The Minimalist A-bar System: Wh-Movement in Kashmiri

This paper asks an old question restated in the context of the Minimalist Program: whether the systems of A-bar dependencies and A-dependencies are governed by the same organizing principles. I will claim that they are.

0. Introduction
The language of exemplification is the Indic language Kashmiri, which exhibits both full wh-movement and wh-expletive constructions.

(1) tse kem' chu-y ba:sa:n ki mohn-as dits kitab
you who aux think that Mohan gave book
Who do you think gave Mohan the book?

(2) tse k'a: chu-y ba:sa:n ki mohn-as kem' dits kita:b
you expl aux think that Mohan who gave book
Who do you think gave Mohan the book?

• the matrix scope interpretation (1) is achieved by displacement of the question word kem' 'who' into the matrix clause, and in (2) via the association of kem' with a minimal question word k'a in the matrix clause
• The sentences produced by these two strategies receive the same interpretation
• I will claim that distinction between full extraction from subordinate clauses and partial wh-movement in Kashmiri can be analyzed as the distinction between the operations Move and static Agree to satisfy uninterpretable features

Structure of the Talk:
1. Review relevant Kashmiri wh-data
2. Present an approach to the word order of Kashmiri
3. Provide an account of wh-movement and wh-expletive constructions as in (1)-(2)
4-5. Compare this with previous accounts and discuss crosslinguistic relevance

1. Kashmiri Facts
1.1 Main Clauses
• Though underlyingly verb final, Kashmiri is V2 on the surface, with (3a) as an unmarked order, and (3b-e) variants

b. mohnas dits aslaman kita:b ramini khetri ra:th
c. kita:b dits aslaman mohnas ramini khetri ra:th
d. ra:mini khe:tri dits aslaman mohnas kita:b ra:th

1 All Kashmiri data from Wali and Koul (1997) unless otherwise noted.
e. ra:th dits aslaman mohnas kita:b ra:min khe:tri

- The constituent immediately preceding the verb in (3) is focalized (the focus-particle –ti can only appear suffixed to a constituent in this position Bhatt (1999))
- In questions with question words, at least question word must appear before the verb.

(4) a. kem' he:v shi:las nev kita: ra:th
   who showed Sheila new book yesterday
   Who showed a new book to Sheila yesterday?
   b. rajan kemis he:v nev kita:b?
   Raj whom showed new book
   To whom did Raj show his new book?

- A subject may appear alone, non-subjects with an additional constituent: this additional non-interrogative constituent is a topic (the focus particle –ti may not be suffixed to this position) (Bhatt, 1999)

- Focalized constituents and question words are mutually exclusive

(5) *k'a tem khyav ra:th
   what he ate yesterday
   What did he eat yesterday?

- Multiple question words exhibit two grammatical patterns:

(6) kem' kemis k'a: d'ut?
   who-erg whom what gave
   Who gave what to whom?

(7) a. kem' dits kumis kita:b?
   who-erg gave-fsg whom book-fsg
   Who gave the book to whom?
   b. ra:jan kar d'ut kemis k'a:?r
   Raja when gave who what?
   When did Raja give what to whom?

1.2 Subordinate Clauses

- Subordinate clauses are optionally preceded by the particle ki 'that'. The remainder of a subordinate clause is identical to a matrix clause, following the schematics in (8) and (9).

(8) Matrix Clause
   [Topic XP] [Wh-word(s)] [verb]... / [Focus XP] [verb]...

(9) Subordinate Clause
   [ki] [Topic XP] [Wh-word(s)] [verb]... / [ki][Focused XP] [verb]...
2. The Structure of the Left Periphery of Kashmiri

- I will follow Davison (2003) in considering the split CP structure
- Rizzi (1997) expands the complementizer layer with data from Romance and Germanic languages to accommodate interrogative and relative pronouns, topics, and focalized elements.

Essential -
Force: establishes clause type (question, relative, exclamative, etc)
Fin: specification of finiteness selecting the appropriate IP system

If/when needed -
Topic: Functional head with Topic feature to be checked by A' movement
Focus: functional head with a Focus or Wh feature to be checked by A' movement
the focus head is also the target of verb-second movement

Additionally, I will assume that the optional subordinating particle ki appears in a Sub head that dominates the structure in (10).

The presence of ki has no bearing on the Force or clause type of the subordinate clause (Bhatt and Youn (1992), also see Butler (2004), and for new support, the appendix to this paper)

Applying this to the ordering constraints in Kashmiri, the left periphery of the subordinate clause in (1) will fall out as in (11):
(1) tse k'a: chu-y ba:s:a:n ki mohn-as kem' dits kita:b
    you expl aux think that Mohan who gave book
Who do you think gave Mohan the book.

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2 For their helpful comments on this section I thank the participants of SALA 2004 and in particular Rakesh Bhatt.
3 See Manetta (2004) for a comparison of this approach with CP-recursion or MoodP (Bhatt, 1999).
This structure predicts the rigid ordering we find on the Kashmiri left-periphery.


- The data above demonstrated that in constituent questions at least one question word must appear before the verb in addition to some other optional constituent (the topic).
- Factive verbs in Kashmiri do not permit extraction of question words from their complement clauses (12a).
- Bhatt (1999) claims (and my informants agree) that wh-expletive constructions are possible (12b). These constructions will be addressed further below.

4 Wali and Koul (1997) maintain that the wh-expletive strategy also cannot be used with factive predicates and that sentences like (12b) are ungrammatical, however my fieldwork indicates otherwise.
Who do you think gave Mohan the book?

• Considering the Minimalist program and its feature-based understanding of A movement, we will attempt to approach A-bar movement using the same set of mechanisms (following Simpson (2000) and Fanselow and Mahajan (2000))

Core claim: The distinction between full extraction from subordinate clauses and partial wh-movement in Kashmiri can be analyzed as the distinction between the operations Move and static Agree to satisfy uninterpretable features

3.1 A-movement
• In A-movement the Agree operation is a mutual exchange of information between a head and an element bearing the relevant features in the configuration in (14) (Chomsky, 2000)

(14) $\text{H} \ldots \alpha \ldots \beta$
   a. H commands $\alpha$, which in turn commands $\beta$
   b. $\alpha$ is ‘closer to’ H than $\beta$\(^5\)

• The features of the head (the Probe) and those of the nominal (the Goal) mutually value one another
• If the required relation is not established, and uninterpretable features remain unvalued, and the derivation will not result in a well-formed syntactic object
• Once all of the uninterpretable features of an element are valued, the element is inactive, and its participation in head-nominal interactions will be limited.

• Move is Agree + pied-piping + 2nd Merge and occurs in order to satisfy the EPP
• In the absence of the EPP, the uninterpretable features of the Probe and Goal may of course be valued by static Agree over a distance, as described above (Chomsky, 2000).
• The operations described above are limited by locality considerations in the form of the phase, which is the unit in which derivations proceed: either C or v; a Probe can only interact with Goals within its own phase or on the edge of the previous phase

3.2 A-bar movement
In this paper I will claim that the A-bar system of Kashmiri functions like the A system in most respects, while still permitting the seemingly unbounded dependencies that are the hallmark of A-bar movement

• If a higher probe possesses the EPP in addition to other features, an accessible wh-XP will undergo Move
• If the wh-expletive $k'a$ is in the numeration, the merging of $k'a$ can satisfy the EPP on the probe, much like an expletive in the A-system, and the uninterpretable features on

\(^5\) ‘Closer to’ is defined in terms of asymmetric c-command. That is, $\alpha$ is ‘closer to’ H than $\beta$ iff H commands $\alpha$, $\alpha$ commands $\beta$, and $\beta$ does not command $\alpha$ ($\alpha$ commands $\beta$ iff $\beta$ is contained within the sister of $\alpha$). (Adger, 2002).
the A-bar probe will be valued by interacting with an accessible wh-XP via static Agree over some distance.

Features: EPP (common to the A and A-bar systems)
- [wh] feature – interpretable on wh-XPs; uninterpretable on all heads
- [Q] feature – uninterpretable on the wh-XP but present and interpretable on heads in the A-bar movement sequence; a category-defining feature allowing its head to enter into selectional relations

- In a Kashmiri clause, a wh-XP must always move to the specifier of the head containing the second-position verb.
- This means that the head which contains the second position verb will necessarily possess in all interrogative clauses, both matrix and subordinate: [wh-\(u\)], EPP
- Within an interrogative sentence comprised of a single clause ((15)), this head will also possess [Q-\(i\)] feature, signaling the position at which the scope of the wh-XP will be interpreted.
  
  (15) rajan kemis he:v nev kita:b?  
  Raj whom showed new book  
  To whom did Raj show his new book?

- the [Q-\(i\)] feature on the Focus head will value the [Q-\(u\)] feature on the wh-XP, and will both arrest the movement of the wh-XP and allow the sentence to be a well-formed syntactic object (with no unvalued uninterpretable features)

  (16) \(\text{Foc} \quad \text{kemis} \quad \text{Q-i} \quad \text{Q-u} \quad \text{wh-u} \quad \text{wh-i} \quad \text{EPP}\)
Consider (1):

(1) tse kem' chu-y ba:sa:n ki mohn-as dits kitab
    you who aux think that Mohan gave book

Who do you think gave Mohan the book?

(17)

- the subordinate Foc head lacks an interpretable [Q] feature; wh-XP that has raised to the specifier of this FocP will still have uninterpretable features that require valuing
- the wh-XP in the specifier of the subordinate FocP is accessible to the matrix Focus head which has an uninterpretable [wh] feature, the EPP, and the interpretable [Q] feature
- As a Probe, it enters into Move with the wh-XP.
- The wh-XP raises to the specifier of the matrix FocP, and the result will be full extraction
Consider (2):

(2) tse k'a: chu-y ba:sa:n ki mohn-as kem' dits kita:b
    you expl aux think that Mohan who gave book

Who do you think gave Mohan the book?

(18)

<table>
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<tr>
<th>ForceP</th>
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<tr>
<td>TopP</td>
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<td>tse you' Top</td>
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<td>k'a expl</td>
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<td>'wh-u Q-i EPP</td>
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<td>chu-y 'do'</td>
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<td>ForceP</td>
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<tr>
<td>Top</td>
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<td>mohan-as Top</td>
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<td>'kem' 'who' FocP</td>
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<td>'wh-u EPP dits'</td>
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<td>TP</td>
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- the subordinate Foc will once again have only an uninterpretable [wh] feature and the [EPP].
- The difference in (2) is that the numeration contains a wh-expletive k'a, which can be merged to satisfy the EPP on the matrix Foc probe.
- The expletive differs from a full wh-XP in its feature content. It lacks an interpretable [wh] feature, so it cannot inactivate the probe in whose specifier it is merged.
- The matrix Foc head will still need to value its uninterpretable [wh] feature, and will therefore enter into static Agree with the wh-XP in the subordinate FocP.
- wh-expletives in the A-bar system serve the same purpose as expletives in the A-system – to satisfy the EPP and permit the head's features to be valued statically by some other local element (Simpson, 2000).
3.3 Constraints on wh-expletives
Consider the ungrammaticality of the Kashmiri (19) and the German (20).

(19) *rajan k'a: he:v kemis nev kita:b?
    Raj expl showed who new book
    Intended: To whom did Raj show his new book?

(20) *Was glaubst du was?
    expl believe you what?
    Intended: What do you believe?

- a wh-expletive is present in the same clause with the full wh-XP whose scope it marks – according to the analysis above, these should be grammatical
- this is not a problem with the English DP-expletive *there

(21) There are three unicorns in the garden.

Stipulated anti-locality is inadequate. Consider the German (22) (originally from Fanselow and Mahajan (1996)) and Hindi-Urdu (23)

(22) Was glaubst wer wen sie liebt\(^6\)
    Expl believe who whom she loves
    Who believes she loves whom?

(23) kis-ne kya socaa ki aap-ne kya pa\(\text{Rhe}\)?
    who expl thought that you what read
    Who thinks you read what?

As long as the wh-expletive is associated with a full wh-XP separate from the one in the same clause, the construction is grammatical.

- Simpson (2000), along with Horvath (1997) and Fanselow and Mahajan (2000), claims that the anti-locality property of wh-expletives can actually be reduced to a question of case.\(^7\)
- If the wh-expletive in fact needs case just like any other wh-XP, it must actually be merged into a case position in a sentence like (19), but the full wh-XP has received this case here.

  - Kashmiri has a pleonastic element *yi which can be optionally inserted into a matrix clause such as in (24). The Hindi-Urdu sentence in (25)

    (24) bi o:sus yi sa:na:n ki seli:m gav ra:th rajas sit
        I aux this know that Selim went yesterday Raj with
        I knew that Selim went with Raj yesterday.

    (25) Miriam yeh jantaa hai ki Haroun kis-se baat karegii.
        Miriam this know aux that Haroun who-with talk aux
        Miriam knows who Haroun will talk to.

- In both Hindi-Urdu and Kashmiri this object (*yi or *yeh) cannot coexist with a wh-expletive, indicating that they occupy the same case position in the

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\(^6\) There has been some discussion about the grammatically of (36), but both Simpson (2000) and Beck and Berman (2000) indicate that this sentence is grammatical or nearly so for most speakers.

\(^7\) Note that the need for DP case does not alter the status of *k'a or *was as a wh-expletive. It is still defective in the sense that it cannot value the uninterpretable features on the C head to whose specifier it raises. This will force the uninterpretable wh feature on the C head to seek another wh-XP with which to interact.
clause.

(26)  *Sita-ne yeh kyaa socaa ki ravii-ne kis-ko dekhaa? [H-U]

Sita this expl thought that ravi who saw

Intended: Who did Sita think that Ravi saw?

- In Hungarian, the wh-expletive in the matrix clause exhibits case morphology appropriate to its role in relation to the matrix verb, and the wh-XP in the subordinate clause is assigned a separate case (Horvath, 1997)

(27) Mit mondtal hogy kinek vett Janos szinhazjegyet?

what-acc said that who-dat bought John theatere ticket-acc

Who did you say John bought a theatre ticket for?

3.4 Factive verb complements:

Full wh-movement is not possible from clauses that follow factive verbs in Kashmiri, but wh-expletive constructions are generally permitted

(28)  a. * k'aa cha mi:ra:yi khabar ki t mohnan por.

what aux Mira know that Mohan read

Intended: What does Mira know that Mohan read?

b. k'aa cha mi:ra:yi khabar ki k'aa mohnan por.

expl aux Mira know that what Mohan read

Intended: What does Mira know that Mohan read?

Bhatt (1999) and others have proposed that subordinate clauses out of which extraction is impossible in Kashmiri are in fact adjoined to the matrix clause

(29) CP

                   CP

                   CP

mi:ra:yi cha khabar            ki k'aa por mohnan
Mira aux knows                that what read Mohan

• There will be no wh-movement at all between the two clauses because the first CP fails to command the second, but under an "indirect dependency" approach, $k'a$ can mark the scope of the wh-XP in the adjoined clause via conindexation

• Binding facts indicate that a hierarchical relationship obtains between the matrix and complement clauses of both factive and non-factive predicates:

(30)  a. har insa:n, chu basa:n ki su, chu te:z.

each man aux thinks that he aux smart

Each man thinks that he is smart.

b. har insa:n, chu pata: ki su, chu te:z.

each man aux knows that he aux smart

Each man knows that he is smart.

Horvath (1997) originally intended this data to argue against the so-called 'direct dependency', syntactic chain-based approaches to partial wh-movement, but note that under the Minimalist analysis outlined here, (30) would not pose any problem.
I will instead propose here that when factive verbs in Kashmiri have an interrogative complement, they invariably select for a complementizer layer in which the Focus head has an [Q-i] feature.

- the [Q-u] feature of the wh-XP will be valued after its first movement within the subordinate clause, so it will be rendered inactive – it will be frozen
- If the matrix clause is not of the question type, the sentence will contain an indirect question, and the scope of the wh-XP will be interpreted in the subordinate clause
- If the matrix clause is of the question type and if the wh-expletive k’a: is present in the numeration it can satisfy the EPP on the the matrix Focus head
- The [wh-u] feature on the Focus head will still need to be valued
- This feature can be valued via an Agree relation with the [wh-i] on the wh-XP in the lower clause.
- For evidence from the A-system that Agree but not Move is still possible with nominals whose uninterpretable features have already been valued, see Manetta (2003), Hiraiwa (2001), and Chomsky (1995, fn1 78).

(31)  Foc (matrix&comp)
      Q-i
      wh-u
      EPP

Summary:
- This analysis accounts for full and partial wh-movement in Kashmiri, from complements of both factive and bridge verbs
- The two strategies for construing matrix scope for wh-XPs embedded in bridge verb complements differ only in the presence of an expletive in the numeration, so their interpretation will be the same
- The wh-expletive must originate in a case position and then raise into the specifier of FocP

4. Comparison: Other Approaches to Wh-Expletive Constructions
4.1 Indirect Dependency
An entirely different approach to full and partial wh-movement has been suggested for a related language, Hindi-Urdu, by Dayal (1994).
- Dayal proposes that all apparently subordinate clauses in Hindi-Urdu are in fact adjunction structures, and that what we have called a wh-expletive is in fact a scope-marker which is coindexed with adjoined CP.
- The process of semantic interpretation proposed by Dayal allows the scope of the wh-XP to be interpreted at the position of the scope-marker

Hindi-Urdu, like Kashmiri, exhibits two strategies for expressing long-distance wh-dependencies.

(32)  a. Sita-ne kis-ko socaa ki ravii-ne t dekhaa?
         Sita who thought that Ravi saw
Who did Sita think that Ravi saw?

b. Siita-ne kya socaa ki ravii-ne kis-ko dekhaa

Sita expl thought that Ravi who saw

Who did Sita think that Ravi saw?

- Dayal (1994) claims that the displacement of a wh-XP in (31a) is usually analyzed as either topicalization or scrambling, since Hindi-Urdu is in general a wh-in situ language (also see Kidwai, 2000)
- Scope-marking structures occur when the matrix argument position is occupied by an expletive coindexed with the adjoined CP yielding the LF in (33)
  
  \[(33) \quad [\text{cp} \text{kyaa}_1 [\text{ip} \text{jaun t} \text{socctaa hai}] [\text{cp} \text{kis-se} \text{meri t} \text{baat karegii}]_1] \]

- What is the nature of the coindexation of the wh-expletive with the embedded wh-clause?
- If the embedded CP is in fact adjoined to the matrix CP, Mahajan and Beck and Berman (2000) ask why quantifiers in the matrix clause can bind pronouns in the adjoined clauses.

  \[(34) \quad \text{Har aadmi, socctaa hai ki vo, tez hai.} \quad \text{Each man thinks aux that he smart is} \]

  \[(35) \quad \text{daß [keine Studentin], es bedauert, daß sie, die Vorlesung geschwänzt hat that no student it regrets that she the lecture skipped has} \]

Since both of these embedded clauses in (34-35) would be separate adjunctions to some matrix CP/IP, the subject of the first could never c-command the second.

- Dayal responds that one may be able to reconstruct the entire CP to the matrix preverbal position in order to obtain the necessary relation between the clauses, although these clauses did not originate there
- The account proposed here could account for (32) and (34-35) by assuming a form of direct dependency between the wh-expletive and the wh-XP in the subordinate clause, while maintaining the expected hierarchical relationship between these clauses

4.2 A Minimalist Direct Dependency Approach (Simpson (2000))

- Simpson's account shares many properties with account presented here
- He proposes that wh-expletives serve to "extend the licensing domain" of the matrix question Probe into the lower clause
- In the account presented here this assumption is unnecessary -- here the wh-expletive satisfies the EPP and permits the wh-XP at the phase edge of the lower clause to have its features valued by static Agree

5. Crosslinguistics Characteristics of Wh-expletives

Characteristics of wh-expletive constructions that researchers have claimed to hold crosslinguistically (Beck and Berman (2000), Dayal (1994), Mahajan (2000), Fanselow and Mahajan (1999)):
• Any wh-phrase can be associated with the wh-expletive
  This is expected in the Minimalist approach, since it only matters that the wh-XP in the
  subordinate clause has the [wh] and [Q] features.

• In German, Hindi-Urdu, and Kashmiri, an embedded wh-XP can take scope across
  any number of clauses so long as this is mediated by a wh-expletive in every clause
  higher than the clause containing the wh-XP.

  (36) a. Was glaubst du, was Jan meint, mit wem Ann gesprochen hat
      Expl believe you expl Jan think, with whom Ann talked
      Who do you believe Peter thinks Mary talked with? [G]
  b. *Was glaubst du, Jan meint, mit wem Ann gesprochen hat?

  (37) a. Ram-ne kyaa socaa ki ravii-ne kyaa kahaa ki kon sa aadmii aayaa
      Ram expl think that Ravi expl said that which man came
      Which man did Ram think that Ravi said came? [HU]
  b. *Ram-ne kyaa socaa ki ravii-ne kahaa ki kon sa aadmii aayaa

  (38) a. Raman k'a von ki tse k'a: chu-y ba:sa:n ki mohn-as kem' dits
      Ram expl said that you expl aux think that Mohan who gave
      book
      Who did Ram say you think Mohan gave the book to? [K]
  b. * Raman k'a von ki tse chu-y ba:sa:n ki mohn-as kem' dits kita:b

In the Minimalist approach, each of the ungrammatical examples (36b), (37b), and (38b)
will fail right away due to the unsatisfied EPP in the first embedded CP...

• It seems that in Hungarian and in dialects of German and (possibly) Kashmiri,
  constructions of the type in (b), in which there are CPs intervening between the wh-
  XP and the expletive-containing CP that don't host expletives themselves, can be
  grammatical.

• Simpson attributes this to phonological deletion of the intermediate expletive based
  primarily on support from Hungarian

  (39) Mit mondtal [hogy tudnak [hogy melyik fiut
      wh-acc said-indef-2sg that know-indef-3pl that which boy-acc
      szeretted]]?
      like-def-2sg
      Which boy did you say that they know you like?

• Indefinite agreement on mondtal and tudnak is associated with assignment of
  accusative case. If mit had orginated in the intermediate clause in (40) and moved to
  the matrix clause, it would have had to receive accusative case from both verbs

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9 The question then becomes how the features of the wh-XP in the second embedded CP will be valued by
the matrix CP (so that the scope of the wh-XP will be interpreted at this point). We must say that the
intermediate C head values its features with those of the wh-XP and that the matrix C head finds and values
its features with those of the intermediate C head.
6. Conclusion
Recent work (Simpson (2000), Mahajan (2000), Fanselow and Mahajan (1996)) has built the case that "all members of the large family of 'partial movement constructions' in the world's languages ... have a common syntactic base" (Fanselow and Mahajan, 2000; 2).

- To me this is a tempting view, and I suggest that the Minimalist approach explored above, which uses a system of features to motivate wh-movement, could be this base.
- Future research may show that this approach can be extended to wh-phenomena in German, Hungarian, Iraqi Arabic, and Hindi-Urdu, among others.

This paper has:
• Proposed an account of full and partial wh-movement and wh-expletives in Kashmiri, including behavior wrt factive verbs, multicausal structures, and 'antilocality'.
• Claimed that this account, based on a system of interpretable and uninterpretable features, may indicate that it is possible to understand both A and A-bar movement using the same set of principles.

References


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