

Remarks and Replies

The Nonuniform Syntax of Postverbal Elements in SOV Languages: Hindi, Bangla, and the Rightward Scrambling Debate

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Much debate in recent years has focused on whether postverbal elements (PVEs) in SOV Hindi are derived via leftward movement compatible with the Linear Correspondence Axiom (Mahajan 1997a,b, 2003) or whether they must be assumed to result from some kind of rightward non-antisymmetric movement (Bhatt and Dayal 2007, Manetta 2012). A second phenomenon, scope restrictions on *wh*-in-situ elements in postverbal CPs, is often linked to the syntactic analysis of PVEs. Comparing Hindi with Bangla, this article shows that PVEs in Indic languages are not derived in a uniform way and that the *wh*-scope restriction needs to be considered independently of the syntax of nonclausal PVEs.

Keywords: rightward scrambling, remnant movement, Linear Correspondence Axiom, *wh*-in-situ, Hindi, Bangla

1 Introduction

It has long been noted that many languages whose basic word order is SOV optionally allow various elements to occur following the verb in colloquial speech. Among these languages are Japanese (Kuno 1978, Whitman 2000), Turkish (İşsever 2003, Kural 1997), Hindi (Gambhir 1981), and Tamil (Sarma 2003), as illustrated in (1)–(4).¹

- (1) Taroo-ga yonda yo, ano-hon-o. *Japanese*
TAROO-NOM read.PST PRT that-book-ACC
'Taroo read that book.'
(Takita 2011:381)

¹ Spellings and glosses of examples taken from other works follow the conventions used in the original sources.

- (2) Ali sabah biraktı kitabı buraya. *Turkish*
 Ali morning put.PST book.ACC here
 ‘Ali put the book here in the morning.’
 (İşsever 2003:1032)
- (3) sita-ne dhyaan-se dekh-aa thaa ram-ko. *Hindi*
 Sita-ERG care-with see-PFV be.PST Ram-ACC
 ‘Sita had looked at Ram carefully.’
 (Bhatt and Dayal 2007:288)
- (4) shakuni dharma-kku koDu-tt-aan daayatt-ai. *Tamil*
 Shakuni-NOM Dharma-DAT give-PST-3SM dice-ACC
 ‘Shakuni gave the dice to Dharma.’
 (Sarma 2003:240)

Such noncanonical patterning has given rise to significant debate concerning the syntactic derivation of postverbal elements (henceforth PVEs) in verb-final languages, and, particularly within South Asian linguistics, how analyses of PVEs can be reconciled with and inform general theories of the derivation of SOV structures, both antisymmetric and non-antisymmetric (Mahajan 1997a,b, Bhatt and Dayal 2007, Manetta 2012). In Hindi and Bangla, it can be shown that PVEs are not simply extracentential afterthoughts that are not syntactically incorporated into the preceding clause. PVEs in these languages may be negative polarity items and idiom chunks that must be licensed by elements in the core of the sentence.

- (5) mae-ne nahii kharidii koi kitaab. *Hindi*
 I-ERG NEG bought any book
 ‘I didn’t buy any book.’
- (6) ram gita-r chokhe diyeche dhulo. *Bangla*
 Ram Gita-GEN eye gave sand
 ‘Ram deceived Gita.’ (lit. ‘Ram threw sand in Gita’s eyes.’)

In Hindi and Bangla, the analysis of PVEs has also been linked with another controversial phenomenon found in Hindi, Bangla, and other Indo-Aryan languages of northern India: a ban on the occurrence of *wh*-elements in postverbal CPs where the interrogative scope of such elements is intended to be established at some higher clausal [+Q] C, as shown in (7) and (8). In Bhatt and Dayal 2007, the derivational analysis given to PVEs in general is suggested to extend naturally to account for the *wh*-scope restrictions found within postverbal CPs and to render unnecessary the antisymmetric explanation of such patterns proposed in Simpson and Bhattacharya 2003.

- (7) *ram-ne kahaa ki kOn aayaa hE? *Hindi*
 Ram-ERG said that who come has
 Intended: ‘Who did Ram say has come?’
 (Mahajan 1990:128)

- (8) *tumi bhab-cho [CP ke baRi kor-be]?
 you think-PRES.2 who house make-FUT.3
 Intended: 'Who do you think will build a house?'
 (Bayer 1996:250)

Bangla

This article probes the comparative syntax of PVEs in Hindi and Bangla with a new focus on the occurrence and derivation of multiple postverbal phrases. It shows that PVEs cannot be assumed to result from a uniform syntactic operation in these two languages, hence that at least two modes of analysis are crosslinguistically necessary to account for PVEs in SOV languages, in a way that interestingly resembles differences in the rightward placement of elements within SVO Italian: dislocation vs. "marginalization" (Cardinaletti 2002). A second important conclusion that follows from the nonuniformity of PVE syntax in Hindi and Bangla is that the much-discussed *wh*-scope restrictions can no longer be attributed to constraints on a single mechanism deriving PVEs and must instead be given an explanation that is independent of the way in which PVEs arise in the two languages.

The structure of the article is as follows. Section 2 provides an overview of two prominent recent approaches to PVEs in Hindi—the VP-remnant movement analysis in Bhatt and Dayal 2007 and the rightward XP scrambling analysis in Manetta 2012—along with certain initial data from Bangla bearing directly on these approaches. Section 3 documents how Hindi and Bangla show clear similarities in the information structure status of PVEs, allowing for a range of different interpretations of elements in postverbal positions. It also demonstrates two important ways in which Hindi and Bangla differ in their patterning of PVEs. This ultimately leads to the suggestion that Bangla PVEs are derived by a stranding movement of the verb, whereas Hindi PVEs result from rightward scrambling. Finally, section 4 highlights the need for a treatment of *wh*-scope restrictions in Bangla and Hindi that does not depend on a common syntactic derivation of PVEs in the two languages.

2 PVEs in Hindi and Bangla

2.1 Previous Approaches to PVEs in Hindi

Bhatt and Dayal (2007) (henceforth B&D) offer an extended reply directed primarily toward Mahajan's (1997b) antisymmetric account of Hindi, and to a lesser extent toward Simpson and Bhattacharya's (2003) SVO analysis of Bangla. A key property observed in Hindi (and also Bangla; see Bayer 1996) is that elements that precede the verb regularly seem to take scope over postverbal elements, suggesting that the positioning of the latter, however it occurs, does not result in such elements' c-commanding the preverbal domain for purposes of scope. For Mahajan, this motivates an analysis in which PVEs are first moved leftward, and then stranded in clause-final position by the leftward movement of other elements in the clause. B&D, however, point out that the mechanics of Mahajan's remnant movement approach ultimately result in configurations in which preverbal material actually does not c-command elements stranded to the right of the verb; hence, additional assumptions become necessary to account for the scope relation of elements to

the left over elements to the right (which appears to follow the linear ordering of phrases in the clause; see B&D 2007:296). B&D then offer an alternative rightward VP-remnant movement analysis of PVEs that assumes a head-final SOV Aux base. B&D suggest that PVEs arise when the lexical verb raises rightward to Asp⁰ and the VP-remnant is then optionally moved rightward, carrying any elements that have not been raised out of the VP into postverbal position. Scope properties of surface pre- and postverbal elements are later computed at LF. Following Huang (1993), B&D argue that VP-remnants undergo obligatory reconstruction. However, they suggest, elements that have been raised leftward out of the VP prior to rightward VP-remnant movement do not reconstruct to VP-internal base positions. Such assumptions allow B&D to predict the scope patterns observed in Hindi sentences with PVEs, with preverbal elements c-commanding and taking scope over those in surface postverbal position following LF reconstruction of the VP-remnant, as schematized in (9) for an OVS sequence in which the object takes scope over the subject.

- | | |
|--------------------------------|---|
| (9) Base order | [_{TP} [_{AspP} [_{VP} S O V]] Aux] |
| Verb movement | [_{TP} [_{AspP} [_{VP} S O t _k] V _k] Aux] |
| Object movement | [_{TP} [_{AspP} O _i [_{VP} S t _i t _k] V _k] Aux] |
| VP-remnant movement | [[_{TP} [_{AspP} O _i t _m V _k] Aux] [_{VP} S t _i t _k]] |
| LF reconstruction of VP (only) | [_{TP} [_{AspP} O _i [_{VP} S t _i t _k] V _k] Aux] |
| → O takes scope over S | |

B&D also use their account of PVEs to provide an analysis of the *wh*-scope restriction found in postverbal CPs in Hindi, suggesting that such an account will extend to parallel patterns in Bangla, discussed in Bayer 1996 and Simpson and Bhattacharya 2003. B&D suggest that finite CP complements occur in postverbal position as a result of the same VP-remnant movement operation that optionally transports DP objects (and subjects) rightward following the verb. Such CPs subsequently undergo reconstruction at LF as the VP itself reconstructs to its base position. Critically, however, B&D suggest that VP-remnants create *scope islands*, hence that *wh*-elements that occur within VP-remnants will be trapped inside such constituents and be unable to take scope outside the containing CP/VP, resulting in the observed scope restrictions and the ungrammaticality of examples such as (7) and (8).

Manetta (2012) also addresses issues relating to the derivation and interpretation of PVEs in Hindi. She first points to certain potential criticisms of B&D's VP-remnant account and then proposes an analysis in which DPs and CPs scramble rightward past the verb without being contained within VP-remnants. Four of the points Manetta raises regarding the VP-remnant analysis are the following. First, such an analysis, in which both DPs and CPs are moved rightward via the same operation of VP-movement, may seem unable to capture the property that the postverbal positioning of DPs is fully optional, whereas finite CP complements must obligatorily follow the verb. Second, B&D's account assumes that only VPs and no other phrasal categories may move rightward, which remains a stipulation in the theory that is difficult to justify. Third, the VP-remnant movement approach appears to be unable to capture the different positional requirements

of CPs and DPs in the postverbal domain and the fact that postverbal CPs must always follow postverbal DPs. Fourth, the VP-remnant approach may not be able to accommodate patterns in which (a) a postverbal NP is separated from a preverbal floating quantifier and (b) a postverbal relative clause is separated from a preverbal NP, as there is no obvious syntactic derivation that could result in such discontinuous sequences if only VPs may undergo rightward movement.

To address these issues, Manetta suggests an approach in which PVEs move individually to rightward specifiers, and CP complement clauses are positioned sentence-finally via an optimality-theoretic rule of alignment operating at PF. Consequently, rightward movement is not restricted to VP constituents, and patterns of relative clause extraposition and quantifier floating can be accommodated. Relative scope patterns are captured in a way similar to B&D's, via the assumption that PVEs reconstruct to their prescrambling, preverbal positions, but leftward-scrambled elements do not reconstruct, the latter thereby taking scope over the former at LF. In this way, Manetta attempts to deal with certain PVE-related patterns in Hindi not considered by B&D.

2.2 *Bringing Bangla into the Picture: Patterns Bearing on the VP-Remnant Approach*

PVEs are also robustly present in Bangla, a language closely related to Hindi. Various PVE patterns in Bangla bear directly on the viability of applying a VP-remnant movement account to Bangla. Such an account was indeed proposed by B&D (2007:297–299) and intended to explain *wh*-scope phenomena in Bangla as well as in Hindi.

A first point, which relates to Manetta's (2012) discussion of floating quantifiers in Hindi, is that Bangla exhibits comparable evidence from the separation of NP and numeral-classifier pairs for an analysis in which constituents other than just VPs may undergo movement in sentences with PVEs, as illustrated in (10).

- (10) chatro-Ti obhidhan kineche tin-khana. *Bangla*
 student-CL dictionary bought 3-CL
 'The student bought three dictionaries.'

Second, and again relating to the VP-remnant movement hypothesis of PVEs, in addition to clear VP/vP-internal material, it is possible for elements higher in the clausal structure to occur as PVEs. This is illustrated in the Bangla example (11), in which the epistemic adverb *hOyto* 'perhaps' occurs following the verb, a position that may be unexpected if PVEs may in general only result from VP-remnant postposing.

- (11) jonaki cole-gEche hOyto. *Bangla*
 Jonaki leaving-went perhaps
 'Perhaps Jonaki left.'

A third, important point relative to the VP-remnant movement hypothesis of PVEs, potentially extended to Bangla, is that elements in postverbal position are not necessarily trapped within any kind of "scope island," contra the key suggestion used by B&D to account for *wh*-scope restrictions; indeed, in various instances it is possible for PVEs to take scope over other quantificational

elements that precede them in the preverbal field. In many cases in Bangla and Hindi, it is actually difficult to find sequences of quantificational elements that allow for nonlinear scope even when all elements occur preverbally, and so the observation that QPs in postverbal position are scoped over by preverbal QPs is not unexpected. Bangla and Hindi are largely languages in which linear order dictates relative quantifier scope. However, in Bangla, double object constructions have been noted to be an exception to the dominance of linear order in relative scope relations, and Bhattacharya and Simpson (2011) have shown that in examples such as (12) and (13), either scope relation of the direct and indirect objects is possible—that is, either ‘linear’ scope or non-linear ‘inverse’ scope.

- (12) hori [kono Ek-Ta chattr-er khata] [prottek-SikkhOk]-ke dEkhalo. *Bangla*
 Hori some 1-CL student-GEN copy each-teacher-OBJ showed
 ‘Hori showed some student’s notebook to every teacher.’
 Either: some > every linear
 Or: every > some nonlinear
 (Bhattacharya and Simpson 2011:1077)
- (13) hori [kono Ek-Ta boi] [prottek-SikkhOk]-ke dilo. *Bangla*
 Hori some 1-CL book each-teacher-OBJ gave
 ‘Hori gave some book to every teacher.’
 Either: some > every linear
 Or: every > some nonlinear
 (Bhattacharya and Simpson 2011:1077)

Significantly now, when the indirect object QP occurs in postverbal position as a PVE, it is still possible for both scope relations to be licensed; hence, the PVE is not trapped within any scope island in postverbal position and can take scope over a QP in the preverbal field.

- (14) hori [kono Ek-Ta chattr-er khata] dEkhalo [prottek-SikkhOk]-ke. *Bangla*
 Hori some 1-CL student-GEN copy showed each-teacher-OBJ
 ‘Hori showed some student’s notebook to every teacher.’
 Either: some > every linear
 Or: every > some nonlinear
- (15) hori [kono Ek-Ta boi] dilo [prottek-SikkhOk]-ke. *Bangla*
 Hori some 1-CL book gave each-teacher-OBJ
 ‘Hori gave some book to every teacher.’
 Either: some > every linear
 Or: every > some nonlinear

We will return to this observation about PVEs and relative scope, once we have highlighted further aspects of PVEs. In section 3, we will continue to build Bangla into the comparative picture and show ways in which PVE patterns in Bangla and Hindi are alike, before turning to some significant differences between the two languages.

3 Comparing PVEs in Hindi and Bangla

3.1 Similarities in Distribution

Although Hindi and Bangla are often referred to as SOV languages, the occurrence of elements in postverbal position is actually common in both languages. Finite CP complements are obligatorily postverbal in Hindi, and frequently so in Bangla, and phrases of other types optionally occur postverbally in colloquial speech: DPs, PPs, and (certain) adverbials. Both languages also allow *multiple elements* to occur postverbally, as illustrated in (16)–(19); hence, there is no restriction that the postverbal position be occupied by only one constituent.

- | | | |
|------|--|--------|
| (16) | ram-ne diye haiN gita-ko yeh zewar.
Ram-ERG gave are Gita-OBJ these jewels
'Ram gave Gita these jewels.' | Hindi |
| (17) | kal-hi-to dekha sita-ne ram-ko.
yesterday-EMPH-TOP saw Sita-ERG Ram-OBJ
'Yesterday Sita saw Ram.' | Hindi |
| (18) | porechi ami o-boi-Ta.
read I that-book-CL
'I read that book.' | Bangla |
| (19) | bhiSon mereche chele-gulo ram-ke.
severely beat boy-PL Ram-OBJ
'Those guys really beat Ram a lot.' | Bangla |

A second, important shared property relating to postverbal constituents in Hindi and Bangla, mentioned earlier, is that *wh*-elements that occur in a postverbal CP may not take interrogative scope outside this CP; see examples (7) and (8). Bangla (but not Hindi) allows finite clauses to occur optionally in preverbal position, and in this case, a *wh*-phrase contained within the CP may take scope outside the embedded CP, as illustrated in (20). Hence, the *wh*-scope restriction critically relates to (being contained in a CP in) postverbal position.

- | | | |
|------|--|--------|
| (20) | ora [ke aS-be (bole)] Sune-che.
they who come-FUT.3 C hear-PAST.3
a. 'Who have they heard will come?'
b. 'They have heard who will come.'
(Bayer 1996:252) | Bangla |
|------|--|--------|

Given the presence of this restriction in both Hindi and Bangla, it is natural to think that the phenomenon should have the same syntactic explanation in both languages.

A third general aspect of PVEs shared by Hindi and Bangla relates to their *information structure* status. In the literature on PVEs, not much attention has been given to the kinds of interpretation that elements optionally located in postverbal position can and do receive. Manetta (2012), for example, remarks that PVEs essentially instantiate background material, and B&D make no mention of the pragmatic role(s) played by PVEs in the sentences in which they occur.

Given common assumptions that movement operations may often be triggered by properties of the interpretation of elements, it is perhaps surprising that movement analyses of PVEs have not delved further into the potential information structure licensing of DPs and PPs positioned after the verb. In fact, it is possible for PVEs to occur with a range of different interpretations, and while they may often represent discourse-old, background information, in the form of definite DPs, they may also encode the focus of a sentence, either as new information focus or as contrastive focus, in both Hindi and Bangla.² Examples of indefinites occurring as new information foci in postverbal position are given in (21) and (22). Definite DPs may also occur as new information foci in postverbal position in the answers to *wh*-questions, as shown in (23). Example (24) illustrates the occurrence of contrastive focus in postverbal position.

- (21) Se kineche Ek-Ta notun gaRi. *Bangla*
 he bought 1-CL new car
 'He bought a new car.'
- (22) aajkaa programa pesh kar rahe haiN ek bahut mashoor kalakaar. *Hindi*
 today's program present do ASP is a very famous artist
 'A very famous artist is presenting today's program.'
 (Dayal 2003:89)
- (23) A: yeh zewar-to bade sundar haiN. kis-ne kis-ko diya? *Hindi*
 these jewels-TOP very beautiful are who-ERG who-OBJ gave
 'These jewels are very beautiful. Who gave them to whom?'
 B: yeh zewar diye haiN gita-ko ram-ne.
 these jewels gave are Gita-OBJ Ram-ERG
 'Ram gave these jewels to Gita.'
- (24) ami ram-ke dekhechi dilli-te, hyderabad-e na. *Bangla*
 I Ram-OBJ saw Delhi-in Hyderabad-in NEG
 'I saw Ram in Delhi, not in Hyderabad.'

When multiple constituents occur as PVEs, it is furthermore possible for their information structure status to differ, resulting in a mixture of old/definite and new/indefinite referents within a single postverbal sequence, as in (25) and (26).

- (25) diyeche sita ram-ke Ek-Ta boi. *Bangla*
 gave Sita Ram-OBJ 1-CL book
 'Sita gave Ram a book.'
- (26) dekha ram-ne tin aurton-ko. *Hindi*
 saw Ram-ERG three women-OBJ
 'Ram saw three women.'

² Dayal (2003) also points out that rightward scrambled NPs in Hindi may encode a variety of different information types, including (a) nontopic background information (ground), (b) fully new information, (c) afterthoughts, (d) deemphasis, and (e) emphasis. For similar observations, see Gambhir 1981.

In section 3.2, we will further explore the potential significance of these different roles borne by PVEs, particularly in sequences of multiple PVEs. However, here we can note that the placement of elements following the verb in Bangla and Hindi cannot be attributed to any single information structure trigger (focus, defocusing, topichood, etc.), as sequences of PVEs with different information structure roles may occur.

3.2 Significant Differences between Hindi and Bangla PVEs

Having noted that PVE patterns in Hindi and Bangla are similar in many ways, we now point out two particularly important differences in the ways that PVEs manifest themselves in the two languages. The first difference relates to the potential occurrence of *wh*-elements in postverbal positions, when such elements are not embedded within complement CPs. B&D note that in Hindi, *wh*-phrases may not occur as PVEs with normal interrogative force; they may only give rise to echo questions if postverbal, as illustrated in (27).

- (27) sita-ne dhyaan-se dekh-aa thaa kis-ko? Hindi
 Sita-ERG care-with see-PFV be.PST who-ACC
 ‘Sita looked carefully at WHO?’
 (B&D 2007:291)

The unavailability of regular interrogative scope for postverbal *wh*-elements is explained in terms of the VP-remnant movement hypothesis and the suggestion that VP-remnant movement results in scope islands, necessarily delimiting the scope of any element within the VP-remnant. Significantly, in Bangla, *wh*-phrases may in fact occur in postverbal position and be interpreted as having regular nonecho interrogative force. The scope of *wh*-phrases in postverbal position in Bangla (when not embedded within CP complements) is therefore not restricted in any special way, unlike their scope in Hindi. Examples of *wh*-phrases as PVEs in Bangla are given in (28)–(30).

- (28) tumi kinecho kon-boi-Ta? Bangla
 you bought which-book-CL
 ‘Which book did you buy?’
- (29) oi-ciThi-Ta likheche/poreche ke? Bangla
 that-letter-CL wrote/read who
 ‘Who wrote/read that letter?’
- (30) sinema-Ta Suru hobe kOkhon/kOTa-e? Bangla
 film-CL begin do.FUT when/what.time-at
 ‘When does the film start?’

In B&D 2007, the restriction on interrogative scope found with Hindi *wh*-elements in postverbal complement CPs and those that occur as bare PVEs (as in (27)) is attributed to the same mechanism: VP-remnant movement and its suggested creation of scope islands. However, it is not appropriate to attribute both types of patterning to the same syntactic process, as then Bangla would be expected to pattern exactly like Hindi—yet Bangla clearly shows the former type of restriction but not the latter.

A second important difference concerns the relative sequencing of elements in postverbal position in Hindi and Bangla. It has frequently been noted that the ordering of PVEs in Hindi is in principle free (modulo the requirement that CPs occur in final position; Gambhir 1981, Manetta 2010) and that DP subjects, objects, and indirect objects may essentially occur in any relative order in the language (“Any number of DPs may appear postverbally, in any order”; Manetta 2012:51). However, this is not so in Bangla, and, in strong contrast to what one finds in Hindi, the sequence of multiple PVEs must follow the base order of elements. Consequently, for example, while objects and indirect objects may occur before subjects in the postverbal domain in Hindi, this is not possible in Bangla. The examples in (31)–(32) show the restrictions on linear ordering of PVEs in Bangla, and examples (33)–(35) show that PVEs in Hindi are free to follow a wide variety of orders.

- | | | |
|---------|--|--------------------------------|
| (31) a. | dekhlo sita ram-ke.
saw Sita Ram-OBJ
‘Sita saw Ram.’ | <i>Bangla</i>
✓V S O |
| b. | *dekhlo ram-ke sita.
saw Ram-OBJ Sita | *V O S |
| (32) a. | diyeche sita ram-ke Ek-Ta boi.
gave Sita Ram-OBJ 1-CL book
‘Sita gave Ram a book.’ | <i>Bangla</i>
✓V S IO O |
| b. | *diyeche ram-ke Ek-Ta boi sita.
gave Ram-OBJ 1-CL book Sita | *V IO O S |
| c. | *diyeche ram-ke sita Ek-Ta boi.
gave Ram-OBJ Sita 1-CL book | *V IO S O |
| (33) | dekha ram-ko sita-ne kal-raat ki party mein.
saw Ram-OBJ Sita-ERG last-night PRT party in
‘Sita saw Ram, at last night’s party.’ | <i>Hindi</i>
✓V O S PP |
| (34) | bahut mara hai bechare-ko un gunDo-ne.
very hit has poor.thing-OBJ those criminals-ERG
‘Those criminals beat that poor thing a lot.’ | <i>Hindi</i>
✓Adv V Aux O S |
| (35) | yeh zewar diye haiN gita-ko ram-ne.
these jewels give are Gita-OBJ Ram-ERG
‘Ram gave these jewels to Gita.’ | <i>Hindi</i>
✓O V Aux IO S |

It can also be noted that the rigid sequencing of subject PVEs before object PVEs in Bangla applies regardless of the information structure status of the PVEs. As mentioned in section 3.1, PVEs may represent old information that is part of the background, new focal information, or contrastively focused information, and sequences of PVEs with different information structure roles may cooccur. However, regardless of the information status of the individual phrases in a sequence of PVEs, no relative ordering of old/new/contrastive information allows the subject > object base order to be inverted, as illustrated in the examples below. In (36), a focused subject

in postverbal position legitimately precedes an informationally old object, but the reverse sequencing of these elements is not possible. In (37), an informationally old subject legitimately precedes a focused object, but the reverse sequencing of these elements is not possible. In (38), an informationally old/backgrounded subject in postverbal position legitimately precedes an object that encodes new information, but the reverse sequencing of these elements is not possible. Finally, in (39) an informationally new subject in postverbal position may legitimately precede an object that encodes old/given/background information, but the reverse sequencing of these elements is not possible.

- | | | |
|---------|------------------------------------|--|
| (36) a. | pOreche ram-i oi-ciThi-Ta. | Bangla |
| | read Ram-EMPH that-letter-CL | ✓V S _{FOCUS} O _{OLD} |
| | ‘Ram read that letter.’ | |
| b. | *pOreche oi-ciThi-Ta ram-i. | Bangla |
| | read that-letter-CL Ram-EMPH | *V O _{OLD} S _{FOCUS} |
| (37) a. | pOreche ram oi-ciThi-Ta-i. | Bangla |
| | read Ram that-letter-CL-EMPH | ✓V S _{OLD} O _{FOCUS} |
| | ‘Ram read that letter.’ | |
| b. | *pOreche oi-ciThi-Ta-i ram. | Bangla |
| | read that-letter-CL-EMPH Ram | *V O _{FOCUS} S _{OLD} |
| (38) a. | pOreche ram Ek-Ta-ciThi. | Bangla |
| | read Ram 1-CL-letter | ✓V S _{OLD} O _{NEW} |
| | ‘Ram read a letter.’ | |
| b. | *pOreche Ek-Ta-ciThi ram. | Bangla |
| | read 1-CL-letter Ram | *V O _{NEW} S _{OLD} |
| (39) a. | pOreche ek-jOn-SikkOk amar ciThi. | Bangla |
| | read 1-CL-teacher my letter | ✓V S _{NEW} O _{OLD} |
| | ‘A teacher read my letter.’ | |
| b. | *pOreche amar ciThi ek-jOn-SikkOk. | Bangla |
| | read my letter 1-CL-teacher | *V O _{OLD} S _{NEW} |

3.3 Developing an Analysis of the Different Derivations of PVEs in Bangla and Hindi

The divergent patterns of PVEs seen in section 3.2 clearly suggest that a different analysis of PVEs in Bangla and Hindi is necessary. That is, were one to apply a uniform syntactic derivation in both languages, the output should be the same in both Hindi and Bangla, yet it is not. If one were to adopt a Manetta-style rightward scrambling analysis to multiple Spec,TP positions in Bangla, and then suggest that the ordering restrictions might result from a tucking-in type of constraint (Richards 2001) imposing sequencing on multiple movements to the specifiers of a single functional projection, as in cases of Superiority, one would expect that such a constraint would enforce the same ordering restrictions in Hindi, contrary to what is observed. Alternatively, if one attempted to model Bangla and Hindi in a parallel way via *leftward* scrambling of subjects

and objects, followed by further leftward remnant movement of the constituent containing the verb, as in Mahajan's (1997b) analysis of Hindi, one would again expect the outputs in Bangla and Hindi to be the same. As leftward scrambling imposes no strict ordering on subjects and objects in either language, such a derivation would predict that PVEs should be freely orderable in both languages, contrary to what is found in Bangla. It thus seems that the way in which PVEs are derived in Bangla must necessarily differ from the way apparently similar phenomena are derived in Hindi, and also from the occurrence of leftward scrambling operations within Bangla itself, which may regularly produce O > S sequences.

We suggest that the differences seen here in Bangla and Hindi show interesting and potentially revealing parallels with alternations that have been noted within Italian, in postverbal patterns described and analyzed by Cardinaletti (2002) and others. Cardinaletti observes that there are two distinct ways in which subjects, objects, and other selected arguments may all occur following the verb in Italian. The first involves clitic resumption and is classed as right-dislocation. The second does not make use of resumptive clitics and is referred to as *marginalization/marginazione*. Together with certain other distinguishing properties, what is particularly interesting about right-dislocation vs. marginalization in Italian is that the latter but not the former imposes a strict ordering of postverbal arguments that corresponds to the base order of the arguments within VP. This constraint on the sequencing of postverbal subjects, objects, and selected PPs is illustrated in (40) and (41). The (clitic) right-dislocation example (40) shows that when the verb precedes all of the postverbal arguments, their order is not fixed, whereas the parallel marginalization example (41) (with no clitics) demonstrates that the postverbal arguments are constrained to follow the order in the underlying base (in this case, SUBJECT > OBJECT > GOAL).

- (40) Ce l'ha nascosto il bambino, il libro, sotto il letto.
 there it-has hidden the child the book under the bed
 Ce l'ha nascosto il bambino, sotto il letto, il libro.
 there it-has hidden the child under the bed the book
 'The child has hidden the book under the bed.'
 (Cardinaletti 2002:34)

- (41) Ha nascosto il bambino, il libro, sotto il letto.
 has hidden the child the book under the bed
 ??Ha nascosto il bambino, sotto il letto, il libro.
 has hidden the child under the bed the book
 'The child has hidden the book under the bed.'
 (Cardinaletti 2002:34)

Cardinaletti analyzes marginalization as being produced by raising the verb out of the vP/VP, leaving the postverbal marginalized arguments in situ. It is the in-situ occurrence of these elements that accounts for the base order sequencing restriction. By contrast, Cardinaletti assumes that right-dislocation is produced by applications of movement, with the result that no parallel ordering restrictions are imposed on the postverbal dislocated arguments.

The basics of this analysis of the alternation within Italian naturally suggest themselves for modeling the PVE restrictions in Bangla and Hindi, with Bangla manifesting the strict, underlying word order properties of marginalization, and Hindi the freer sequencing possibilities of right-dislocation. Focusing first on Bangla, and how PVE strings might be derived in a way similar to Italian marginalization, with evacuation of the verb from the vP/VP leaving arguments in their base positions, two hypotheses of the syntax deriving such a result can be considered here.

Under the first possibility (Hypothesis 1), the verb in Bangla moves leftward out of the vP/VP via head movement, to some head-initial functional category higher in the clause, leaving elements such as the subject and the object in situ, if these elements are not themselves raised further. The underlying base for such a derivation might be an SVO sequence, as suggested for Bangla in Simpson and Bhattacharya 2003, or an SOV structure, as assumed in Bayer 1996 and other works. The view that Bangla is underlyingly SOV would need to assume that lower clausal categories such as vP/VP are head-final, whereas at least certain higher functional categories may be head-initial (see Bayer 1999 for discussion of mixed headedness in Bangla, and Manetta 2011 for similar assumptions about Kashmiri). (42a–b) schematize these two strategies for deriving surface VSO sequences from putative SVO and SOV bases.

- (42) a. [_{vP} S V O] underlying SVO base
 [_{V_k} [_{vP} S t_k O]] verb movement creating PVE sequence
 b. [_{vP} S O V] underlying SOV base
 [_{V_k} [_{vP} S O t_k]] verb movement creating PVE sequence

Under the second possibility for a marginalization-type derivation of PVEs in Bangla (Hypothesis 2), the verb moves rightward out of vP/VP to some head-final functional category to the right of vP/VP, followed by rightward movement of the vP/VP itself, past the verb, as represented in (43).

- (43) [_{vP} S O V] underlying base
 [[_{vP} S O t_k] V_k] rightward verb movement
 [t_m [V_k] [_{vP} S O t_k]_m] rightward vP-movement creating PVE sequence

This type of derivation, which also preserves the subject and object in their base positions, capturing the observed surface base order of multiple PVEs, somewhat ironically posits that B&D's VP-remnant movement analysis of PVEs would be correct for Bangla—but not for Hindi, as it has been concluded that Bangla and Hindi PVEs must arise via different kinds of derivation. Hypothesis 2 might be exploited further to account for the differences between Bangla and Hindi as follows. It could be suggested that the significant differences between the two languages arise because Hindi makes available multiple rightward specifiers of TP, whereas Bangla permits only one. Bangla would therefore allow only one constituent to move rightward to postverbal position; for a sequence of subject and object PVEs to occur, a vP (remnant) would need to raise, containing the subject and object in their vP-internal base positions. With the possibility of multiple rightward Spec,TP positions, and assuming no tucking-in constraint regulating the ordering of multiple elements moved to Spec,TP, the range of PVE orders found in Hindi would arguably be free to occur.

While a vP-remnant approach to Bangla PVEs might well seem possible, and while it allows a way to capture the sequencing differences in Bangla and Hindi, we believe there is a stronger argument for Hypothesis 1 of Bangla marginalization-like patterns, with leftward movement of the verb. This involves the ability of the analysis to potentially capture two other differences between Bangla and Hindi: (a) the occurrence of postverbal *wh*-elements in Bangla but not Hindi (examples (27)–(30)) and (b) scope patterns in double object constructions. With regard to the latter, we noted in section 2.2 (examples (12)–(15)) that the ready availability of the nonlinear/inverse relative scope possibility exhibited in double object constructions in Bangla with fully preverbal sequences of object and indirect object is preserved when the indirect object follows the verb as a PVE. This suggests that the structural relation between direct and indirect object QPs in preverbal and PVE sequences remains the same; and this in turn can naturally be modeled with the assumption that it is simply the verb that undergoes raising in the creation of Bangla PVE sequences, so that the underlying positions of other elements are not necessarily disturbed. Importantly, it can now be observed that relative scope in double object constructions is *not* preserved in Hindi PVE sentences, and the inverse scope possibility, which readily exists when direct and indirect object QPs precede the verb, is no longer naturally available when the indirect object occurs postverbally, unlike the situation in Bangla. This is illustrated in examples (44) and (45). In (44), where both the direct and the indirect object QPs occur preverbally, the latter may take scope over the former (or the former may take scope over the latter, either reading being quite accessible). In (45), however, the indirect object QP occurs postverbally; as a result, the inverse scope reading is suppressed, so that the sentence is naturally interpreted with linear scope, and the preverbal theme takes scope over the postverbal recipient.

- (44) hari-ne [kisi-ek chhatra ki kapi] [prattyek shikshak]-ko di. *Hindi*
 Hari-ERG some-one student LNK copy each teacher-OBJ gave
 ‘Hari gave every teacher some student’s notebook.’
- (45) hari-ne [kisi-ek chhatra ki kapi] di [prattyek shikshak]-ko. *Hindi*
 Hari-ERG some-one student LNK copy gave each teacher-OBJ
 ‘Hari gave every teacher some student’s notebook.’

This difference between Hindi and Bangla further strengthens the conclusion that PVEs in the two languages must be derived via different syntactic mechanisms, one preserving scope relations, the other disrupting regular preverbal relative scope. Now reconsider Hypothesis 2 regarding Bangla marginalization, in which a vP-remnant is scrambled rightward to Spec,TP. This potential solution to the word order differences in Bangla and Hindi views both languages as optionally creating PVEs via rightward scrambling to Spec,TP positions (with Hindi allowing the projection of multiple specifiers of TP and Bangla just one). As the movement operation assumed in such a scenario is the same for both Bangla and Hindi (i.e., rightward scrambling to Spec,TP), it is expected to have the same effect on relative quantifier scope in both languages: either the moved constituent can reconstruct in both languages and allow inverse scope effects, or no reconstruction is possible in either language, eliminating the preverbal possibility of nonlin-

ear scope. What is not expected is a different scopal patterning in the two languages, and the fact that this occurs undermines the rightward vP-remnant movement approach for Bangla.

A similar, supporting argument is based on the difference in patterning of *wh*-elements in postverbal position. Either it is expected that rightward scrambling should have no effect on the licensing of *wh*-elements, and these should be able to occur as PVEs with regular interrogative force in both languages, or it is expected that rightward scrambling should uniformly interfere with and block *wh*-scope in both languages. However, as noted earlier, there is a significant difference between Bangla and Hindi: *wh*-phrases may occur as PVEs with normal interrogative force in Bangla but not in Hindi. This difference again suggests that the mechanism deriving PVEs in Bangla should not be essentially the same kind of rightward scrambling that is posited for Hindi, differing only in the vP vs. DP/PP size of the moved constituent.

A leftward verb-movement analysis of Bangla PVEs would therefore seem better positioned to capture not only the marginalization-type word order patterns in multiple PVE sequences, but also the preservation of *wh*-scope and relative quantifier scope in postverbal argument DPs/PPs. A further pattern that supports the verb-movement analysis is the alternation illustrated in (46a–b).

- (46) a. gOtokal porechi ami oi boi-Ta. Bangla
 yesterday read I that book-CL
 ‘Yesterday I read that book.’
 b. porechi gOtokal ami oi boi-Ta.
 read yesterday I that book-CL

In both examples, the subject and object occur in postverbal position. In (46a), the temporal adverb *gOtokal* ‘yesterday’ precedes the verb, while in (46b), *gOtokal* follows the verb but precedes the subject and object. Both sequences are acceptable, but (46b) requires that the verb be stressed in order to sound natural. This necessary stressing of the verb is naturally accounted for if the verb undergoes leftward movement in both examples but must be specially stressed to reach a higher head position in the leftward part of the clause in (46b) (note that other elements moved leftward to initial positions in the clause may also regularly be stressed in Bangla).³ By contrast, it is difficult to understand how rightward movement of the adverb *gOtokal* in a constituent scrambled to postverbal position would require that the unmoved verb be given a special, added stress. We therefore adopt the position that PVEs in Bangla are created by leftward evacuation of the verb from vP, potentially stranding subjects and objects within vP.

Finally, with regard to the derivation of Bangla PVEs, the leftward verb-movement analysis needs to be supplemented with an assumption that *scrambling* of the object over the subject is not possible in the postverbal domain, as this might otherwise be expected to result in licit VOS sequences, which cannot occur, as illustrated in (31)–(32), (36)–(39). While such an assumption seems necessary to account for the impossibility of VOS sequences in Bangla, it curiously does

³ See also example (11), where the verb/verbal complex can similarly be assumed to raise to a higher clausal position above the epistemic adverb *hOyto* ‘perhaps’.

not seem to regulate the distribution of lower internal arguments of ditransitive verbs, and a direct object may either precede or follow an indirect object when both are present as PVEs. In Bhattacharya and Simpson 2011, the alternating occurrence of IO > O and O > IO sequences in the *preverbal* domain is attributed to short scrambling of the direct object over a recipient-goal argument in O > IO forms, as this can capture the observation that such sequences are scopally ambiguous when both arguments contain quantifiers (see (12) and (13)), whereas IO > O sequences critically are not. When the direct and indirect object both occur as QPs in the *postverbal* domain, O > IO order is similarly scopally ambiguous, but IO > O order again is not, as shown in (47) and (48).

- (47) hori dilo [kono Ek-Ta boi] [prottek SikkhOk]-ke. *Bangla*
 Hori gave some 1-CL book each teacher-OBJ O > IO
 ‘Hori gave some book to every teacher.’
 Either: some > every
 Or: every > some
- (48) hori dilo [prottek SikkhOk]-ke [kono Ek-Ta boi]. *Bangla*
 Hori gave each teacher-OBJ some 1-CL book IO > O
 ‘Hori gave some book to every teacher.’
 Only: every > some

This suggests that the direct object is able to scramble over the indirect object in the postverbal domain as well and that the mechanism of scrambling that optionally produces preverbal O > IO orders remains available in the postverbal domain, although the scrambling of objects over subjects is not possible. At present, we do not have an explanation for this asymmetry in the availability of short vs. longer scrambling in the postverbal domain, and we must leave this issue open for future research.

However, more positively, such alternations can provide further support for the general analysis developed here regarding leftward verb movement in PVE structures in Bangla, as the patterns of direct/indirect object quantifier scope that are present when both direct and indirect object precede the verb are identical to those present when both direct and indirect object follow the verb. This patterning is naturally captured if it is the verb in PVE structures that is moving leftward through the array of arguments in vP, causing such elements to be postverbal without disturbing the scope relations that these arguments would bear to each other in the absence of verb movement. By contrast, a rightward movement analysis of Bangla PVEs in which such elements are individually scrambled to the postverbal domain would find it hard to account for the asymmetrical patterns of quantifier scope present among postverbal IO > O vs. O > IO sequences and the fact that these precisely mirror the interpretations of preverbal IO > O and O > IO sequences (or sequences in which one of the direct/indirect object pair precedes the verb and the other follows it as a PVE).

Turning now to Hindi, the Bangla-style stranding derivation of PVEs can be concluded not to be available here, given the difference in scopal patterning of QPs as PVEs noted earlier; moreover, Hindi must permit a different mode of derivation to allow for the free ordering of

postverbal subjects and objects. If Bangla PVEs approximate Italian marginalization structures to a clear degree, one might wonder whether Hindi makes use of a right-dislocation strategy similar to that of Italian to license its postverbal sequences, with PVEs being resumed by preverbal null pronominal elements. However, the observation that indefinite DPs may occur as PVEs in Hindi disfavors a dislocation analysis, as crosslinguistically left- and right-dislocation seem to regularly be restricted to occur just with definite DPs and PPs. This observation returns us to the approach common to both B&D (2007) and Manetta (2012) that Hindi PVEs result from (some kind of) rightward scrambling. We now similarly assume that rightward scrambling is involved in the production of Hindi PVEs, without attempting to determine the precise identity of constituents scrambled past the verb (i.e., we do not attempt to further adjudicate between B&D's approach and Manetta's). Rightward scrambling in general appears to be an appropriate way to model Hindi PVEs and the properties they exhibit, which are clearly different from those of elements stranded by verb movement in postverbal position in Bangla.

At least with regard to Bangla and Hindi, then, the syntax of postverbal constituents in related SOV languages interestingly shows clear signs of being produced in distinct ways, despite various superficial similarities, raising questions about the derivation of PVEs in other verb-final languages and how nonuniform a phenomenon this might turn out to be.

4 Conclusions and Consequences: Revisiting *Wh*-Questions in Hindi and Bangla

The primary goal of this study of Hindi and Bangla has been to investigate whether PVEs constitute a unitary syntactic phenomenon across SOV languages, and how to capture restrictions on elements in postverbal position that in various instances differ from those in the preverbal domain. We have concluded that PVEs result from two different mechanisms in Bangla and Hindi: a verb-movement strategy stranding PVEs in vP-internal positions in Bangla, and rightward movement of PVEs to their postverbal position in Hindi, accounting for the divergent properties of word order and scope in Bangla and Hindi. There is undoubtedly much more to discover in the syntax of PVEs, both within Bangla and Hindi and within other SOV languages, but now that it is clear that there are (at least) two quite different ways to produce PVEs in such languages, it will be interesting to see whether the properties identified with Bangla-style and Hindi-style PVEs occur in parallel ways in other verb-final scrambling languages.

A further consequence of the article's analysis of PVEs relates to the much-discussed scope restriction on *wh*-elements in rightward embedded CPs in Hindi and Bangla, and why *wh*-phrases may not occur in situ in postverbal CPs, although such constituents are not syntactic islands. B&D (2007) take the position that whatever syntactic mechanism accounts for the postverbal placement of DPs and PPs in Hindi (and Bangla), it should also account for the interrogative scope restriction on *wh*-elements located within CPs in postverbal position; they propose a VP-remnant movement analysis to account for PVEs. We conclude, however, that the occurrence of elements in postverbal position in Hindi and Bangla is not the result of a parallel syntactic derivation applying in both languages, and that PVEs in Hindi and Bangla arise via clearly different mechanisms. Consequently, it can be argued that the analysis of the shared *wh*-scope restrictions should not be taken to depend on a uniform analysis of the syntax of PVEs in both languages, and

indeed should be divorced from the specific mechanism producing PVEs in each language, as independently assumed in alternative analyses of the *wh*-scope phenomenon such as Simpson and Bhattacharya's (2003) and Manetta's (2010).⁴

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⁴ A pattern brought to light in this article seems to present a new challenge to such overt *wh*-movement approaches, however. Specifically, the fact that *wh*-phrases may occur as PVEs in Bangla may suggest that such elements can in fact occur in situ and are not forced to undergo overt movement. While space does not permit a detailed treatment of this issue, we believe that Bangla actually needs to be viewed as a language like both French and Iraqi Arabic, in which *wh*-in-situ is available as an alternative to regular *wh*-movement within *matrix* clauses but is not licensed in *embedded* clauses, so that embedded *wh*-elements with higher scope are forced to undergo overt *wh*-movement. See Bošković 1998:44–46, (4b) and (6a), for data showing that a *wh*-phrase in French may optionally occur in situ in a matrix clause but not in an embedded clause, and Wahba 1991 for similar patterns in Iraqi Arabic. We intend to expand on this issue in future work.

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