<u>ā</u>.*

CONTRASTIVE KNOWLEDGE BASE

The contrastive knowledge base for the verbal inflection in the above sentences says that the English verb will inflect into masculine singular form, if the English verb is bi-valent (causing two case markers in Hindi) and transitive occurring in V2 (i.e. simple past.) or   V3 form (i.e. present or past perfective). Bi-valency is the property of a verb, which requires two case markers for its participants usually in the combination of ergative-accusative (ne-ko), ergative-dative (ne-ko), and ergative-ablative (ne-se). The information of valency is stored in the contrastive lexicon, which is further related with the transitivity and aspectual conditions to inflect *masculine singular form* of the Hindi verbs. For example, all the underlined English verbs in block A and B above are bi-valent. As a result, all the corresponding Hindi verbs have inflected for masculine singular.

4. PASSIVE-BASED VERBAL INFLECTION

A

(i) The <u>kabobs</u> will be eaten.   *<u>kabāb</u> khāe j<u>āẽge</u>*

(ii) A <u>question</u> is being asked   *<u>savāl</u> pūchā jā <u>rahā</u> hē*

B

(i) Sister is beaten a lot.   *bahan <u>ko</u> khūb pītā <u>jātā hē</u>*

(ii) Sita will be recognized right off   (a) *sītā ko phōran pahcān <u>līya jāega</u>*

CONTRASTIVE KNOWLEDGE BASE

The contrastive knowledge base for the above set of passive constructions says that the inflection of passive based verb agrees with the gender, number, and person of the **grammatical subject** or **logical direct object** in Hindi as in (Ai) and (Aii). If the logical direct object (occurring as grammatical subject) is animate, the case marker /ko/ is used after the grammatical subject. Such a /**ko**/ may be retained or dropped. If retained, the verb must take the masculine singular form as in (Bi) and (Biia). If /ko/ is dropped, then the verb agrees with the gender, number, and person of the grammatical subject as in (Biib).

5. MOOD-BASED VERBAL INFLECTION

Under mood based verbal inflection, only subjunctive and imperative mood have been taken into account.

SUBJUNCTIVE:

A
(i) Maybe Sita goes everyday   *sītā ʃāyad har roj jātī ho*

(ii) May be Vijay is coming now   *vijay ʃāyad abhī ā rahā ho*

B
(i) The boy wants the car to go fast.   *laṛkā cāhtā hē ki kār tej cale*

(ii) Some devotees want this deity to come to earth.

CONTRASTIVE KNOWLEDGE BASE

Subjunctive is used when the speaker does not wish to make any claim about the reality of an event. There are mainly two purposes of subjunctive- (1) to express possible action and (2) to express desired action. In case of <u>possible action</u>, the CKB for (Ai), (Aii), and (Aiii) says that, /**ho**/ subjunctive marker should be used after the main verb in Hindi if the English sentence has probability adverbial, viz, 'maybe' and present, progressive, or perfective aspect of verb. In case of <u>desired action</u> as in (Bi) and (Bii), /e/ suffix is usually used after the base form of second verb, viz, *cal* and *ā* in (Bi) and (Bii) respectively. It is noteworthy that grammatical subjects (i.e. *laṛkā, bhakt*) of these expressions do not decide the inflection of the last verb.

IMPERATIVE

A
(i)You go!   *tu jā*

(ii) "   *tum jāo*

(iii) "   *āp jāẽ (jāiye, jāiyegā)*

(iv) "   *tu / tum / āp jānā*

B
(i) Come on, let's go home now. *calo, ab ham ghar calẽ*

(ii) Let's find a solution.   (a) *ham koī hal DhũDhẽ*

CONTRASTIVE KNOWLEDGE BASE

As for (A), it is noteworthy that (V1) form of "**go**" used for imperative mood in English gives six equivalents in Hindi. In Hindi, the verbal inflections of imperative forms of verb depend on the degree of formality and intimacy. In case of addressing a person who is very intimate to the addresser, the subject inflects for /**tu/** and the verb takes the base form (*dhatu rūp*), e.g. "*jā*" as in (Ai). In case of addressing a person in non-honorific sense, the subject inflects for **tum** and the verb takes /-o/ suffix after the base form as in (Aii). In case of addressing a person in honorific sense, the subject takes **āp** form and the verb takes /-en/, /-iye/, or /-iyegā/ suffix markers after the base form as in (Aiii). For *nideʃmūlak kāl*[1] in Hindi /-**nā/** suffix is used after the base form of the verb for *tu*, *tum* and *āp* as in (Aiv). (B) is the case of inclusive imperatives using 'LET' construction in English. In inclusive imperatives, the speaker wishes to include himself in a command expression. The verbal inflection for inclusive imperative takes /-**en/** suffix marker after the base form of the Hindi verb as in (Bi) and (Biia). Unlike English, Hindi provides impersonal passive as an alternant to inclusive imperative. The verbal inflection for impersonal passive usually requires /-ā jāy/ suffix after the main verb as in (Biib).

6. COMPLEMENTIZER-BASED VERBAL INFLECTION

Translatability of English complementizers (also known as ***catenative verbs*:** Scotts, 1973; ***serial verbs*:** Maggie Tallerman, 1998, ***multiple verbs*:** M. Bryant, 1945) poses problems in machine translation. The fact can be seen in the statistical results of the case studies in chart (10) on page 203 in which the MT systems: S1, S2, and S3 have shown 60%, 44%, and 0% proficiency in the translatability of complementizers. As for S4, a system developed as part of this research has managed to solve the issues of complementizers up to 100%. The following are the brief contrastive knowledge base as to complementizers based on the samle text.

There is no hard and fast conversion rules in terms of English-Hindi to show the verbal inflections based on **complementizers**. So a translator needs to know firstly the probable configurations of complementizers in English (as discussed on page 84 in chapter 3); and secondly to find a close equivalence for them in Hindi. Unlike the dimension of complementizers (Peter Hook, 1979:24) which incorporates not only attaching main verb to main verb but also modal and main verb, here complementizers are going to be discussed only in terms of joining two main verbs. Most of the complementizers in English can be formed by attaching two main verbs with or without infinitive marker /**to/** and the second collocating verb inflects as per the gender, number, and person of the subject head in Hindi. The present discussion has focused on three major configurations of complementizers in view of the following sample texts.

(i) The boy <u>wants to come</u>.   *laṛkā ā<u>nā cāh**tā hē**</u>*

(ii) They still <u>avoid to see</u> us.   *ve abhī bhī hamse <u>milne se katrā jāte hẽ</u>*

(iii) He <u>began breaking</u> chairs.   *usne kursiyã toṛnā ʃurū <u>kiyā</u>*

(iv) Everyday we <u>heard</u> the phone <u>ring</u> in his room.

          roj ham uske kamre mẽ phon <u>bajtā sunte the</u>

(v) I made him laugh.   *mẽne use hãsāyā*

(vi) I <u>got</u> my hair <u>cut</u>.   *mẽne apne <u>bāl katāvāe</u>*

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[1] As for the difference between adeshmulak and nideshmulak kal in Hindi, adeshmulak kal is used for prompt action as in Ai, Aii, Aiii, whereas nideshmulak kal is used for futuristic action as in Aiv.

CONTRASTIVE KNOWLEDGE BASE

Viewing the above examples, the first configuration is English (V1/V5+V4/V6) = Hindi (V6/V4^{base} ^{form}+ /-nā/+{V1/V5}^{inflection}).[2] In terms of ordering, the configuration says that English configuration before equal mark will reverse and V6 will take /-**nā**/ suffix in Hindi, whereas the tense of V1 or V5 will inflect as per the gender and number of the subject. For example, wants (V5) +to come (V6) = ā (V6) + (nā} +cah$^{tā\ hai}$ in case of (Ai). As for (Aii), it shows the configuration V1+V6 differing from the first configuration only in terms of middle suffix /-ne se/ after V6 (i.e. *milan*). The second configuration is English (V2 + N + V1/V4) = Hindi (N + V1/V4 + /nā/, /-tā huā/ + V2/V3) can be seen to show the inflection for (Aiii) and (Aiv) respectively. The third configuration (V1/V2/V3 + N + V1) = (N + V1 + V1/V2/V3) stands for causativization. In Hindi, certain changes are made in a verb to express actions that one has someone else perform (Hook, 1997: 207). Causatives in Hindi may be direct or indirect. Direct is formed by adding /–ā/ to the root as in (Av), and it means 'make somebody do a thing'. Indirect is formed by adding /–vā/ suffix to the base form, and it means 'to have a thing done by a third person as *katvānā* in (Avi).

7. COMPOUND VERB-BASED VERBAL INFLECTION

Translatability of English verbs in Hindi as *compound verbs* or *verbal clusters* is one of the most deterministic issues faced by the translator, as English doesn't have compound verbs like Hindi. Hindi compound verbs are sometimes compared with English particle or phrasal verbs. It is difficult to decide when an English verb will be substituted by compound verb or simple verb in Hindi. "Use of compound verb allows the mind to travel across the phases of an action. Using the simple verb illuminates a single stage. (Hook, 1997: 231)."

A

(i) You will <u>get</u> the money   *āpko pēse (milẽge / mil <u>jāẽge</u>)*

(ii) I will eat up the kabobs   *mẽ kabāb (khāũgā / khā <u>lũ̃gā</u>)*

(iii) Shall I send the boss's letter?   *kyā mẽ sāhab kā patr bhejũ / bhej dũ?*

B

(i) No, don't send.   *nahĩ mat bhejo*

(ii) Come in, Sir.   *āiye, sāhab*

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[2] V1= first form of verb(i.e unmarked present e.g. go)

V2= second form of verb (i.e. simple past e.g. went)

V3= third form of verb (i.e. past participle form e.g. gone)

V4= fourth form of verb (i.e. progressive form e.g. going)

V5= fifth form of verb (i.e. present marked e.g. goes)

V6= sixth form of verb i.e. infinitive form e.g. to go)

CONTRASTIVE KNOWLEDGE BASE

The above example shows that (*jānā, lenā,* and *denā*) are the most frequently used auxiliaries to form compound verbs as in (Ai) to (Avii) above. It is noteworthy that transitive verbs are compounded by postposing auxiliaries like *lena* and *dena,* viz, *lũgā* and *dũ* after *khā* and *bhej* respectively in (Aii) and (Aiii). But the case of (Aiv) is more challenging to tackle in Hindi, as it requires further information whether the action is for one's own sake or others. It seems possible to form compound verbs of almost any simple verbs in Hindi, but it is not possible to form compound forms of any verbs in any contexts. For example, (Bi) shows that compound verb should not occur in negative sentences, whereas (Bii) and (Biii) suggest preferably the use of simple verbs if the actions occur in successive phases as polite commands. Viewing the above use of compound verbs in block (A) and (B), it is evident that the main verb carries the natural meaning in compound verb rather than auxiliary.

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