Fragment Answers in Hindi

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ABSTRACT

Holmberg (2015) and Merchant (2005) among others have argued for an analysis of fragment answers wherein they are CPs but have undergone constituent ellipsis under identity with the question; building on the proposal that questions and answer have similar syntactic structure. Focusing on yes/no fragment answers in Hindi, I provide an account for answers of the type I describe as the ‘verb stacking’ pattern and thereby extend the attested typological variations in fragment answers to yes/no questions. Yes/no questions in Hindi are answered by obligatorily repeating all the verbal elements in the order they occur in, in the question. Extending Holmberg’s (2015) analysis for optional verb stacking in Finnish to Hindi, I argue, with independent evidence that the subject in Hindi may stay in spec, vP and the verb moves outside of vP. I posit that PolP can be IP-internal and argue for it to be the highest head in the vP domain in Hindi. I also posit that fragment answers are obtained by elision of PolP which effectively is verb stranding vP ellipsis.

1 Introduction

Holmberg (2015), Merchant (2004), and Kramer and Rawlins (2011) among others have argued for an analysis of fragment answers wherein they are CPs but have undergone constituent ellipsis under identity with the question; building up on the proposal that questions and answer have similar syntactic structure. I, in this paper provide an account for obligatory verb stacking in yes/no fragment answers in Hindi and thereby enable a direct comparison with languages like Welsh and Finnish which do not have obligatory verb stacking.

Yes/no questions in Hindi could be answered by repeating all the verbal elements in the order they are in, in the question. This verb stacking is obligatory unlike in Finnish wherein the answer can also be only the highest verbal element (a verb echo answer- Holmberg 2015). Welsh on the other hand obligatorily cannot have verb stacking, as the fragment answer always has to be only the highest verbal element. Thereby verb stacking at first glance is parametric. Holmberg (2015) argues for the optional verb stacking in Finnish to be due to the ellipsis of a smaller than IP constituent. Building up on his analysis, I argue that the parametric variations in the languages mentioned above are conditioned by two different properties. The first property as already argued in Holmberg (2015) is the size of the constituent getting elided in the answer under identity with the question. I argue that Welsh, obligatorily has IP ellipsis. Finnish as already stated in Holmberg (2015) could either have IP ellipsis giving the verb echo answer or vP ellipsis giving the verb stacking pattern. A natural extension of Holmberg’s idea would be to say that Hindi obligatorily has vP ellipsis. A second property that affects the answer patterns in these languages is the position of the subject, i.e. whether the subject stays in its initial merge position of spec, vP or moves higher. The subject in Welsh and Finnish has been argued to be able to move to a higher position from its merge position. I argue for Hindi, that the subject may stay in spec, vP.

This paper is organized as follows: in Section 2 I give a brief summary of Holmberg’s (2015) analysis of y/n answers. The basic answer patterns of Hindi are then presented in Section 3. In Section 4, the different possible syntactic analysis for y/n answers are compared and one optimal

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analysis is argued for Hindi. Section 5 details the proposed analysis for fragment answers in Hindi. In section 6, I lay out the outstanding issues in Hindi fragment answers and speculate the possible alternations required to be able to account for the problems. Section 7 concludes by mentioning the multifold implications that this research has on the study of the syntax of fragment questions and answers.

2 Summary of Holmberg (2015)

Holmberg (2015) provides us with an analysis of answers to y/n questions wherein the answers are syntactically full CPs, even the yes/no particles as answers. The yes/no particles are argued to be in the focus position in the C-domain, with the IP elided under identity with the IP of the question.

Holmberg (2015) argues that every finite clause has a Pol head within a PolP as the highest phrase in the IP domain. In the y/n question this Pol head is a variable and can effectively get two values: positive or negative. The Pol head variable to mark sentential scope and be the Centre of Attention (CoA) moves overtly or covertly to spec, CP. The Q-force in the question which takes what is in the spec,CP as its argument demands that the Pol variable receive a value. This value is supplied by the answer. The answer has the same PolP as the question, but in the spec,CP there is a valued polarity feature. This valued polarity feature is merged at spec,CP and gives the variable polarity feature in the Pol head a value. We get an affirmative answer if the value of the polarity feature in the answer is positive and we get a negative answer if the value of the polarity feature is negative. This is how Hamblin’s (1958) idea of answers being a disjunctive set of propositions: p and ¬p is instantiated in the syntax of y/n questions and answers. And since the PolP in the answer is the same as that in the question, it can be elided under identity. This analysis is schematized in Figure (3) and Figure (4) for Finnish.

(1) Q: luki-ko jussi sen kirjan
read-Q jussi that book

(2) A: kyllä
yes

(3) Yes/No Q in Finnish

(4) Yes/No Answer in Finnish

Particle + highest verbal element answers of the type in (5) are argued by Holmberg (2015) to be an instance of verb stranding vP ellipsis wherein the verb has moved out of the vP and more importantly the subject stays in spec, vP.
Verb stacking as defined here to be a fragment answers with more than one verbal element as shown in (6) is also a possible answer in Finnish. The analysis for this structure is argued to be that the highest verbal element moves to spec,CP, the main verb moves out of the vP and essentially the subject stays inside spec, vP. Given this, verb stacking is obtained by vP ellipsis.

Having given Homberg’s (2015) analysis for y/n answers in Finnish, we should note that these are not the exhaustive analyses for the derivation of such answers if we take crosslinguistic answer patterns into consideration.

There are various other ways by which one could account for fragment answers attested in different languages. The first option is subject pro drop + object pro drop. This analysis can apply to languages which independently attest both these phenomena and thereby account for the missing arguments in fragment answers. A second analysis that is entertained is subject pro drop + verb stranding VP ellipsis for languages which do not have unrestrained object pro drop but do have unrestrained subject pro drop. A third analysis is what Holmberg (2015) calls the Big Ellipsis analysis which he adopts for Finnish and Welsh among other languages. In such analyses there is no argument drop, instead either the IP is elided with the subject in spec, IP or the vP is elided with the subject in spec, vP. In the next section I first present the Hindi fragment answer patterns and then in section 4, I compare all the four analyses presented here and argue for one which could account for the patterns in Hindi.

3 Hindi Fragment Answers

Hindi is an Indo-Aryan language with SOV word order. Yes/no questions in the language are typically marked with rising intonation and optionally a questions particle ‘kya’. The questions particle in its unmarked position is clause initial but can also occur clause finally. Yes/no questions in Hindi can be answered simply by the positive/negative particles. However, the unmarked answer for a y/n questions is the prt + verbal elements answer. Essentially it is not a verb-echo language like Finnish or Welsh where only the highest/inflected verb can be a fragment answer.

(7) Q: (kyaa) raaghav-ne kitaab paDhii?
    Q Raaghav-Erg book read.Perf.3FSg
    ‘Did Raghav read the book?’

(8) PosA: a. haan
    yes
Interestingly, if the question contains more than one verbal element, then the fragment answer obligatorily has to contain all the verbal elements in the same order as given in the question.

(9) Q: (kyaa) raaghav kitaab paDh paa rahaa thaa?
   Q raaghav book read.Inf able Prog be.Pst.3MSg
   ‘Was Raghav able to read the book?’

(10) PosA: a. haan
     b. (haan) paDh paa rahaa thaa -Verb Stacking
        yes read.Inf able Prog be.Pst.3MSg
     c. #paa rahaa thaa
        able Prog be.Pst.3MSg
     d. #rahaa tha
        Prog be.Pst.3MSg
     e. #padh
        read.Inf
     f. #thaa -Verb Echo
        be.Pst.3MSg
        ‘Yes.’

Thereby we conclude that Hindi, unlike Finnish and Welsh is not a verb-echo language, i.e. only the inflected/highest verb cannot be a fragment answer in Hindi. Further there is obligatory verb stacking in Hindi. Verb stacking is optional in Finnish and obligatorily impossible in Welsh, thereby providing us with three languages which follow a paradigm and can be compared for crosslinguistic study. In the next section I examine in detail the four different analyses that could be possibly used to account for fragment answer patterns in Hindi.

4 The Probable Accounts

When we compare the unmarked answer pattern attested in (10b) to the yes/no question in (9), we realize that the only elements missing from the answer are the argument DPs as the answer constitutes of just the verbal sequence. A number of syntactic mechanisms could account for these missing arguments. The mechanisms considered in this section are pro drop, verb stranding VP ellipsis (for missing object DPs) and IP ellipsis. All the three phenomena mentioned here are independently attested in Hindi and hence could each potentially account for (10b).
4.1 Subj Pro Drop + Obj Pro Drop

In this account, fragment answers are directly a result of having phonologically null elements like pro in the argument positions. This analysis could be argued for with languages which independently attest empty pronominals in argument positions in non-interrogative contexts. This could be a probable analysis given that Hindi does attest rampant argument drop as in (11). There are doesn’t seem to be any person restrictions on the null pro or any (in)definiteness restriction.

(11) Context: Raghav is looking for a book and Dharmesh knows that.²

Q: [e] [e] milaa (kyaa)?
find.Pst.3MSg Q
‘Did you find it?’
A: [e] [e] DhUnD raha ahun.
search Prog.2MSg be PRES.2MSG
[e] [e] pataa nahi kahaan rakh DIYAA.
know Neg where keep give.Pst.2MSG
‘I am looking for it. I don’t know where I kept it.’

One clear evidence for this analysis is the obligatory verb stacking in Hindi. In (10b) only the arguments are missing, the entire verbal complex has to be obligatorily present. The ungrammaticality of (10c-f) is very easily obtained if fragment answers are a result of argument pro drop. The analysis is schematized in Figure (12).

(12) Argument pro drop analysis

However, I argue against this analysis. The major evidence comes from adverb inclusion in fragment answers. If we include adjuncts like certain adverbials in the questions the fragment answers will not have those adjuncts overtly but the answer will still include the adjunct

²Context inspired by a similar example for Thai in Holmberg (2015).
interpretation. For instance, in (13) we have the adverb *asaanii-se* 'easily' in the question which is absent in the answer, though the answer includes the adverb interpretation. This will not be possible if the fragment answer was obtained merely due to argument drop.

\[(13)\] Q: (kyaa) raghav-ne asaanii-se kaam kiyaa
Q: Did Raghav do the work easily?
A: haan kiyaa
   yes do.Perf.3Msg
   'Yes, he did the work easily.'

Moreover, there have been arguments that null objects in Hindi could be a result of V stranding VP ellipsis or genuine argument ellipsis. Simpson et al. (2013) argue for an ellipsis account to account for missing objects due to sloppy interpretation being available in object positions with an anaphoric antecedent. Sloppy interpretations are never available in the subject positions. We could account for fragment answers in Hindi with a subject pro drop + Verb stranding VP ellipsis account as that could easily explain the adverb inclusion as well. This is considered next.

### 4.2 Subj Pro Drop + Verb stranding VP Ellipsis (V stranding VPE)

The major empirical evidence against an argument drop account was adverb inclusion in fragment answers. We could modify the 1st analysis in a way so as to be able to account for this phenomenon. Our next analysis is that the phonetically null subject is due an empty pro occupying the subject position and the phonetically null object is due to verb stranding VP ellipsis. The verb moves out of the VP leaving the object in the base position and the entire VP gets elided. Null objects in Hindi have been argued to be a result of V stranding VPE. Adverb inclusion like in (13) is also accounted for as the adverb *asaanii-se* 'easily' is considered to be a very low VP level adverb in the Cinque (1999) hierarchy and gets elided along with the VP. The analysis is schematized in Figure (14).
Nevertheless, this account wouldn’t work as well with inclusion of high level adverbs like subject oriented adverbs like in (15). Adverbs which can take scope over the subject have to be higher than the VP level, they have to at the least attach at the vP level. Inclusion of such adverbs cannot be accounted for verb stranding VP ellipsis. In (15) we have the adverb phir-se ‘again’ which in the answer is overtly not realized but the answer has a repetitive reading of ‘again’ which suggests that the subject is under the scope of the adverb (von Stechow 1996, Johnson 2004), thereby suggesting that the adverb is higher than the subject. The adverb inclusion in this case cannot be accounted for if the ellipsis site is lower than the position of the adverb.

(15) Q: (kyaa) raaghav-ne phirse kitaab paDhii
Q Raghav-Erg again book read.Perf.3Fsg
‘Did Raghav read the book again?’
A: haaN paDhii
yes read.Perf.3Fsg
‘Yes. (Raghav performed the action of reading the book again.)’

Hence, I argue that Hindi fragment answers are not formed by Subj pro drop + V stranding VPE. It needs to be an ellipsis of a larger constituent which would explain inclusion of higher level adverbs and still explain the missing arguments.

4.3 IP Ellipsis analysis

The fact that we never find as a fragment answer a pattern where the subject is overt but some part of the clause is still phonetically null suggests that the elided part has to contain the subject. This leads us to a Big Ellipsis analysis as argued by Homberg (2015) for Welsh and Finnish. There are two sub-types in Big ellipsis analysis. In the first sub type the entire IP gets elided and in the second sub-type the vP gets elided and the subject is in spec, vP. Holmberg (2015) argues for the former analysis for Welsh while both these analyses are argued to be present in Finnish to account for different answer patterns.

Essentially the difference is brought about by verb echo answer vs. verb stacking. Verb echo answer can be accounted for only by an IP ellipsis account. The account argues that the highest verbal element is attracted by the focused polarity feature which needs a phonological exponent. The entire IP/ PolP then gets elided. This is the obligatory answer pattern in Welsh and for verb echo answers in Finnish. Verb stacking on the other hand cannot be accounted for by IP ellipsis. If the focused polarity feature needs a phonological exponent and attracts the highest verbal element, there is no motivation for the other verbal elements to move out of IP before the IP is elided. A natural account of verb stacking then would be a vP ellipsis account wherein the verb is raised out of the vP due to some head attracting feature, the subject stays inside vP and the vP is elided. Since the entire verbal clausal complex is not elided we get verb stacking as a fragment answer.

I argue that Hindi obligatorily has verb stranding vP ellipsis with the subject staying in spec, vP. This easily accounts for the fact that verb echo answers (8c, 10c-f) are not possible in Hindi. Holmberg (2015) furthermore argued that the prt + verbal elements pattern is a result of vP ellipsis and not IP ellipsis. This further supports that suggestion that Hindi only has vP ellipsis as the unmarked fragment answer in Hindi is the prt + verbal elements answer.

One way to account for verb stacking in an IP ellipsis account would be to suggest that the multiple verbal elements form a complex head and all of them raise to spec,CP. This is however not the case in Hindi. Though there is no empirical evidence suggesting that they never form a complex head, we however can argue that the verbal elements do not always form a complex head. We see in (16) how the verbal elements can be broken up and there can be elements in between.
To say then that this complex head is obligatory in answers but not in usual declarative contexts would feel like a stipulation.

(16)  
raaghav   kitaab paDh paa raha thaa
raaghav   book read.Inf able Prog be.Pst.3MSg
raaghav   paDh kitaab paa raha thaa
raaghav   read.Inf book able Prog be.Pst.3MSg
raaghav   paDh paa raha kitaab thaa
raaghav   read.Inf able Prog book be.Pst.3MSg
‘Raghav was able to read the book.’

Yet another argument against a vP ellipsis and supporting an IP ellipsis account would be to argue that the subject in Hindi has to raise to spec,IP and a vP ellipsis account can’t explain why a subject is not overt in a fragment answer. It is the standard assumption that the subject raises from spec,vP to spec,IP in languages with subject-verb agreement. The major evidence though comes from head initial languages and it is very difficult to know from the word order patterns of head final languages like Hindi if this is indeed the case. Bhatt (2005) argues that the subject in Hindi does not raise to spec,IP at least for agreement purposes.

5 Proposed Account – A vP Ellipsis Account

In this section, I develop an analysis of Hindi fragment answers which attributes there to be an operation of V raising vP Ellipsis which can account for all the attested patterns in Hindi. I argue for the ellipsis size to be larger than VP, it is actually at the level of little vP. Ellipsis of vP instead of VP allows us to have the subject inside the ellipsis site and furthermore can also explain the missing higher-level adverbs which scope over the subject as they too can be under the scope of the targeted ellipsis constituent. The only way that we can argue that ellipsis of vP elides the subject as well, is if the subject in Hindi can stay in spec,vP. Further, we need independent evidence that the verb in Hindi moves out of vP to a position higher than v prior to ellipsis. Only then can we account for the fact that all the verbal elements are outside of the scope of the ellipsis site.

In a vP ellipsis account for verb stacking in fragment answers, the verb has to move out of v due to some head attracting feature to explain the fact that the answer patterns have the entire verbal sequence present. Verb stranding verb phrase ellipsis is independently attested in Hindi as can be shown by (17) wherein the adjunct inclusion and availability of sloppy interpretation points to a verb phrase ellipsis account as opposed to a pro drop or an argument ellipsis account of the missing argument (Bhatt & Dayal 2007, Simpson et al 2013, Manetta, to appear).

(17)  
raam-ne apanaa nayaa lekh do baar paDh aa
raam-Erg self new article two times read.Perf.3MSg
‘Ram read his/new article twice.’
raaj-ne bhi paDh aa
raaj-Erg also read.Perf.3MSg
‘Raj also read (his/her article twice).’

With regards the subject staying in a lower position, following Miyagawa (2001) and Miyagawa & Arikawa (2007) paradigms for Japanese, I provide independent empirical evidence that the subject
in Hindi indeed might stay in spec, vP. Miyagawa & Arikawa (2007) argue that Japanese has an EPP condition which can be fulfilled either by the subject or the object. When the object moves to spec,IP the subject essentially stays lower in spec,vP and that is clear in those scrambled construction as in those constructions the subject can’t take scope over negation which it otherwise can when the subject is in spec,IP and the object stays lower. In (18) we see that the subject does not take scope over negation in Hindi.

(18) sab-ne kitaabein nahi paDhiiN not >> all, *all >> not all book.Pl neg read.Pst.3FPl
‘Everybody didn’t read the books.’
#’Nobody read the books.’

This could be taken as evidence that the subject stays lower than negation in Hindi in its base origin position of spec,vP. Negation in Hindi is argued to be low in the structure, as the word order constraints suggest that nothing come in between the negation and the verb. Even very low adverbs like ‘easily’, ‘quickly’ etc cannot intervene between negation and the verb.

Additionally, there have been crosslinguistic arguments concerning interpretive differences in subjects when the linear order of the subject is alternated with other constituents like certain adjuncts. These interpretive differences are associated with two different positions for the subjects. Diesing (1992) in her study of indefinites in German argues for two different positions of subjects as they are interpreted differently when they occur in different positions. Similar evidence can be used to argue for two different subject positions in Hindi. In (19), when the subject is to the left of the location adjunct, it has a specific interpretation and in (20) when subject is to the right of the adjunct, the subject can only have an existential interpretation. The conclusion for German carries over to Hindi to a certain extent in the sense that the existential interpretation of the subject is obtained only when the subject stays in its lower base position in spec,vP. By way of contrast the specific interpretation of the subject is obtained when the subject moves higher to the spec,IP position.

(19) kitaabeiN mej-par rakhi heiN
book.Pl table-on keep.Pst AUX.Pres.3FPl
‘The books are kept on the table.’

(20) mej-par kitaabeiN rakhi heiN
table-on book.Pl keep.Pst AUX.Pres.3FPl
‘There are books on the table.’

Now that we have independently motivated that the verb in Hindi moves out of vP and the subject in Hindi can stay in spec,vP, a vP ellipsis analysis accounts for the attested patterns of fragment answers in Hindi. Hindi does not have verb echo answers. The prt + verbal elements answer is the unmarked fragment answer and is easily obtained in a vP ellipsis account. The analysis is schematized in Figure (21).
Outstanding Issues

Reviewing what I stated in the introduction, we have here a paradigm with the three languages Welsh, Finnish and Hindi. Welsh is a language which only has verb echo or particle as fragment answers. Prt + verbal elements and verb stacking are unattested. Finnish has all the fragment answer patterns that we have seen, we can have only the particles, or only the highest verb. We also have prt + verbal elements and verb stacking. Hindi on the other hand is opposite to Welsh as it doesn’t have verb echo but obligatorily has verb stacking and prt+ verb answers. Given Holmberg’s (2015) analysis for Welsh and Finnish and the analysis presented here for Hindi, the different patterns can be accounted for the by the size of the constituent which undergoes ellipsis. Welsh only has IP ellipsis, Finnish has both IP and vP ellipsis and Hindi has vP ellipsis. The issue that arises is for Welsh and Hindi.

I speculate that this difference between Welsh and Hindi could to some extent be motivated by the position of PolP. As stated earlier in the section 2, Holmberg (2015) argues for there to be a PolP for every finite structure. All the cases where we have seen IP ellipsis it is actually PolP ellipsis under identity as PolP is highest phrase in the IP domain and it is the same PolP as in the question. I suggest that the maximal constituent that can be elided in a fragment answer is PolP. I then suggest that PolP is quite low in the clausal spine in Hindi. As has been argued that the polarity variable in the Pol head is focus driven feature and moves to C to get that focus. FocP in Hindi and in other Indo-Aryan and Dravidian languages has been argued to be lower than IP and just above vP (argued for in Brody 1990, Jayaseelan 1996, Kidwai 1995). It would then not be surprising if Hindi attests a lower Pol head. I posit that the Pol head is IP internal and is the highest head in the vP domain.

One piece of evidence comes from negative biased yes/no questions in Hindi. Holmberg (2015) argues that languages which have a higher NegP are mostly Polarity based languages as the NegP
is too close to the PolP and can’t have opposing polarity values. Hindi pre-dominantly is a polarity based language as we can see in (22).

(22) Q: (kyaa) raaghav-ne kitaab nahi paDhii?
Q Raghav-Erg book neg read.Perf.3FSg
‘Didn’t Raghav read the book?’
PosA: (naiii), naiii paDhii
No neg read.Perf.3FSg
‘No he didn’t.’
NegA: haan paDhii
yes read.Perf.3FSg
‘Yes, he did.’

One way to account for this would be to say that NegP is higher in the clausal spine in Hindi and is too close to PolP, but as stated above, word order suggests that negation is Hindi is very close to the verb lower in the structure. It is difficult to account for Hindi being a polarity based system if the highest head in IP and NegP is much lower. However, if we argue that PolP is lower as well and is closer to vP we could account for Hindi being a polarity based system. Though further research needs to be done to be able to say anything conclusive, the difference between Welsh and Hindi does seem to be a non-trivial issue.

7 Conclusion

In this paper, I have tried to extend Holmberg’s (2015) analysis for fragment answers to Hindi. I have argued against a pro drop analysis, an argument ellipsis analysis and a verb stranding VPE analysis as they are not able to account for the entire range of attested patterns. A vP ellipsis analysis has been motivated wherein the subject stays in spec,vP while the V+υ complex moves out of vP to a higher phrase. This gives us the obligatory verb stacking pattern in Hindi which is the unmarked answer form. One implication of this research is that the syntax of fragment answers gives us an insight into the syntax of yes/no questions based on the assumption that questions and answers share a similar syntactic structure. Yet another avenue of further research lies in the explanatory power of an ellipsis account over other accounts for fragment answers. An ellipsis account for a language like Hindi which independently attests various other syntactic phenomena which could account for unpronounced structure, leads us to an appealing generalization of fragment answers across all languages being derived via ellipsis. Hindi further prove to be a useful language for crosslinguistic comparison as it presents novel patterns which weren’t attested so far. The syntax of fragment answers needs to be able to account for languages with obligatory verb stacking. Hence, we see that the implications of this research are multifold and I leave these issues open for future research.

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References


