

Bangla WH in-situ and Scope Marking

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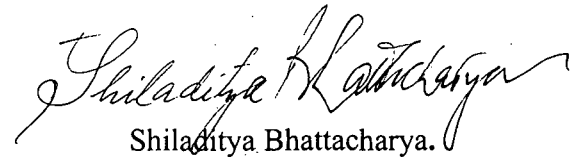
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DECLARATION BY THE CANDIDATE

This dissertation titled ‘Bangla WH in-situ and Scope Marking’ submitted by me for the award of the degree of Master of Philosophy, is an original work and has not been submitted so far in part or full, for any other degree or diploma of any University or institute.



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CERTIFICATE

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This may be placed before the examiners for evaluation for the award of the degree of Master of Philosophy.

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List Of Abbreviations:

We have adopted the following conventions that deviate from the IPA for transcribing Bangla sounds. The symbols T, D stand for the retroflex voiceless and voiced stops respectively; S is the alveopalatal voiceless fricative; c, j are the voiceless and voiced alveopalatal affricates, respectively; R is the retroflex flap; y is the alveopalatal glide; for length of the vowel we have used a; for rounded vowel O; to mark aspiration we have h after the consonants. Other symbols are listed below,

GEN= Genitive

ACC= Accusative

FUT= Future (tense)

Pst= Past(tense)

Pst Prf=Past Perfect

Prs=Present(tense)

Prs Prf=Present Perfect

Inf= Infinitive

COMP=Complementizer

DEM=Demonstrative

Spec=Specifier

CP=Complementizer Phrase

DP=Determiner Phrase

CLA=Classifier

Wh-Expl=WH-Expletive

POSS= Possesive

LOC=Locative

REL=Relativizer

INS= Instrumental

Chapter One: Literature Survey

1. General Introduction:

Literature in the field of study of the nature and structure of human languages is abundant with accounts of how a language encodes interrogative content in its syntax and semantics. Number of languages differ from each other with respect to whether they permit movement of a wh-phrase, clause, or not. A good number of Germanic and other European languages seem to allow movement of the wh-phrase or clause where as languages such as Chinese (Mandarin), Korean, Japanese do not allow the wh-phrase in concern, to move out of their base position. Thus these types of no movement languages are referred to as 'WH in-situ languages'. Formal researches on this specific language date back to the 1980s to the present, and in this course of investigation, we are looking at a language which typologically is claimed to –A. has the default word order SOV and B. is a WH in-situ language.

According to the typological studies of Bangla, especially with taking the second property in mind, we can accord Bangla with other languages like Chinese (Mandarin), Korean, Japanese. In all of these languages, the WH-phrase or the element, which is responsible for question formation, does not undergo overt movement as in English, where the WH-phrase does; rather the WH-expression stays in its base position. Explanation of the in-situ phenomenon has been given by scholars like Aoun & Hi (1993), Huang (1982), Choe (1987) and Cheng (1991) in the line of LF movement following Chomsky's proposal (1981). Roughly saying, it is argued that the in-situ WH-phrase, if moves in the overt syntax, seem to violate some constraints like ECP and Subjacency, and the derivation would yield ungrammatical sentences, e.g.

1. Who bought what?

We took this example because the multiple interrogative constructions in English have in-situ Wh-phrases in it. But

2. *What_i, who brought e_j?

–is ungrammatical because there exists a ‘Superiority Condition’ (Chomsky, 1973) which says – ‘in a multiple interrogation where a WH-phrase is in comp and another is in-situ, the S-structure trace of the phrase in comp must c-command the S-structure position of the Wh in-situ.’. The second example is a clear violation of that condition. This problem can be resolved by a movement analysis as suggested by Jaeggli (1980, 1982) which claims that Wh-expressions adjoin to S’ position by undergoing a movement in covert syntax or at LF, instead of moving the Wh-expression in overt syntax. A L(ogical) F(orm) analysis of the first two examples are provided here respectively in 3. (a) and (b) –

3. a. [what_j [who bought e_j]]
b. [(s’) What_j [who_i [(s) e_i ..e_j]]].

This analysis shows the possibility of the movement of WH- in-situ phrases at LF. As further studies on WH-in-situ continued, scholars came up with varied proposals as alternatives to the above mentioned prominent LF movement analysis. Alternative suggestions include -

A. Movement of

- I. Q particle (Watanabe 2001, Hagstrom 1998, Kishimoto 2005)(eg. ‘d?’ particle in Sinhala, (Kishimoto, 2005)) or
- II. WH feature (Pesetsky 2000)

B. No LF movement.

- I. Absorption of the WH-in-situ operator (Higginbotham and May ,1981)
- II. Unselective Binding by a Q operator and D-Linking phenomenon indexing analysis (Pesetsky 1987 following Heim 1982, Lewis 1975 and Baker 1970).
- III. Choice Function Analysis (Reinhart 1998)
- IV. Disguised Movement Analysis:
 - 1) Remnant IP movement (Munaro, Poletto, Pollock 2001)
 - 2) Overt WH- movement (Simpson and Bhattacharya, 2003), and
 - 3) Pronouncing the lower copy (Chomsky 1995, Bobaljik 2002)

In our investigation, we are primarily looking at an overt movement hypothesis such as one proposed in Bhattacharya & Simpson 2003, as well as dealing with an alternative proposal of no movement, in which wh-expressions receive matrix/ wide scope by means of 'Scope-Marking' constructions. The latter analysis owes for its origin to van Riemsdijk (1983), McDaniel (1989), and Dayal (1994) for its application in Hindi. We look for supportive facts for both of the proposals from other works, as well as from empirical data obtained from the native speakers of the language in concern. Syntactic tests are utilized in determining the validity and nature of the claims made in those proposals.

1.1. INTRODUCTION AND ORGANISATION OF THE CHAPTER:

In this chapter we will look at some of the seminal works in this field, and will do a detailed review of them. Section 2 of the chapter chiefly evaluates the 'Indirect Dependency' approach. Dayal (1994) in section 2.1, provides an account of this indirect dependency approach, incorporated to the description of Hindi facts. This thesis of her, claims to extend its reach to a good amount of Indic languages where the wh-expression does not undergo movement in overt syntax. In section 2.2, we furnish Lahiri's (2002) work, which actually lends support to the analysis that Dayal did for Hindi and here he provides ample support to the indirect dependency approach with detailed semantic explanation of the phenomenon. Moreover, in this paper, Lahiri provides some more useful insights, that help us in characterizing the nature of scope-marking constructions. In section 3, appears an alternative proposal from Bhattacharya & Simpson (2003), in which they attempt to account for a possible overt wh-movement in Bangla. This work is of special importance to us as it happens to be the first of its kind for the language under investigation. Their proposal comprises of a number of issues that range from the order of finite complements in Bangla, to focus movement, and ultimately they try to constitute a movement hypothesis against the more standard in situ analysis of the language. Section 3.1 and 3.2 help us to understand the rationale behind the alternative movement hypothesis and the licensing position for the wh-phrases in Bangla after movement respectively. Bhattacharya and Simpson's focus is on the phenomenon of disguised movement and in their account they claim that there are other types of movements in Bangla (alongside wh-movement), which are frequently disguised by different factors, ultimately affecting wh-movement. Possibilities of DP-extraction as well as Clausal pied piping have been

registered in the data they provide from the language. In section 3.3, we attempt at a critical evaluation of the proposal and particularly in this section, we begin to look at some other possible construction types-possibilities proposed in other thesis for in-situ languages- which the movement hypothesis cannot explain in its own limits. The final section, i.e. section 4 brings in the actual research question that we aim at.

2. The in situ Analysis: Looking at Facts from the Perspective of Indirect Dependency:

2.1. Dayal's (1994) work on Hindi Wh-expression:

Dayal (1994) proposes that in certain languages, where both the more popular 'Extraction' strategy and 'Scope-marking' strategies are employed to express long distance wh-dependencies, we should maintain the apparent syntactic distinction, as well as seek for an alternative solution for the similarity in its semantics.

In German, along with the more popular extraction strategy, scope-marking also seems to be at work to denote direct questions (Riemsdijk, 1983). While in extraction, the wh-expression lands at Spec, matrix CP after wh-movements 'direct' in scope-marking constructions the wh-expression which marks the semantic content of the question stays in situ (at the embedded CP) and another wh-expression at the Spec, matrix CP marks the question as 'direct'.

Existence of such constructions has been attested in Romani (McDaniel, 1989), Hindi (Davison, 1984, Mahajan 1990, Srivastava 1989, 1991a), Bangla (Bayer 1990), and in Iraqi Arabic (Wahba 1991). Dayal has an interesting claim at this point, that this is the only strategy for these languages, as popular overt and covert extraction strategies from finite complements are not possible in them.

She furnishes some crucial features of the scope-marking constructions. First of all, there is no restriction over the type of the wh-expression that can occur in the embedded clause. In a footnote (footnote no.2), she mentions that there are some cases in German, where wh-expressions at the embedded clause in scope-marking constructions can receive a marginal yes/no interpretation; where as in Hindi, they are completely acceptable. For the Hindi examples, the possibilities range from 'yes/no' types to questions with semantic content or real questions.

There is also no restriction over the number of wh-expressions that can occur in the embedded clause. Examples 7a and b in the paper illustrate the instances of multiple interrogations. Those examples are furnished here in 4 and 5.

4. Was glaubst du, wann Hans an welcher Universitiit
what think you when Hans at which University
studiert hat?
studied has
'When do you think Hans studied at which university?'
5. jaun kyaa soctaa hai kaun kahaanN jaayegaa?
John what thinks who where will-go
'Who does John think will go where?'

She claims that the scope-marker extends the scope of the wh-expressions (in all possible numbers and of as many types as possible) that can appear at the embedded clause.

Scope-marking constructions can also express unbounded dependencies. Examples 8a and 8b in the original paper show that a scope-marker at the matrix clause can bind two wh-expressions at two different clauses in a three clause structure.

One landmark feature of scope-marking construction as Dayal notes is that, when there is more than one embedding, every intermediate clause must have a scope marker.

6. *Was glaubst du, dass Peter meint, mit were Maria
what think you that Peter believes with who Maria
gesprochen hat?
spoken has
'With who do you think Peter believes Maria has spoken?'
7. *jaun kyaa soctaa hai, anu kahegi, meri **kis-se**
John what thinks Anu will-say Mary with-who
baat karegi?
will-talk
'Who does John think Anu will say Mary will talk to?'

Both of these are bad as wh-expressions that are needed in the intermediate clauses are missing.

Finally, the distribution of scope-marking is interesting- though the matrix verb must be able to take [-WH] complements the actual complements must be [+WH]. (cf, examples 10 and 11 in the original paper).

Dayal provides an overview of a dominant thesis of 'Direct Dependency'. She says that the challenge is to decide whether we should consider meaning as a guide and treat the surfacial syntactic distinction as representationally adequate, which will serve as input to the interpretation, or should we take the syntactic distinction seriously and account for the apparent semantic equivalence. She critically argues that this not a question of mere choice or preference, but that we need to know how the syntactic and semantic modules interact. Seminal works which lead to this kind of a syntax-semantics mixed approach are of Chomsky (1986a), which spells out the necessity of Full interpretation. Dayal's claim here is that the paper provides support for these two "sound methodological principles" as well as facilitates the view of syntax-semantics interface that these principles imply.

According to the principal tenets of the direct dependency approach a scope-marker is an expletive wh-expression which is base generated in Spec, matrix CP and forms a chain with the wh-expression in the embedded clause (cf, example12 in the paper). The difference between the sentences in 12 a and b respectively is that, one follows extraction while the other chooses simple co-indexation. But in both cases a direct dependency is achieved between the embedded argument position, where the theta role is assigned, and the matrix Spec position, where the scope is fixed. Scope markers thus are analyzed as special types of operators which some languages employ. Dayal argues that though it explains some major properties of scope-marking, quite adequately it fails to capture the distinction syntactically, as at LF both of them behave in the same way.

Furthermore Dayal points out some relevant facts regarding negation which has been noted for the first time in Rizzi (1992). Rizzi's argument is this: equivalence of scope-marking and extraction structures breaks down under negation. Example 14 in the paper-repeated here as 8, explains the facts for German.

8. a. Mit wem glaubst du nicht, dass Maria gesprochen hat?

with whom think you not that Maria spoken has

b. *Was glaubst du nicht, mit wem Maria gesprochen hat?

what think you not with whom Maria spoken has

'Who don't you think Maria has spoken to?'

As we can clearly see, the equivalence of scope-marking and extraction structures breaks down under negation here. The 'Relativized Minimality' account explains this negative island effect in terms of a 'referential index', which is carried by arguments to bind their traces. On the other hand, adjuncts cannot carry such indexes and need antecedent to govern their traces. The potential A-bar negative operator blocks antecedent government in such cases. Rizzi's explanation of the negative blocking effects in the German examples is done in the same vein. 'mit wem', which has a semantic content, carries a referential index, and thus can bind its trace at the lower clause, whereas, 'was' cannot do so being an A-bar expletive; so it has to form an A-bar chain with the embedded question 'mit wem', which it cannot as the negation interferes. Yet this is not enough evidence, as Dayal says that negative island effects affect the adjuncts but not the arguments in a wh-movement in regular. Example 15 from the paper is restated here as 9,

9. a. Who do/don't you think Mary will hire?

b. How do/*don't you think Mary will behave?

Dayal identifies two major problems regarding a direct dependency style approach,

- I. Embedded questions with more than one wh-expression (cf, example 7a in the paper) are problems for this kind of an analysis. As in the 7a example the wh-chain has one head and two corresponding wh-embeddings to bind. McDaniel offers a solution in line of Higginbotham & May (1981) in which the two wh-expressions undergo 'absorption'. After the absorption the index of the absorbed wh-expression is copied onto the scope-marker.

Dayal calls this solution ad-hoc, because this differs from standard absorption process, in the sense that no operators are created in this case.

II. Direct dependency approach does not allow for a compositional mapping from LF representations to meaning. The scope-marker has no semantic content, and there is no restriction on the type of wh-phrases that can appear in the embedded clause. The kind of quantification needed for such scope-marking structures cannot be determined at the point where the scope-marker has to be interpreted.

Dayal suggests that relevant co-indexation cannot be systematically mapped to semantics without compromising compositionality. Even expletive replacement type of successive cyclic operation at LF would not come to much help, for then, Rizzi's generalization will be lost as both extraction and scope marking structure would become isomorphic at LF. If we say that only adjuncts won't be able to cross-over the negation to replace wh-expletives, then that would not be right as example 10 illustrates.

10. *Was glaubst du nicht, mit wem Maria gesprochen hat?

What think you not with whom Maria spoken has

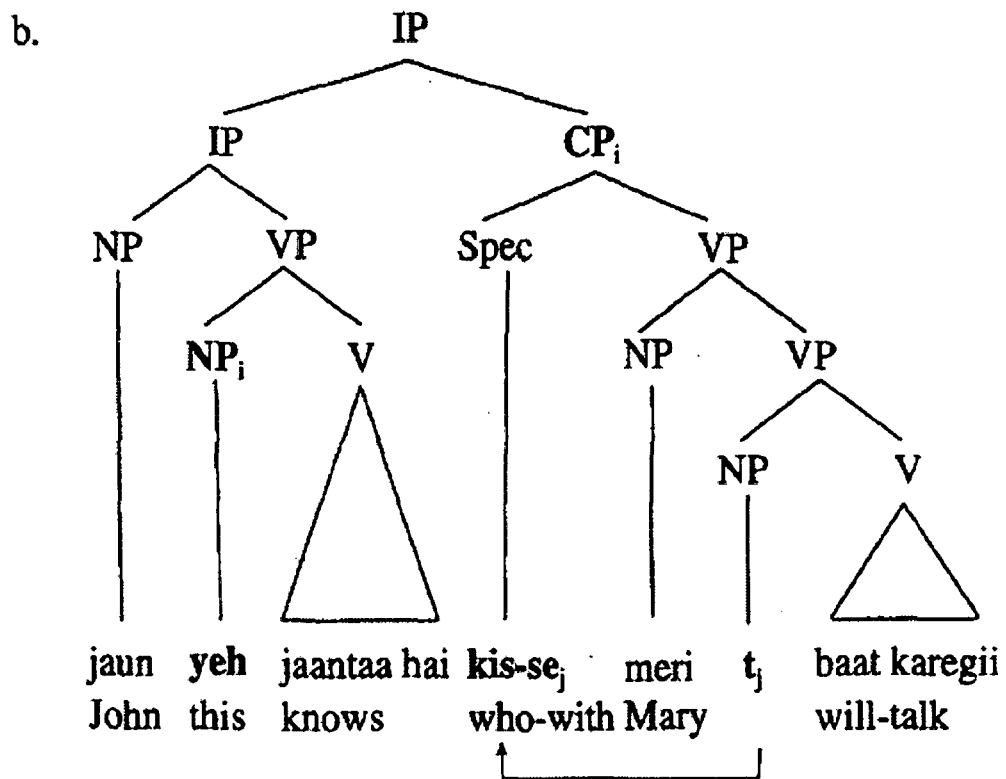
'Who don't you think Maria has spoken to?'

Finally, Dayal argues that scope-marking does not extend to adequately to in situ languages like Hindi and Bangla under the direct dependency approach. In Hindi, the wh-expletive occurs at the preverbal object position and this is the canonical object position. Under direct dependency the scope-marker needs to move to Spec, matrix CP at LF. As an effect, the link between the expletive and the object position is erased, and a new chain is formed with the embedded wh-phrase. But this movement cannot be independently motivated. Mahajan (1990) attempts to save this situation by saying that the finite complement adjoins to the scope-marker-an operation similar to that of Expletive Replacement. But even this account trivializes the syntactic distinction between scope-marking and extraction.

Dayal outlines rather a more effective approach and employs it in the Hindi Scope – marking constructions successfully. In Dayal (1991a) a claim has been made that Hindi does not allow CPs in the argument position due to 'Case Resistance' principle (Stowell, 1981). Finite complements in Hindi are syntactic adjuncts, which are co-indexed with the preverbal direct object position which is again generally filled up by null or expletives like 'yeh'. Dayal derives the scope-marking constructions gradually

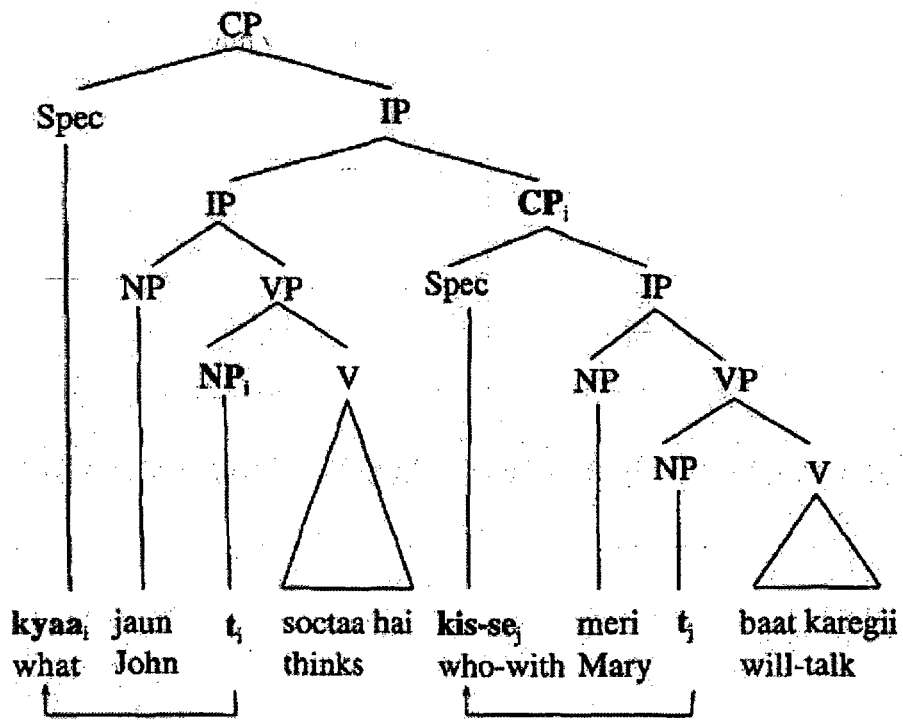
by first moving the embedded wh-phrase to Spec of the Intermediate CP following Huang (1982), and then moving the expletive from matrix object position to the Spec of the matrix CP. In this way two independent chains are formed which then is united into one by simply co-indexing the dominating nodes by which the effect of a long distance dependency is achieved without direct dependency. The structural representations below illustrate the gradual development of this indirect dependency analysis in Hindi.¹ For our purpose we did not change the numbers of these examples from the original paper.

- (19) a. jaun (yeh) jaantaa hai ki meri kis-se baat karegii.
 John this knows that Mary who-with will-talk
 'John knows (this) who Mary will talk to.'

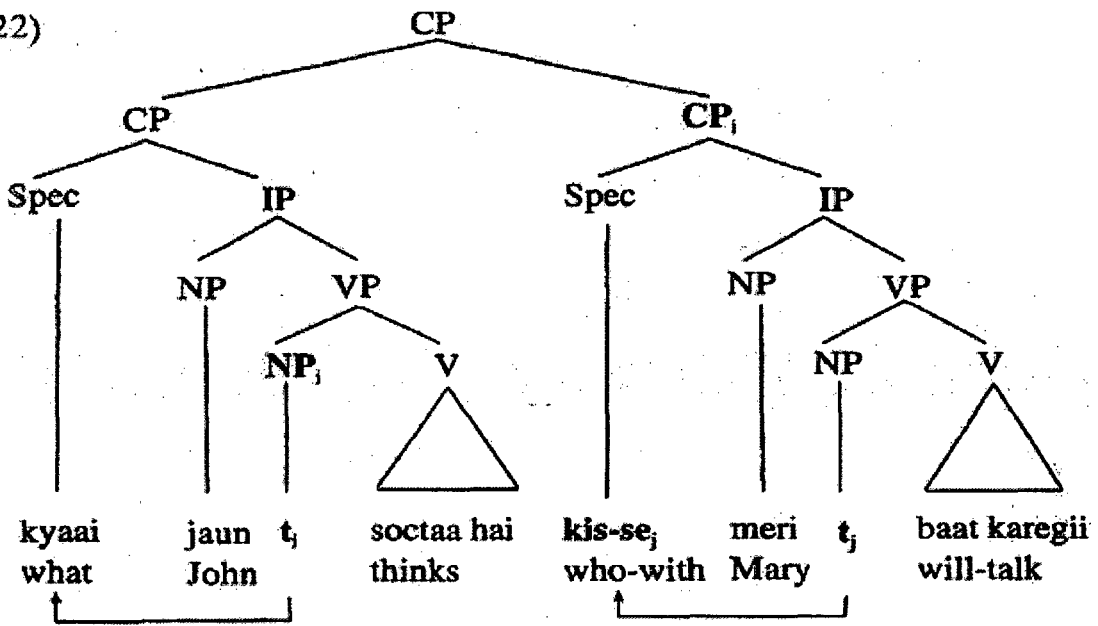


¹ These structures are taken from Dayal, Vineeta: 'Scope Marking As Indirect WH-Dependency'. Natural Language Semantics 2, 137-170.

(20)



(22)



Dayal's account of scope-marking differs from others in basically two aspects. One, the syntactic difference of extraction and scope-marking is not sacrificed for the semantics and two, the origin of the expletive in Dayal's system is not at Spec, matrix CP but at the direct object or else in an argument position.

Dayal claims that the problems related to a proposal, like direct dependency, withers away with this new approach.

“The indirect dependency approach has no problems with compositionality since each wh-expression is fully interpreted in its LF position. If there are two such expressions, as in the case of (7b), the normal procedure for interpreting multiple wh-questions can be followed. For example, if absorption is the assumed mechanism, it would yield a binary operator here as elsewhere. Thus interpretation of multiple embedded questions in scope-marking structures is completely straightforward. Multiple wh-structures were particularly problematic for the direct dependency approach, which had to resort to a special definition of absorption... Since a scope-marking structure is itself a question, it follows that it can form the restriction on a propositional variable in a higher clause, creating the effect of unbounded wh-dependencies. The co-indexing between each complement clause and the object position in the clause above it eliminates from the higher-clause denotation the propositions that do not belong in its complement”(Dayal 1994, 158-159).

Moreover, the problems regarding full interpretation also go away with the multiple wh-constructions. In this approach it is necessary for a multiple embedding structure to have one scope-marker in each of the clauses. This is because, as Dayal explains it- the complement a scope-marking construction must be of the same type. Thus, a question cannot take an intermediate complement which is a proposition. It thus violates the principle of full interpretation. In order to save the derivation we need to have a scope marker in every phrase in a multiple embedding. In this way, Dayal utilizes the principle of full interpretation to justify her approach, which in itself justifies the requirements of an interface condition.

This approach fulfills the need of compositionality too. The lexical items get full interpretation in the position where it occurs at LF. In the other approach- the direct dependency approach- we had to keep off from full interpretation until the quantificational force of the scope-marking construction is assigned, which is a violation of compositionality.

One very interesting point subtly refers to the selectional restrictions of predicates over what kind of arguments they will choose. Dayal, from personal communications

predicts that if a language employs different lexical items to question the object position of a simple verb, like ‘eat’ and a verb like ‘think’, which takes propositional complements, the semantic requirement of the latter may force it to opt for a scope-marking construction.

2.2. On Lahiri’s (2002) Proper treatment of Hindi Wh-expressions:

Lahiri (2002) evaluates the indirect dependency account of Hindi scope-marking constructions and introduces previously unnoticed phenomenon like ‘Scope-Freezing’, which provides additional support to the analysis. Moreover, he solves the problem regarding the binding of pronouns in the sub-ordinate clause of a scope marking structure by a quantifier in the matrix clause, a problem that was hard to approach within the limits of the indirect dependency analysis of the earlier stage.

Lahiri outlines the basic properties of the scope-marking constructions in Hindi and in some other languages. Scope-marking in general has the form [CP₁ ...WH....][CP₂....WH....]. These structures have often been called as wh-expletives because of the invariance of the wh-phrase in the first clause, akin to English ‘it’ and Hindi ‘yeh’.

11. raam yeh jaantaa hai ki ramaa kis-se baat karegii

Ram this know.Prs that Ramaa who.INS talk-do.FUT

‘‘Ram knows who Ramaa will talk to’’ (example 3 in the original paper)

Like Dayal (1994), Lahiri claims the same account for Hindi. Alongside the types and number of the expletives that can appear at the embedded clause, Lahiri provides support to the conditions proposed on multiple embeddings as well as the thesis of invariance of the expletive wh-expression in all the intermediate clauses.

He refers to the fact that, in Hindi, it is marginally possible for scope-marking constructions to form normal subordinate clause with a pinch of salt added to it. The example 8 in the paper is reproduced here in 12,

12. raam kyaa soctaa hai ki ramaa kyaa kahtii hai ki rameS kis-se baat
karegaa
Raam what think.Prs that Ramaa what say.Prs that Rames who.INS talk-
karegaa
do.FUT

“Who does Ram think that Ramaa says that Rames will talk to?”

Furthermore Lahiri acknowledges the fact that negation can block scope marking in the way direct dependency works,

13. *raam kyaa nahiiN soctaa hai ki ramaa kis-se baat karegii
Ram what not thinkPrs that Ramaa who.INS talk-do.FUT

“Who doesn’t Ram think Mary will talk to?” (Example 9 in the paper)

Not surprisingly Bangla facts correspond to these results.

Scope-marking structures are attested in a number of languages of the world. Scope-marking constructions are seen to co-exist with extraction structures as in Hungarian (Hovrath, 1997). Lahiri provide examples from Dayal (1996, 2000) in which English, a language which has obligatory overt wh-movement is said to have a few instances of scope-marking also. We restate examples 12-15 from the original paper here in 14-17,

14. What do you think? Who did Bill see?

Possible answer: Mary (i.e. I think that Bill saw Mary)

15. What do you think? Will Mary go or not ?

Possible answer: no (i.e. I think Mary won’t go)

16. What do you think ? Which boy loves which girl ?

Possible answer: I think John loves Mary

17. What do you think ? Why is Mary unhappy?

Possible answer: I think Mary is unhappy because her mother died.

Regarding these examples, Lahiri's argument is that though these examples pragmatically look like scope-marking structure, in actuality these are sequence of two clauses. The better candidates for scope-marking can be found in colloquial English, in which there is pied piping of the subordinate clause to the matrix clause and subject auxiliary inversion is visible there. He furnishes examples 16 and 17 to demonstrate the facts.

With further example, Lahiri shows that, even though sub-aux inversion is possible in subordinate interrogatives in many dialects of English (cf, examples 18 and 19) and though pied piping in English is possible within a restriction to the extent that only questions with matrix scope can undergo pied piping, still examples 16 and 17 are good examples.

Lahiri evaluates both the direct and the indirect dependency approaches with semantic insights and explains in a footnote the problem with McDaniel (1989) type of indirect dependency-which does not consider LF movement of the embedded question by means of operations similar to that of expletive replacement at LF-is in the fact that in that approach attaining semantic interpretation of such an LF is not possible.

Unlike the previous approach, in the indirect dependency approach the expletive has independent semantic content which as Lahiri claims corresponds to Hindi counterpart of 'what'. So except in a situation where the question is constrained by contextual information, 'kyaa' does not have any overt restrictions unlike an operator whose quantificational force depends on the semantic nature of the content question that it co-indexes with to extend the latter's scope (cf, example 32 against example 33 in the original paper).

While exploring different versions of the indirect dependency analysis Lahiri primarily picks up Dayal's (1994) version of it. Hindi finite complement clauses cannot occur preverbally due to restrictions like case resistance principle (Stowell, 1981). So the second clause or the subordinate clause is an adjunct to the matrix clause, which again in the words of Dayal (1991a) is co-indexed with the preverbal direct object position. Lahiri shows that 'yeh' the real expletive is actually the real argument to the verb that follows it (cf, examples 36a and b) and thus the subordinate

clause can be said to be linked with it; and as it acts as an interrogative quantifier, it needs to move at LF to get scope.

The second version can be attributed to works of Horvath (1997), Herburger (1994) and Mahajan (2000). This version differs from the earlier one in respect to the fact that the scope-marker is at first a constituent of CP at the Dstructure and then it moves and adjoins to it. According to this analysis, the scope marker is constrained at the very beginning.

Following Herburger (1994) Lahiri proposes that there is subtle difference of meaning among the two structures of extraction and scope-marking that can captured in the following examples,

18. Was glaubt der Georg, wen die Rosa geküßt hat

What believe George who Rosa kissed

Literally, What does George believe, who did Rosa kiss? (Scope marking)

19. Wen glaubt der Georg, daß die Rosa geküßt hat

what believe George who Rosa kissed

Literally, “who does George believe that Rosa kissed?” (Extraction)

(Examples 48 and 49 of the original paper; reproduced here as 18 and 19).

To quote Lahiri “Herburger observes that in (48), the proposition implicated by the (embedded) wh clause, i.e. that Rosa kissed someone, cannot be understood as being merely part of George’s belief-state. Rather, it must be interpreted as being part of the speaker’s beliefs, that is, de re. As she puts it, “We can thus paraphrase the meaning of (1a) [=my (48)] as ‘Rosa kissed somebody, who does George think it was?’.” The same does not hold of the extraction structure (49), which only requires the speaker to presuppose that George believes that Rosa kissed someone. To put it slightly differently, if one assumes (say, following Karttunen and Peters, 1976) that questions like who did Rosa Kiss?-implicate that Rosa kissed someone, one may say that a scope marking structure like (48, as in 18 here) inherits that implicature, but that an extraction structure like (49, as in 19 here) does not—it merely inherits the weaker implicature that there is someone who George believes that Rosa kissed (Lahiri, 2002, 515).

A second reason for Lahiri to support the indirect dependency approach is for the reason that the semantics of extraction and scope-marking do not conflate due to the reason that the class of 'bridge' verbs and predicates are different for them both. The best examples of scope-marking in Hindi comes with the verbs of saying like 'puchnaa', 'bolnaa', 'kahnaa' and verbs of knowledge or belief or of cognition like 'janna', 'socnaa', 'dekhnaa' etc.

By means of indirect dependency we can form yes/no questions in Hindi as well and can accommodate predicates like 'whether' which otherwise cannot be analyzed under direct dependency approaches as predicates like these do not undergo LF movement. Hindi slightly differs from German or Hungarian due to the same reason.

Lahiri subsequently registers a unique phenomenon of 'scope freezing'. For English and other languages where extraction structures are permitted, there are some well known constructions containing an 'amount' WH-question which when moved across clauses, yield ambiguity (Kroch, 1989; Cresti, 1995). Thus, one may observe the paradigm in 20 (example 65 in the original paper):

20. How many books does John think that Bill read? (ambiguous)

a. What is the number of books (such that) John thinks that Bill read those books?

(Wide- scope)

b. What is the number such that John thinks that Bill read that many books?

(Narrow scope)

Lahiri claims that the facts are different for Hindi in which as example 21 (originally 68) shows that only narrow-scope reading is available,; there is no ambiguity in 21,

21. rameS kyaa soctaa hai ki raam-ne kitnii kitabeN paRhiin?

Ramesh what thinks that Ram.ERG how many books read.Pst

“How many books does Ramesh think that Ram read?”

(Unambiguous, narrow scope of wh- numeral phrase)

The sentence in 21 can only correspond to a reading where the person is asking Ramesh's thoughts about the number of books that Ram has read not his 'book-thoughts'. Lahiri calls this phenomenon Scope Freezing. Possible explanations for this have been provided by Lahiri later in the section where he says that either the wh-part of the expression moves at LF but not the measure-part or else one will have to think that after 'how many' reaches LF it then involves reconstruction. The effectiveness of the indirect dependency approach lies in the fact that, under the indirect dependency view, scope freezing follows from the architecture of the theory itself.

Lahiri extends his support to indirect dependency analysis of Hindi scope marking by trying to solve the problem of functional interpretation of questions which includes the interaction of wh-phrases and quantifiers and especially behavior of pronouns bound by quantifiers. In a scope marking structure, a pronoun in the second wh-clause might be bound by a quantified DP in the first clause, as the following examples show ((99a, b) are from Dayal (2000): (examples 99 a, b, c in the original paper; rephrased here as 22 a, b, c.

22. a. har aadmii kyaa soctaa hai, ki us-ko kahaan jaanaa hai

Every man what thinks that he where go has

“What does every man think, where does he have to go?”

b. .har baccaa kyaa soctaa hai, ki vo jaayegaa yaa nahiiN

Every child what thinks that (s)he go or not

“What does every child think, will (s)he go or not?”

c. har laRkaa kyaa soctaa hai, ki kOn laRkii use pasand kartii hai

Every boy what thinks that which girl him likes

“What does every boy think, which girl likes him?”

The underlined elements are the elements bound by quantifier –variable binding. 21 c can be rephrased in English like, Which girl does every boy think like him?

If we want to have an individual reading (which concludes that there exists one girl and that everybody like her) 22c is our candidate. It seems easy with a direct

dependency approach to apprehend this reading as the subject quantifier ('har') c-commands the pronoun ('vo'), and since the wh-phrase has scope over the quantifier phrase, it doesn't remain a matter to worry about functions and quantifying into questions etc. But this reading of the sentence creates a problem for the indirect dependency approach because the way the rules of semantic composition work, to get the pronoun bound by the quantifier subject is impossible under indirect dependency approach. However we will not go into much of the explicit semantic details of the analysis done by Lahiri in this particular section as that is relatively less important to our present inquiry, but Lahiri finds out solution within the approach by taking resort to 'relational answers to question, in the line of Engdahl (1986) .

Lahiri concludes in casting doubts over Hungarian and German facts where the direct dependency approach seemed to work well as per the older accounts. Lahiri finds out enough evidence in these languages that show definite effects of scope-freezing that we have seen earlier in Hindi. The Hindi facts seem to respond in the desired manner when analyzed under the indirect dependency approach; whereas German and Hungarian examples of scope-freezing cannot get a plausible account under direct dependency analysis.

3. Alternative Proposal in Bhattacharya and Simpson (2003):

Bhattacharya and Simpson (2003) ((henceforth B&S)) propose an approach alternative to the other in situ or LF movement approaches that are found in the literature.

Bangla has typically been assumed to be a language with SOV order which does not permit wh-expressions to move from base positions, i.e. Bangla is a WH in-situ language. But B&S (2003) argue that this canonical typological description is actually incorrect. As basic ground of investigation they looked at the distribution of finite WH / non-wh CPs in Bangla and found the ordering with regard to the selecting verb can be either pre or post-verbal. The schema as stated in ex.9 in the original paper is given below-

23. a. SUB V [CP]
- b. SUB [CP] V

They provide an example of this unrestricted ordering in example 3 in the original paper which is restated here in 24,

24. jOn ([_{CP} meri cole gEche]) bollo ([_{CP} meri cole gEche])
 John ([_{CP} Mary walk.Inf go.Prs.Perf]) say.Pst([_{CP} Mary walk.Inf go.Prs.Perf])
 “John said that Mary left”.

.Though this optional ordering is legitimate in Bangla, yet there are certain constraints for CPs containing a wh-expression in it which aims at gaining matrix clause scope. For such wh-CPs, Bhattacharya-Simpson (henceforth B&S) propose the order 23.b) mentioned in the schema previously.

25. ora Suneche [_{CP} ke aSbe] (ex.4 in the paper)
 They.3rd.Pl hear.Prs.Prf [_{CP} who com.FUT]
 “They have heard who will come”

In example 25, the embedded question indirect embedded scope is not possible for the wh-expression staying in-situ; hence they propose the alternate order which is shown in ex.26,

26. ora [_{CP} ke aSbe] Suneche?
 They.3rd.Pl[_{CP} who com.FUT] hear.Prs.Prf
 “Who have they heard will come?”

B&S examines some other relevant and popular theories regarding WH in-situ before they propose their original hypothesis.

Extraposition Analysis: The apparent restriction over WH in-situ has been previously explained by other scholars (Mahajan 1990, Srivastav 1991) in terms of an extraposition analysis. According to this the postverbal CPs in Indic languages like Hindi are actually extraposed to the right of the matrix clause verb from a regular preverbal object position. As these extraposed CPs are assumed to be adjoined to the matrix clause wh-extraction from such adjuncts is not possible due to subjacency conditions applying at LF.

The Inadequacy of the extraposition analysis and Bayer’s (1996) proposal: The inadequacy of the extraposition analysis furnished above lies in the fact that for certain cases it seems that a matrix clause indirect object can bind a pronoun in a

postverbal CP. Bayer (1996) registered such cases in Bangla, the example 27 (ex.7 in the paper) shows this.

27. tumi prottek-Ta chele-ke(i) bolecho [CP ke ta-ke(i) durga pujo-y notun
you each.CLA boy.ACC say.Pst who he.ACC Durga Puja.LOC new
jama kapoR debe]
shirt clothes give.FUT

‘You told each boy who will give him new clothes at Durga Puja.’

The co-indexing here shows the binding relation. Theoretically the extraposition analysis implies that such C-commanding relations do not hold if postverbal CPs are extraposed and adjoined to a higher position than the indirect object.

Rather, Bayer proposed a different ‘restructuring’ analysis which suggests that the postverbal CPs in Bangla are first base-generated as adjuncts but later restructured as rightward complements; such CPs are supposed to be barriers for LF extraction of the wh-expressions inside them.

B&S’s argument against the restructuring analysis: In the paper B&S show that actually the postverbal CPs are not barriers for movement for overt extraction is possible from these CPs,

28. kriSno [mEleria-te]_i bhablo [CP ram t_i mara gaeche]
Krishna malaria.LOC think.Pst Ram die go.Pst

‘Krishna thinks that Ram died of malaria.’

3.1. The alternative overt movement analysis: B&S begin with the assumption that

- A. The underlying word order for Bangla is SVO not SOV.
- B. The wh-Q licensing position in Bangla is not an entirely full S-clause initial position, but it is right to the subject position in the matrix clause.

Beginning with these assumptions it is easier to explain now the cases where indirect embedded scope is not permitted. As stated previously (in the schema given in 23) postverbal wh-CPs cannot take scope over the matrix clause subject in their base position. Hence they move to a matrix clause post-subject position yielding the canonical SOV pattern.

Evidence: To support this hypothesis, B&S furnish examples like

29. tumi [CP ke_i cole gEche] bhabcho meri bollo t_i?

You [CP who leave.Inf go.Pst] think.PROG Mary said [Trace]_i

‘Who do you think Mary said left?’

Long distance movement of wh-CP suggests the fact that staying in-situ, the deeply embedded wh-CP cannot get matrix scope; so, it moves to a position slightly lower than the subject position and the question is thus formed. A thing to note here is that the whole wh-CP is moving. A full clausal movement like this has been attested in Basque and Quechua (ex 13 and 14 in the paper).

Wh-DP movement is another piece of evidence that B&S furnish to explain overt movement in Bangla. Previously we noticed that wh-clausal pied piping is possible and now they claim that even wh-DP raising is possible,

30. jOn ke_i bollo [CP t_i cole gEche] (ex 17 in the paper)

John who_i say.Pst [CP [Trace]_i leave.Pst go.Pst]

‘Who did John say left?’

Davison’s (1988) non movement analysis (which says that wh-phrases are base generated at the matrix clause as an ‘inner topic’) has been criticized by B&S on the ground of relatedness between case assignment and particle/postpositions on the NP. In the examples 18 and 19 (restated as 31 and 32 here) they try to show that the case particles occurring on the wh-phrase is directly linked to the predicate in the embedded clause.

31. tumi [ki OSukh-e/*-er]_i bhable [CP ram t_i mara gEche]

You[which illness.LOC/*-GEN]_i thought[CP Ram [Trace]_i die go.Pst]

‘Of which illness did you think that Ram died?’

(Bayer 1996)



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32. tumi [kon OSukh-er/*-e]_i bhable [_{CP} t_i kono cikitSa nei]
 you [which illness.GEN/*-LOC]_i though[_{CP} [Trace]_i any treatment be-not]
 ‘For which illness did you think that there is no treatment?’

This again confirms the validity of the movement hypothesis.

For additional support to the SVO account, B&S proposes a reconsideration of positioning of finite non-wh CPs. If a complement CP contains contrastive focus then it occurs in preverbal positions (like any finite CP, the focus CPs also can have similar patterns as stated in 23).

33. jOn [_{CP} or BABA aSbe] Sone ni {not jOn Sone ni [_{CP} or BABA aSbe]}
 John[_{CP} his father(FOC) come.FUT] hear.Pst not
 ‘John didn’t hear that his FATHER will come.’

The interesting thing to note here, is the apparent similarity between wh-CP movement and focus-CP movement being licensed at the same position. Focus-CPs, wh-CPs / DPs they all move to a post-subject position in the matrix clause. But B&S later propose that these are different types of movement operations. In the paper examples 24 and 25 the distinction is noted. Unlike the wh-CP/DP movement, deeply embedded focus-CPs in a three-clause structure can actually be licensed at any of the clauses.

3.2. Arguments for the ‘licensing position’:

We have noted in the previous section that the licensing position for both non-wh and wh-CPs can be the same (may not be fixed for the focus-CPs) and according to Cullicover (1992) this is a kind of ‘polarity phrase’ which can host and license not only wh features but also simple focus features. Additional to these, B&S further propose that adjuncts in Bangla can also appear at the same licensing position as the other CPs we talked about. In the example 34 (28 in the paper) we see is the wh-expression follows the adjunct which may suggest that actually the licensing position for wh-expressions in Bangla is low in the clause.,

34. . jOn borders-e kal [kon boi-Ta]_i kinlo t_i
 John Borders.LOC yesterday [which book.CLA]_i buy.Pst [Trace]_i
 ‘Which book did John buy yesterday at Borders?’

Again in 35 (29 in the paper) we notice that the order gets reversed,

35. jOn [kon boi-Ta]_i borders-e kal kinlo t_i

John [which book.CLA]_i Borders.LOC yesterday buy.Pst[Trace]_i

‘Which book did John buy yesterday at Borders?’

Considering these two possibilities, B&S assume two syntactic operations that can yield such a result. In one case it can be the fact that the adjunct gets to the post-subject position which is otherwise reserved for wh-CP/DPs or focus-CP/DPs by scrambling from its base position where the other possibility can be a base-generation operation at the matrix clause.

Keeping in mind these movement operations, B&S claim that in actuality the wh-licensing position is higher in the clause structure than it is seen generally. Higher positioning of the adjunct phrase is a popular tendency among speakers which thus conceals the movement of wh-expressions.

3.3. Implications and Assessment:

Apparently, the problems occurring with every token of SOV analysis mentioned in the paper (Davison 1988, Mahajan 1990, Srivastav 1991, Bayer 1996) dissolves if we consider the overt movement option reasonable. The presence of various movement operations like wh-clausal pied piping, wh-DP movement, and long distance CP movement for focus and question furnished in support of the overt movement hypothesis actually gain the thesis valid grounds. Moreover constraints on the optional ordering of embedded wh-CPs, and the inability of deeply embedded wh-CPs to get matrix scope in in-situ facilitates the universal underlying SVO order hypothesis (Kayne 1994).

But as for evaluation of this theory we need to crosscheck it with more data as well as look into some other kinds of questions also. But at first we will look at some of the data that are furnished in the paper which together forms essential supports for the overt movement hypothesis.]

B&S furnished a counterexample to show that Bayer’s restructuring hypothesis is not adequate enough to account for LF extraction of Bangla wh-expressions from a postverbal position. The example 8 in the paper is sated here in 36,

36. kriSno [maelera-te]_i bhablo [_{CP} ram t_i mara gaeche]

Krishna[malaria.LOC]_i think.Pst[_{CP} Ram [Trace]_i die go.Pst]

‘Krishna thinks that Ram died of malaria.’

In this example, the LOC marked element seems to be extracted from inside the postverbal CP. With this example in hand B&S show that this postverbal CP is not actually a barrier for movement for overt extraction seem to be possible.

Intuitively it seems that the LOC marked adjunct phrase is not actually been extracted from the CP but rather base generated at the matrix clause. But the trace in the embedded CP says otherwise. Taking this account to be the correct one we encounter another difficulty in interpreting this sentence. Even if the stated facts are true- that ram died of malaria, intuitively one reading (and the only reading for some!) is also there which says that the diseased person is the one at the matrix clause subject position and the dead one is the other one at the embedded clause. Then the reading would be like –Krishna, while stricken by malaria thought that Ram died. This reading suggests the fact that extraction from such CP may not be actually possible.

Similarly, as wh-CP movement seems to be a plausible strategy for making questions, Wh-DP raising does not seem to be such a popular choice among the native speakers. Thus, for some example (jOn [_{DP} ke_i] bollo [_{CP} t_i cole gaeche]?) in the paper is not a legitimate question in Bangla, rather speakers prefer more to move the whole CP to the proposed wh-Q licensing position.

More interesting are the adjunct questions in Bangla. Example 38 shows that overt extraction from adjunct islands is not possible in Bangla likewise the languages which have overt wh-movement.

37. jOn angTi kinlo [karon meri-r angTi chilo na]

john ring buy.Pst because Mery.GEN ring be.Pst not.

‘John bought a ring because Mary did not have one’

38. jOn ([ki]/[meri-r ki chilo na]); angTi kinlo [karon....t_i....]

38. is not a question whether with the DP alone or with the phrasal chunk. Rather 39 is the only possible question to which 37 can be a felicitous answer.

39. jOn angTi kinlo [kaeno]?

John ring buy.Pst why

‘Why did John buy a ring?’

Following B&S and the schema given in 23.b) we derive 40.

40. jOn [kaneo]_i angTi kinlo t_i ?

Interestingly some speakers tend to move the wh-expression right to the matrix clause object position and the following structure is formed thus as a legitimate question,

41. jOn angTi [kaeno]_i kinlo t_i ?

The first thing to note here in ex 41 is the fact that there is no stringent restriction or constraint applying on the licensing domain for the wh-expression. Secondly as this optional licensing of wh-phrase reminds us of the optional licensing positions for focus-CPs (as stated in ex 24 in the paper), naturally we tend to think that this adjunct question case that we examined might be similar to that of focus movement. In all the three examples above it seems that the element next to the wh-expression [kaeno] gets some type of focus from the WH. Is this wh-expression acting as a focus marker in this case? We can't answer the question yet. But the most common tendency has been to keep the wh-expression in its base position.

42. tumi [_{CP} ke eSeche] bhale [_{CP} jon bollo]

you who come.Pst think.Pst John say.Pst

‘Who do you think John said came?’

The same question can be expressed with an alternative scope marking structure where by way of co-indexing with a wh scope marker at the highest [spec, CP] ,the actual wh (the in-situ wh at the subordinate clause) can have matrix clause scope without being moved .

43. . tumi ki bhale [_{CP} jon ke esheche bollo]?

You what (wh-SCOPE) think.Pst [_{CP} John who come.Pst say.Pst]

“What do you think who came John said?”

This is actually mentioned in Dayal (1994). In this paper Dayal argues against the apparent isomorphism between scope marking structures and extraction structures. In certain languages scope marking structures are used to express long-distance wh dependencies along with extraction structures. Works on Romani (McDaniel, 1989) Hindi (Davison 1984, Mahajan 1990, Srivastav 1989, 1991a), Bangla (Bayer 1990) etc have attested the existence of scope-marking structures in these languages. Dayal claims that in languages with wh-in situ, like Hindi and Bangla, the only way of expressing long distance wh-dependencies is by the way of scope marking (because extraction out of finite complements at LF is not possible). By way of scope marking only, questioning out of the sub-ordinate clause is possible. Hence scope marking structures need some special attention. Scholars like McDaniel (1989) have proposed that scope markers are special types of expletive wh- expressions that are base generated in the matrix [spec, CP] and form a chain with the wh expression in the embedded CP. This Direct Dependency Analysis approach trivializes scope-marking structures by not proposing any explicit semantics for it. Again this direct dependency claim has been tested on the ground of Negation (Rizzi 1992) which is a special case where the equivalence between extraction and scope marking structures breaks down. Dayal claims that in order to establish a direct dependency between scope marker and the embedded wh expression in Hindi (a language where the scope marker appear in the preverbal position) the scope marker have to move at LF to the matrix Spec, CP and thus a chain will be formed between the scope marker and the embedded wh expression. These movements are “clearly non-standard” and cannot be independently motivated. Mahajan’s (1990) account for this has been in terms of Expletive Replacement (Chomsky, 1986b); for his case it would be like adding the finite complement to the scope marker and thus the wide scope reading is achieved. But Dayal observes this analysis permits an isomorphism between extraction and scope marking structures which is otherwise questionable (Rizzi, 1992). Instead of this direct dependency analysis for scope markers, for languages like Hindi Dayal proposes an alternative analysis. In this analysis (which is termed as the Indirect Dependency Analysis) she proposes two local WH dependencies between the scope marker and the actual WH expression. There is no single link between these two and the long distance effect is achieved by the co-indexation of the dominating nodes which then gets linked (example 20 in Dayal 1994). The basic syntactic argument is that the scope marker is generated in the argument position (not in the matrix Spec,

CP as an expletive like the direct dependency analysis) and is co-indexed with a CP in adjoined position. Depending on the language the scope marker moves at s-structure or LF. As for its semantics she argues that the long distance dependency effect can be achieved in this approach by means of interpretation of the complement as a restriction on the variable in the higher clause.

With regard to these two views on wh in situ and scope marking furnished above, a relevant question arises for Bangla: why the existence of both of the mechanisms (overt wh movement in B&S 2003 and scope marking structures Dayal 1993) in the same language to account for a single fact?

In fact there are such languages which employ both of these structures at the same time. Klepp (2001) has pointed out a special type of wh-movement where the wh-expression moves from the embedded clause but does not raise all the way up to the matrix clause Spec, CP; rather it stays into a lower clause. This has been termed as Partial wh-movement. Moreover long distance wh-movement of the English type is similarly a common phenomenon in German. One special feature that we find in this kind of a movement is the presence of a wh scope marker “was” (what) at the matrix clause (example 4 in the paper: [CP Was_i glaubte Miró [CP welches Bild_i Picasso † gemalt hatte]?). The Bangla data, furnished above reflects a similar structure with minor differences. Let us restate the example in 44 here,

44. tumi ki_i bhable [CP jon[CP ke esheche_i] bollo t_i]?

You what (wh.Expl)_i thought[CP John who came_i said [Trace]_i]

“What do you think who came John said?”

We clearly see from the trace that there has been a movement in the Bangla example also, but the difference lies in the fact that both of the wh-expressions (the scope marker in the matrix CP and the actual wh-phrase) in Bangla lands in a post subject position rather than of a s-initial position.

From these facts mentioned above we can add to our question an in depth examination of both the German and Bangla data in relation to the common property they share to see whether Bangla and German comprise up a typical typological set of languages in which both scope marking and overt movement is employed. We need to crosscheck

with data from both these languages and from Hindi also (which at least has the use of the scope marking structure) and testify the validity of our hypothesis on the grounds of various syntactic and semantic constraints.

4. The Question:

Till now we have looked at various proposals and numerous versions of them. We looked at possible in situ analysis under direct dependency approach which seems to fail in capturing proper semantic generalization of the facts it aims at explaining. Moreover the nontrivial trivialization of extraction and scope-marking structure at LF cannot account for the apparent syntactic dissimilarity. On the other hand indirect dependency approach tries to balance between the syntactic and semantic accounts of the phenomenon. It seems plausible enough a strategy to employ in languages like Hindi, Bangla which are traditionally in situ languages. This approach succeeds at keeping the semantics live while taking syntax as a guide for the solution and does not trivialize the syntactic consequences. In another paper supportive evidences are put forward for the indirect dependency analysis. This endeavor further refers to some previously unnoticed phenomena like scope-freezing which is essential characteristic feature of Hindi 'measure' expressions when analyzed under this approach. After this we encounter an alternative overt movement proposal which stands diametrically opposite to the previous account of wh in-situ . This novel approach holds the debate to a different level altogether.

Our concern at this point is slightly different. There are cases that can be furnished to propose otherwise than the movement hypothesis. According to the proposal made by B&S(2003) the underlined construction is good

45. tumi [_{CP} ke eSeche] bhable [_{CP} jon bollo]

you who come.Pst think.Pst John say.Pst

'Who do you think John said came?'

The same question can be expressed with an alternative scope marking structure where by way of co-indexing with a wh scope marker at the highest [spec, CP] ,the actual wh (the in-situ wh at the subordinate clause) can have matrix clause scope without being moved .

46. tumi ki bhable [CP jon ke_i esheche bollo]?

You what Wh.Exp_i think.Pst [CP John who_i come.Prs.Perf say.Pst]

“Whom did you think that John said has come?”

This is actually mentioned in Dayal (1994). In this paper Dayal argues against the apparent isomorphism between scope-marking structures and extraction structures. In certain languages scope marking structures are used to express long-distance wh-dependencies along with extraction structures. By way of scope marking only, questioning out of the sub-ordinate clause is possible. Hence scope marking structures need some special attention.

With regard to the two views on wh in situ and scope marking furnished in the previous section, a relevant question arises for Bangla: why the existence of both of the mechanisms (overt wh movement in B&S (2003) and indirect dependency Dayal (1994) in the same language to account for a single fact?

In fact there are such languages which employ both of these structures at the same time. Klepp(2001) has pointed out a special type of wh-movement where the wh expression moves from the embedded clause but does not raise all the way up to the matrix clause spec,CP ;rather it stays into a lower clause. This has been termed as Partial wh-movement. Moreover long distance wh-movement of the English type is parallelly a common phenomenon in German. One special feature that we find in this kind of a movement is the presence of a wh scope marker “was”(what) at the matrix clause (example 4 in the paper: [CP Was_i glaubte Miró [CP welches Bild_i Picasso t_i gemalt hatte]?). The Bangla data, furnished above reflects a similar structure with minor differences.

47. tumi ki bhable [CP jon ke esheche_i bollo t_i]?

You what Wh-Expl think.Pst[CP John who come.Pst say.Pst]

“What do you think who came John said?”

We clearly see from the trace that there has been a movement in the Bangla example also, but the difference lies in the fact that both the WHs (the scope marker in the

matrix CP and the actual wh-phrase) in Bangla lands in a post subject position rather than of a s-initial position.

From these facts mentioned above we can add to our question a vivid examination of both the German and Bangla data in relation to the common property they share to see whether Bangla and German comprise up a typical typological set of languages in which both scope marking and overt movement is employed. We need to crosscheck with data from both these languages and from Hindi also (which at least has the use of the scope marking structure) and testify the validity of our hypothesis on the grounds of various syntactic and semantic constraints.

Chapter 2: Analysis

1. Introduction And Organization Of The Chapter.

Our aim in this chapter is to look at various syntactic tests and to go through questionnaire surveys in order to verify the possibility of occurrence of both the types of syntactic constructions i.e. Scope marking structure and movement structures as proposed by different scholars. Along with the popular island tests we added a few more to strengthen our verification of the movement hypothesis given by Bhattacharya & Simpson (2003). Testing the data acquired by us against island constraints on movement is the practiced convention in syntactic analysis as these are the most reliable grounds for inquiry; so, we will go through some island tests to check the validity of the movement hypothesis. Moreover these island tests are absolutely necessary for another reason. If some of the data that we have does go - otherwise than/-not conform to- the direction shown by the possible movement hypothesis we would like then, to check those constructions with an indirect dependency analysis that we have previously encountered in Dayal (1994). There is no doubt about the existence of both of these strategies in the language under analysis, and we are not trying to find a unique solution or trying to choose among these two strategies. A number of eminent theoreticians have registered their existence in Bangla and it seems plausible enough to say that both are employed in forming interrogative structures in the language. But let us look back to our initial inquiry where we wanted to find out the logic behind the involvement of two overtly distinct syntactic operations in one language to express interrogative intentions. Our intention thus is clear here: we employ the syntactic tests and furthermore the indirect dependency operation on the same constructions to figure out whether we are dealing with one singular semantic phenomenon which can structurally or syntactically surface in two forms or are we looking at two different phenomena altogether. Moreover such investigations might as well point us to another direction towards individual predicates with idiosyncratic choice over the types of arguments they can accommodate. In overall the issue here is not two mere contrastive syntactic structures but it is an attempt to evaluate these two with the help of reasonable amount of empirical findings and trying to find a way to interpret the situation rationally.

About the organisation of the chapter we have five sections in which the sections 2-2.4 are comprised of a questionnaire and the result that we have obtained from it. In section 2.1. we state the purpose and the organisation of the questionnaire. In section 2.2. we provide a table of results obtained from the survey and the next section, i.e. 2.3. states the organisation of the table. Section 2.4. furnishes the analysis of the tabular data. The questionnaire will help us to reach to a number of conceivable conclusions about popular choice among the native speakers of the language. Moreover we will try to see through it the reality behind movement and scope marking type of operations, i.e. to say whether questions in Bangla can be formed by direct dependencies or there are actual instances of scope-marking which is claimed to suit the whims of an in-situ language (which is the canonical status of Bangla).

In section 3 we look at the various island constraints to see whether the effects of the island stay put across the board or are there gaps that can be explained differently. After exhausting the island constraints in section 3.1 we try to look at the same examples under the light of indirect dependency analysis in accord to Dayal's work in Hindi in 3.2. to see whether that can save the situation or not.

From our empirical investigations we have gathered up some predicates which respond uniquely to these operations. So in section 3 in this chapter we attempt at explaining them in the given frameworks. Further added to section 4, in 4.1, we provide an interesting construction which is basically a concurrence of scope-marking and clausal pied piping structures, typical to the language under investigation. Finally, we end this investigation by drawing a conclusion in section 5.

2. The Questionnaire Survey:

2.1. The Purpose and the Organisation of the Questionnaire:

In order to look at the possibility in a more democratic and unbiased way we proposed a questionnaire survey. This questionnaire aims at exploring the intuitive knowledge of the native speakers about preferable sets of interrogative constructions in Bangla.

The questionnaire is designed in a certain way so that possible choices can be predicted from a given previous contextual incidents which we termed as 'Discourse Contexts'. Different discourse contexts have been set up in order to generate a possible set of choices among the speakers. After the discourse contexts the speakers

are provided with different kinds of interrogative constructions that are possible and /or registered in the language. Respondents are asked to answer a few questions then, which include questions of most preferable choice and least preferable one as well as identification of ungrammaticality if they can find. Then we have designed a 'match the question to the answer' type of test to see whether these different constructions give rise to different types of replies or not. At the end of the questionnaire a limited space is provided for the respondents to add their own views over the given set of interrogative structures where they can include any other type of their intuition if they feel something is missing.

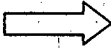

The purpose of the questionnaire is to see whether the reason for the co-existence can be rendered to contextually sensitive discourse situations or due to different predicates. Predicates have been chosen carefully with the hope that they might account for this phenomenon. We began with the question of employment of two different strategies with a single intention-to denote interrogation. Languages in which overt movement (like German) shows this and some other languages also show similar tendencies. Bangla is our language of question where the canonical description is scrutinized by some potent thesis (Bhattacharya Simpson 2003) claiming it to be a movement facilitating language and not an in situ language. On the other hand there are other proposals which differ from this and attempt to analyze the in-situ analysis by means of subtle syntactic operations like scope marking operations (Dayal 1994). The forms that scope marking operations generate in Hindi can have parallels in Bangla too. The question we ask here can they be differentially distributed or is it just a question of choice rather than permissibility.

The selection of the informants has been done keeping in mind the facts that both Age and language proficiency in Hindi and Bangla can influence the question of preference. The first five informants belong to the age-group 22-30, and the remaining others fall in the age-group of 50-65. The language proficiency of the speakers is provided in the table below each informant in the left-most column. Language proficiency is kept as a parameter for the fact that scope marking constructions are registered in Hindi and so the people who have the knowledge of the language may find the indirect dependency structures similar to them while the only Bangla speaking informants may not opt for it.

2.2 The Result Obtained From The Questionnaire Survey:

The results obtained from the survey are provided below in the form of a table.

The description of the organization of the table and analysis of its contents follow it.

Types Of Constructions  Informant replies In each Discourse Contexts 	[±]Indirect Dependency	[±]Wh-Clausal Pied Piping to S-Clause Initial Position	[±]Wh-clausal Pied Piping to the Matrix Clause	[±]Wh-DP extraction	[±]A Mixed Construction of Indirect Dependency and Clausal Pied Piping.(introduced in the questionnaire)	[±]Movement With An Overt Complementizer /je/
Informant 1 [Hindi - Bangla]	+ D1, D6	+ D1,D2,D3, D4,D5,D7, D8	+ D1,D2,D3,D4,D 5,D6 D7,D8	+ D2,D4,D 5, D6,D7	+ D3	-
Informant 2 [Hindi - Bangla]	+ D2,D3,D4, D5,D6,D7, D8	+ D1,D2,D3 D4,D5,D7 D8	+ D3,D4,D5, D7,D8	+ D6	-	-
Informant3 [Hindi - Bangla]	+ D1,D2,D4 D5,D6,D7 D8	+ D7	+ D5,D8	-	+D3	-

Informant 4 [Hindi - Bangla]	+	-	-	+	-	-
	D1,D2,D3, D4,D5,D6, D7,D8			D2		
Informant 5 [Hindi - Bangla]	+	-	-	-	+	-
	D1,D2,D4 D5,D6,D7 D8				D3	
Informant6 [Bangla]	+	+	+	+	+	-
	D1,D2,D4 D5,D6,D7 D8	D1,D2,D4, D5,D7,D8	D1,D2,D4 D5,D6,D7 D8	D6	D3	
Informant7 [Bangla]	+	+	+	+	+	-
	D1	D2,D4,D6, D7	D5	D6,D8	D3	
Informant8 [Bangla]	+	+	+	+	+	-
	D1,D6,D7, D8	D2,D4,D7	D5	D5	D3	
Informant9 [Bangla]	+	+	-	+	+	-
	D1,D2,D4, D6 D7,D8	D1,D2		D5	D3	
Informant10 [Bangla]	+	-	-	+	+	-
	D1,D2,D3, D4,D5,D6, D7,D8			D5	D3	

2.3. Organization of the Table:

The table records the data extracted from the informant-replies of a questionnaire designed for native speakers of Bangla. This questionnaire survey was conducted to achieve a brief overview of available choices among different kinds of interrogative constructions that are permissible by the grammar of the language. The types of constructions chosen here are namely-

1. Indirect Dependency² as proposed for Hindi by Dayal (1994).
2. Wh-CP pied piping to the matrix clause 'post-subject position' (Bhattacharya & Simpson 2003).
3. Wh-DP extraction. (Both to the post subject & S-clause initial TOP/FOC position).
4. Wh-CP pied piping to the S-clause initial TOP/FOC position.
5. A mixed construction of Indirect Dependency and Clausal pied piping (introduced in the questionnaire).

The table contains ten columns and eight rows in which the Informants and the constructions chosen by them in each of the Discourse Contexts given in the questionnaire are listed by means of binary values. So, when one has selected Wh-CP clausal pied piping in a Discourse Context (henceforth, DC) we marked it with '+', and if the same DC receives some other structural response from another informant then we put a '-' to denote the absence of such construction from his(er) list of preferable constructions. Below each binary value in the table we added the instances of structures preferred in the DCs which is referred in the table as D1, D2 etc. We must once again remember the fact that the binary values only denote preference of one structure over another as we aimed. A '-' reply does not mean that the construction is not valid for the respondent for the particular DC. The results as we have arranged in the table signify the choice and gradation of preference.

² For our convenience we will refer to the 'scope-marking' constructions as instances of Indirect Dependency analysis. At this stage of the research we cannot say for sure that the Bangla examples that look similar to the Hindi Scope-marking constructions are real scope-marking structures for the language.

2.4. The Analysis Of the Result Obtained:

The table cited above shows that:

- A. The choice of indirect dependency type constructions has been all pervasive. This particular construction appeared for most of the speakers in most of the contexts as first choice (although not the only choice.)
- B. Almost equal percentage of speakers opted for a possible movement construction as registered in Bhattacharya & Simpson (2003), along with the indirect dependency type.
- C. The percentage of informants opting for only indirect dependency type constructions does not vary drastically from those who chose both (indirect dependency type and movement type). That clearly refers to the fact that there is no actual competition among the two groups over one particular construction. The question was that of a preference when provided with a previous context or sets of events than a question of possible grammatical constructions that Bangla employ to denote questions. Both of the types co-exist in the language and there is no means by which we can grade one over the other from this choice oriented questionnaire survey.
- D. Although the other types seem to be a bit marginal, only in a few occasions Wh-DP extraction to the matrix clause or to a S-clause initial TOP/FOC position is registered. We categorise those under movement type.
- E. An additional observation (mentioned in the original questionnaire replies in the Appendices section) points to the fact that the presence of an overt complementizer (/je/) may block possible extraction or clausal pied piping constructions, e.g.
48. * Neela ke je aasbe suneche Sumit bhebechilo?
Neela who COMP come.FUT heard.Perf Sumit Think. Pst Perf
'Who has Neela heard Sumit thought will come?'
Almost all the speakers considered this construction bad or completely ungrammatical while responding to the questionnaire.
- F. The data from the table shows that the parameters for the selection of the respondents-Age and Language Proficiency does not really impart any important influence over the judgements. We can see that across the board

people of two variant age groups and linguistic abilities opted for indirect dependency structures (by which scope marking is done for matrix questions) and these constructions are rather abundant in Hindi than in Bangla.

- **A Special Construction:**

I would like to attract special notice to the mixed construction, (construction type 5). This type of construction, which I have termed in the table as ‘mixed construction of Indirect Dependency and Clausal pied piping’ can only be applied to sentences containing two embedded clauses. Generally for such cases, one will need two Wh-scope markers³ separately for both of the embedded clauses, as in Hindi-

49. *b. jaun kyaa sochta hai, anu kyaa kahegi, meri kis-se*
 John what thinks Anu what say.FUT Mary with-who
 baat karegi?

Talk GO.FUT

‘Who does John think Anu will say Mary will talk to?’ (Example 8.b in Dayal, 1994).

In this example the two italicised items are the two isomorphic Wh-expressions that are often used in the normal speech. In Hindi this is how matrix scope is attained by the most embedded question by means of indirect dependency (or scope-marking as it is referred to in the literature). We don’t deny such possibilities in Bangla too.

50. *Neela ki sunche Sumit ki bhebechilo ke aasbe?*

Neela what heard Sumit What think.Pst Perf who come.FUT

‘Who has Neela heard Sumit thought will come?’

But a different type of construction can be formed in the way that we can drop the second Wh-expression in the higher embedding and instead just pied-pipe the whole CP containing the Wh-expression in the most embedded clause to the higher one. The structure would look like this-

³ By WH-scope-markers we mean expletive like wh-elements which extend the scope of the embedded question to the matrix clause. Hindi ‘yeh’ and ‘kyaa’ are such expression.

51. [_{CP1} Neela ki suneche[_{CP2} sumit [_{CP3} ke asbe]_i bhebechilo...._{t_i}].
 Neela what heard Sumit who come.FUT think.Pst Perf
 'Who has Neela heard Sumit thought will come?'

Most interestingly this has been the normal choice for native speakers over the original scope marking constructions as registered in languages like Hindi. This deviation from the original indirect dependency type structures is dangerous, as Dayal (1994) has noticed that in Hindi (like in German) when there are multiple embeddings, each intermediate clause must have a scope marker. The case of example 8 surely violates that. For the time being let us put this fact aside. In the later sections we look at various island constraints on the movement operations. Then we will try to weigh these facts from the questionnaire survey against movement facts and look for a proper explanation for phenomenon like we have mentioned in the earlier section.

3. Island Constraints and Movement:

Before we get into analysis let us refresh our memory by looking at some instances of possible Wh-movements in Bangla. Some of the examples that we have furnished here are directly taken from Bhattacharya & Simpson (2003).

- **Long Wh-CP Movement:**

52. tumi [_{CP} ke cole gEche]_i bhabcho meri bollo _{t_i}
 you who left gone thought Mary said

'Who do you think Mary said left?'(ex.15 in B&S, 2003)

Here we can clearly see that questioning out of the most embedded clause is possible by means of moving the whole clause to the matrix clause post subject position. This is an instance of clausal pied piping in Bangla.

53. ?Ram [_{CP} ke mara gEche]_i bhebechilo meri janto _{t_i}?

Ram who dead gone think.pst.PERF Mary knew?

'Who did Ram think Mary knew died?'

53 seems to be similar to the previous example, but native speakers find the same movement construction better when a complementizer-*je* is present in it as in example 54.

54. Ram [_{CP} ke mara gEche]_i bhebechilo je meri janto t_i?

Ram who dead gone think.pst.PERF that Mary knew?

'Who did Ram think that Mary knew died?'

• **Wh-DP Movement:**

55. ?jOn ke_i bollo [_{CP} t_i cole gEche]

John who say.Pst leave.Pst go.Pst

'Who did John say left?' (ex. 17 B&S, 2003)

Unlike the previous pied piping example, this one here shows extraction of a DP and again the presence of a head initial complementizer makes the situation better as shown in example 56.

56. jOn ke_i bollo [_{CP} je t_i cole gEche]

John who say.Pst COMP leave.Pst go.Pst

'Who did John said that left?'

In the next section we attempt to evaluate the validity of the movement hypothesis with the help of some well known island constraint tests. In the section that comes next, our aim will be to see whether the constructions that are blocked by island constraints be legitimized by indirect dependency analysis or not.

3.1. Island tests:

Before moving forward with the tests we would like to introduce the island tests that we are going to do.

- (a) *Complex NPs*
- (b) *Adjunct Islands*
- (c) *Wh-Islands*
- (d) *Factive islands*
- (e) *Negative islands*
- (f) *Co-ordinate Structure Islands*
- (g) *Relative clause Islands*
- (h) *Extraposition Island*
- (i) *ECP violation*⁴

⁴ In order to validate a possible movement hypothesis in Bangla, we need to check on essential universal constraints like ECP along with the other trademark island tests.

a) Complex NPs:

Moving a wh-phrase out of a complex noun phrase yields ungrammatical structures. Given below, the example 57 contains a complex NP, and example 58 illustrates that extraction of a wh-DP is not possible. So, the constraint holds.

57. jOn ei dabi-Ta mane na [CP je prithibi chEpTa]

John this claim.CLA believes not COMP earth flat.

‘John does not believe in the claim that the earth is flat’

58. *jOn ki ei dabi-Ta mane na [CP je t_i chEpTa]

John what_i this claim.CLA believes not COMP [Trace]_i flat.

Similarly,

59. khObor-Ta [je sita aSche] SObar-i jana.

News.CLA that sita come.PROG everyone.EMPH. known

‘The news that sita is coming is known to evryone.’

After movement out of the complement clause,

60. *ke_i khObor-Ta [je t_(i) aSche] SObar-i jana?

Who_i news-CLA that [Trace]_i come.PROG everyone.EMPH. known

Meaning: ‘Who does everybody know is coming?’

These examples show that whenever a constituent (phrasal or clausal) is moved out of a complex noun phrase in Bangla, the resultant construction becomes ungrammatical.

b) Is Adjunct Islands:

Extraction out of a adjunct clause or anything of such kind is not possible in Bangla.

61. jOn bhablo [meri taRataRi cholte pare]

John thought Mary quickly walk can.

‘John thought that Mary can walk quickly’

62. *jOn [kibhabe]_i bhablo [meri t_i cholte pare]

John How_i thought Mary [Trace]_i walk can.

Meaning: 'How could Mary walk John thought?'

63. Ram angTi kineche karon meri-r angTi chilo na.

Ram ring bought because merry.GEN ring be.Pst no

'Ram bought a ring because Merry did not have a ring.'

64. * Ram [ki]_i kineche [karon meri-r t_i chilo na]?

Ram what_i bought because Mary.GEN [Trace]_i be.pst not

Meaning; 'What did john buy that Merry did not have?'

65. jOn aSeni [karon bil meri-r baRi-te bERate
gechilo].

John come.Pst.not because Bill Merry.GEN house.LOC visit.INF
go.Pst

'John did not come because Bill went to Mary's house.'

66. *jOn kar_i aSeni [karon bil t_i bari-te
bERate

John who.GEN come.Pst.not because Bill [Trace]_i house.LOC
visit.Inf

gechilo]?

go.Pst

c) Wh-island:

Extraction out of a wh-island is impossible in Bangla, no matter whether it is an internal or external argument of the embedded clause.

67. Tumi ke ki korche bhabcho?

you who what do.PROG think.PROG?

'What do you think? Who is doing what?'⁵

⁵ This types of constructions are registered in some dialects of English which are claimed to be similar to scope-marking constructions (Dayal,1996, 2000). Although for some other reasons these are considered as just sequence of clauses (Lahiri, 2002).

68. *[ke]_i tumi t_i ki korche bhabcho?

who_i you [Trace]_i what do.PROG think.PROG?

What_i you who [Trace]_i do.PROG think.PROG?

69. ami jani kon problem-Ta-r jOn ebhabe SOMadhan korte

I know which problem.CLA.GEN John this way solve
pare.

do.Inf can.

'I know which problem John can solve this way.'

70. *Tumi kibhabe_i jano kon problem-Ta-r jOn t_i SOMadhan korte

You how_i know which problem.CLA.GEN [Trace]_i solve do.Inf
pare?

can.

d) **Factive islands:**

Constructions with factive predicates like 'onutap'(regret) etc do not permit extraction.

71. jOn onutap kOre je o Olp-er jonno race-Ta jete
Robi bJohn regret do.Prs Comp he small margin.GEN for race.CLA
win

ni.

not.

'John regrets that he could not win the race for a small margin.'

72. * jOn kEno_i/ki karon-e_i/kiSer_i onutap kOre je o t_i
jonno

John why / for what reason reget do.Prs Comp he [trace]_i for
race-Ta jete ni?

race.CLA win not.

e) Negative Islands:

The presence of a negative element in the complement clause prevents wh-extraction out of it in Bangla. Thus, 74 is bad.

73. robi bollo [je ram rityar kOreni karon o lOtari peyeche].

Robi say.Pst COMP Ram retire do.Pst.not because he lottery get.Prs. Perf

‘Robi said that Ram has not retired because he cracked lottery.’

74. *robi ki bollo [je ram rityr kOreni karon o t_i

Robi what say.Pst COMP Ram retire do.pst because he [Trace]_i

peyeche]?

get.Prs.Perf.

f) Co-Ordinate Structure Islands:

Extraction of a wh-phrase out of a co-ordinate island is bad in Bangla.

75. rOjot jane [je SEmol konika-ke bhalobaSe ar
Rajat know.Prs COMP Shyamal Konika-ACC love.Prs CONJ
Subho nije-ke ghrina kOre]
Shubho self-ACC hate do.Prs

‘Rajat knows that Shyamal loves Konika and Shubho hates himself.’

76. *rOjot kake_i jane [je SEmol bhalobaSe konika-ke ar
Rajat whom_i know.Prs COMP SHyamal love.Prs Konika.ACC CONJ
Subho ghrina t_i kOre]?

Shubho hate [Trace]_i do.Prs .

g) Relative Clause Islands:

77. rOmeS Sei meye-Ta-ke cene je robi-r
Ramesh that(DEM) girl.CLA.ACC know.Prs who(REL) Rabi.GEN
dokan-e kaj kOre.
shop.LOC Work do.Prs

‘Ramesh knows that girl who works at Rabi’s shop.’

78. *rOmeS kar_i Sei meye-Ta-ke cene je
 Ramesh WhoPOSS_i that(DEM) girl.CLA.GEN know.prs who(REL)
 t_i dokan-e kaj kOre
 [Trace]_i; Shop.LOC work do.Prs

h) Extraposition Islands :

When a finite NP is extraposed, extraction of a wh-DP from it seems to be impossible in Bangla.

79. na bujhe kOtha bOla-Ta khub kharap. (Base)

not understand.Inf talk.Inf.CLA very bad.

'To say something without understanding it is very bad.'

80. khub kharap holo [na bujhe kOtha bOla-Ta]. (Extraposed)

very bad be.Prs not understand.Inf talk.Inf.CLA

81. *khub kharap ki_i holo [na bujhe t_i bOla-Ta]

Very bad what_i be.Prs not understand.Inf [Trace]_i; say.Inf.CLA

i) ECP Violation:

Example 83 clearly shows that movement of the manner adverb 'kibhabe' out of the embedded clause yields ambiguous meanings. 83 can impart two different readings to the native speakers. In one of the readings, 'kibhabe' can quantify over the 'manner' or the 'reason' for which Ram died and the other reading would ask a question over John's way of thinking the manner in which Ram died.

82. jOn bhabe [ram mEleria-te/-e/-y mara gEche].

John think.Prs Ram malaria.INS death go.Prs.Perf.

'John thinks that Ram died of malaria.'

83. *jOn kibhabe_i bhabe [ram t_i mara gEche]?

John how_i think.Prs [ram [Trace]_i; death go.Prs.Perf

- **Insights from the Island Tests:**

From the tests furnished above we come to the conclusion that Bangla facts regarding Wh-constructions abide by the island constraints which is the trademark for movement. This might provide some additional support for B&S' (2003) claim that Bangla is a language that involves overt obligatory movement of Wh-expressions.

At this point we cannot draw a conclusion as there are a few more things we will need to question. The first thing we will concentrate upon now is the possibility of an indirect dependency analysis of the same data that we scrutinized against the island tests. Previously in section 1 we found out with the help of the questionnaire survey that there seems to be a popular consensus about an indirect dependency 'type' of construction among the native speakers. The island tests effectively back up the alternative- movement hypothesis. What we are looking for in this section is whether the indirect dependency approach can act as a strategy of escape for 'in situ' wh-expressions in situations, when the movement of those wh-expressions is blocked by island conditions. If we can constitute something like that then it would become easy to explain the employment of two distinct and opposing syntactic strategies in one language(as for here we are concerned with Bangla only) to denote a unique phenomenon.

3.2. An Attempted analysis of the Constructions Blocked By Islands under Indirect Dependency Strategy:

For our purpose we have introduced the same list of examples under the same headings. We restate the original examples from section 3.1 and instead of extraction constructions we provide a different structure in which we attempt to achieve matrix scope by means of indirect dependency.⁶

j) Complex NPs:

84. jOn ei dabi-Ta mane na [CP je prithibi chEpTa]

John this claim-CLA believes not COMP earth flat.

'John does not believe in the claim that the earth is flat.'

⁶ Basically we are attempting at the Hindi style analysis done by Dayal(1994). The constructions that she calls scope-marking can have syntactically isomorphic counterparts in Bangla(at least in the questionnaire survey we encountered that). So, we will try to create similar kind of structures in Bangla for these examples and see whether wide scope interpretations are possible.

85. *jOn ki ei dabi-Ta mane na [je ki chEpTa]?

John wh-Expl⁷ this claim-CLA believes not COMP what_i flat

If we follow Dayal's(1994) account for hindi, then we have to say that the wh-expression at the [Spec, CP]matrix, has moved from its original position (which actually belongs to preverbal direct objects in Hindi)⁸. Assuming that then the actual wh-expression with semantic content will move to [Spec, CP]intermediate at LF and will form a chain with its trace at the embedded subject position. The wh-expression at [Spec, CP]matrix will also undergo movement at LF and by the end of these movements we will get two independent chains which then could be co-indexed by means of 'Absorption' of indexes(Higginbotham & May(19810)) and thus a single dependency is achieved. This is the usual syntactic mechanism that we have applied for the following examples too.

86. khObor-Ta [je sita aSche] SObar-i jana.

news-CLA that sita come.PROG everyone.EMPH. known

'The news that sita is coming is known to evryone.'

After movement out of the complement clause,

87. *_i khObor-Ta ki_i [je ke_i aSche] SObar-i jana?⁹

news-CLA wh-Expl that who_i come.PROG everyone.EMPH.
known

⁷ Expl stands for Expletive like elements. In this case 'ki' is the possible counterpart to the Hindi scope marker 'kyaa'. Though we are not theoretically claiming at this point that this is an expletive wh-expression that maps the scope of the embedded wh-question at the matrix clause, we replicate the similar kind of a strategy to see if similar things happen in Bangla.

⁸ See Dayal(1994,147). *Natural Language Semantics* 2, 1994 Kluwer Academic Publishers. Printed in the Netherlands.

⁹ If we consider that the complement clause has moved inside the matrix clause the the structure before such movement would be like-

24'. khObor-Ta SObar-e jana je sita asche.
newsCLA everybody.EMPH know.Inf OMP Sita come.PROG
'The news is known to everyone that sita is coming'

The reason why we changed this structure like this is to check whether at the structure prior to movement we could apply an indirect dependency style analysis or not. The structure after scope marking is achieved will look like 24'',

24''. khObor-ta SObar-I ki(i) jana [je ke(i) asche]?/SObar-I ki(i) khObor-Ta jana [je ke(i) asche]-

Both of these are questions with narrow or embedded scope. Getting matrix scope out of it is hard. Even if there are possibilities I think there will be two answers to these questions.

a. Yes. Know that Sita is coming.

b. No.

In case where we have a two answer then it won't be a bad question to ask whether a direct dependency or a single chain is formed at all or not.

k) Adjunct Islands:

88. jOn bhablo [meri taRataRi cholte pare]

John think.Pst Mary quickly walk can.

'John thought that Mary can walk quickly'

89. ?jOn ki_i bhablo [meri kibhabe_i cholte pare]?

John wh-Expl think.Pst Mary how_i walk can

90. Ram angTi kineche karon meri-r angTi chilo na.

Ram ring bought because merry.GEN ring be.Pst not

'Ram bought a ring because Merry did not have a ring.'

91. ? Ram [ki]_i kineche [karon meri-r ki_i chilo na]?

Ram wh-Expl_i buy.Prs because Mary-GEN what_i be.pst not

92. jOn aSeni [karon bil meri-r baRi-te bERate
gechilo].

John come.Pst.not because Bill Merry.GEN house.LOC visit.INF
go.Pst

'John did not come because Bill went to Mary's house.'

93. jOn *kaeno_i¹⁰/*ki aSeni [karon bil kar_i bari-te

John who.GEN come.Pst.not because Bill whose_ihouse.LOC

bERate gechilo]?

visit.Inf go.Pst

¹⁰ I tried a different expletive here which is similar to English 'why'. I tried it to see whether we need an expletive that is different in form than the usual wh-Expletive we are using here, that can question out of 'Because' clauses. The results seems invariant even if we forcibly vary the expletive-form-we do not get matrix scope.

l) Wh-island:

94. tumi ke ki korche bhabcho?

you who what do.PROG think.PROG?

'What do you think? Who is doing what?'¹¹

95. ?tumi ki jano ke ki koreche?¹²

You wh-Expl know.Prs who what do.Pst?

96. ami jani kon problem-Ta-r jOn ebhabe SOmadhan korte
pare.

I know which problem.CLA.GEN John this way.solve do.Inf
can.

'I know which problem John can solve this way.'

97. ?Tumi ki jano kon problem-Ta-r jOn kibhabe SOmadhan
korte

You Wh-Expl_i know.Prs which problem.CLA.GEN how_i solve do.Inf
pare?
can.

m) Factive islands:

98. jOn onutap kOre je o Olp-er jonno race-Ta jete ni.
John regret do.Prs Comp he small margin.GEN for race.CLA win not.

'John regrets that he could not win the race for a small margin.'

¹¹ These kinds of structure are registered in Dayal (2000). Lahiri (2002) has referred to them as sequence of clauses, but these do not have a two answer reply. They behave like scope-marking constructions.

¹² Again we can have two possible answers to that question.

a. Yes. I know that John did the cleaning and Mary did the washing.

b. No.

So, again this implies a two question structure in which if we need to have a matrix scope for the multiple questions that we have here we need to presuppose that the replier already knows something by virtue of which (s)he can provide answer one. Moreover there is always a possibility of the reply b. So, for this kind of a construction which seems grammatical enough we need to build special strategies which does not seem to be economical enough for an account we want to propose.

99. jOn /ki onutap kOre je o kEno; jonno
 John Wh-Expl_i reget do.Prs Comp he why_i for
 race-Ta jete ni?
 race.CLA win not.

n) **Negative Islands:**

100. robi bollo [je ram rityar kOreni karon o lOtari
 peyeche].

Robi say.Pst COMP Ram retire do.Pst.not because he lottery get.Prs
 Perf

'Robi said that Ram has not retired because he cracked lottery.'

101. *robi ki bollo [je ram rityr kOreni karon o ki
 Robi Wh-Expl_i sav.Pst COMP Ram retire do.pst because he what_i
 peyeche]?

get.Prs.Perf.

o) **Co-Ordinate Structure Islands:**

102. rOjot jane [je SEmol konika-ke bhalobaSe ar
 Rajat know.Prs COMP Shyamal Konika-ACC love.Prs CONJ
 Subho nije-ke ghrina kOre]

Shubho self-ACC hate do.Prs

'Rajat knows that Shyamal loves Konika and Shubho hates himself.'

103. *rOjot ki jane [je SEmol bhalobaSe konika-ke
 Rajat Wh-Expl_i know.Prs COMP SHyamal love.Prs Konika.ACC
 ar Subho ghrina kake; kOre]?


CONJ Shubho hate who.ACC_i do.Prs .


p) **Relative Clause Islands:**

104. rOmeS Sei meye-Ta-ke cene je robir
 dokan-e
 Ramesh that(DEM) girl.CLA.ACC know.Prs who(REL) Rabi.GEN
 shop.LOC
 kaj kOre.
 Work do.Prs
 'Ramesh knows that girl who works at Rabi's shop.'

105. *rOmeS ki Sei meye-Ta-ke cene je Ramesh Wh-
 Expl that(DEM) girl.CLA.GEN know.prs who(REL)
 kar dokan-e kaj kOre
 who.GEN Shop.LOC work do.Prs¹³

q) **Extraposition Islands:**

106. na bujhe kOtha bOla-Ta khub kharap. (Base)

 not understand.Inf talk.Inf.CLA very bad.
 'To say something without understanding it is very bad.'

107. khub kharap holo [na bujhe kOtha bola-Ta]. (Extrapolated)

 very bad be.Prs not understand.Inf talk.Inf.CLA

108. *khub kharap ki holo [na bujhe ki bola-Ta]
 Very bad Wh-Expl be.Prs not understand.Inf what say.Inf.CLA

¹³ This example is of particular interest as it can have only Narrow scope. Answers can either be 'yes' or 'no'. As the question could not achieve wide scope and as our aim of this analysis is to see whether wide scope reading can be attained with indirect dependency like strategies we have marked it with a*.

r) **ECP Violation:**

109. jOn bhabe [ram mEleria-te/-e/-y mara gEche].

John think.Prs Ram malaria.INS death go.Prs.Perf.

'John thinks that Ram died of malaria.'

110. ?jOn ki bhabe [ram kibhabe; mara gEche]?

John W-Exp_i think.Prs [ram how_i death go.Prs.perf.

To conclude this section, there has not been a single instance in the list of data that we have provided, where only the content question is getting matrix scope. The indirect dependency kind of analysis of the Bangla data constrained by the noted island conditions, leads us to suggest that the structures may look isomorphic to scope-marking structures as registered in Hindi but they are possibly not scope-marking structures in the real sense of the term and there are obvious reasons to believe in that.

4. Some Observations about Predicates:

We said in a previous section of this chapter that there are possibilities that individual predicates may play vital role in our analysis. It is true that predicates or selecting verbs sometimes select complements that go in accordance with their semantic demands. In chapter one both from Dayal and Lahiri we received hints that all throughout the nature of predicates may be contributing to the depth questions that we are trying to find answers of.

Dayal(1994) holds that if a language employs different lexical items to question the object position of a simple verb like 'eat' and a verb like 'think' which takes propositional complements, the semantic requirement of the latter may force it to opt for a scope-marking construction. What does this remark signify? Does it point to the fact of selectional restriction of the predicates, which some predicates opt for simple constituents as complements while others may require propositional or sentential complements for predication?

Similarly, Lahiri (2002) finds the difference between the semantics extraction and scope-marking is may be due the reason that both of these structures select different sets of bridging predicates and thus their semantics remains unique. He has an insightful observation in which he says that mostly the verbs of saying and verbs or

predicates of knowledge, belief or cognition undergo scope-marking. These selected few are must be of special kinds and in this section we will look at a few examples of such kind.

111. Tomar ki *dharona* ke tomar bondhu-ke khun koreche

You.GENwh-Expl idea who you.GEN friend.ACC kill do.Pst

“Who do you think that killed your friend?”

112. tumi ki *SOndeho kOro* ei kaj-Ta ke korte pare

You Wh-Expl suspicion do.Prs this(DEM) wokCLA who do.Inf can

“Who do you suspect that can do this?”

113. robi ki *mone kOre* kake daka ucit

Robi Wh-expl mind.Inf do.Prs who.ACC call

“Who does Robi think sould be called?”

114. ram ki *bOle* aj ke oi ghOr-e thakbe

Ram Wh.Expl say.Prs today who that(DEM) room.LOC stay.will

“Who does Ram say will stay in that room today?”

Now let us contrast another set of questions with these.

115. tumi ki jano ke aSbe

You Wh.Expl know.Prs who com.FUT

“Who do you know will come?”

116. baba ki dekhechilo ora ki korchilo

Father Wh.Expl see.Pst Perf they3rd.PL what do.Pst

“What did father see them doing?”

117. ma ki Suneche ke gan gaichilo

mother Wh.Expl hear.Pst who song sing.Pst

“Whom did mother hear singing?”

In The above two sets there is a difference. The first set of questions would have a single and unique answer while the other set has a dominant yes/no reading. This set which has a dominant yes/no reading can always have two kinds of answers,

i. Yes. I know/ I heard/ I saw...XP.

ii. No.

The possibility of the second reading refers to the fact that these questions may have narrow scope. The two answer possibilities, which are the first reading for this set, can arise from the fact that they are uttered with audible pause and thus they are sequence of clauses but not a single wh-chain. We have seen instances of such structures before. Dayal (1994, 157) mentioned in footnote2 that embedded questions can have marginal yes/no interpretation in German but it is absolutely ok with Hindi. Bangla in that respect seems close to Hindi than German. But at the same time indirect dependency analysis does not yield much in bangle except for a few restricted instances.

On the other hand the first set of questions that we have provided are radically different as none of them have even marginal possibility to have a yes/no interpretation. Looking at the structure of such kinds of construction hints us to potential possibilities of availability of scope-marking constructions in Bangla. Moreover, we can try to draw a distinction between them (between the two sets) by moving the embedded question inside them. The first set will respond differently than the second set. The second sets of questions are absolutely alright with extraction strategy.

118. tumi ke_i jano t_i aSbe

You Who_i know.Prs [Trace]_i com.FUT

“Who do you know will come?”, either clausal pied piping or simple DP-extraction is good for these verbs. But for the second set, extraction produces results which are marginally unorthodox.

119. ?tumi ke *SOndeho kOro* ei kaj-Ta t_i korte
pare

You Who suspicion do.Prs this(DEM) wokCLA [Trace]_i do.Inf
can

“Who do you suspect that can do this?”

May be clausal pied piping improves the situation to a certain extent but extraction from such predicates is always problematic.

We can draw a table and classify these two kinds of predicates according to their response to different strategies that we have seen by far -

Predicates ↙	features →	±Indirect dependency	±Extraction	±Content answer	±Yes/no content question
mone kOra/hOoa		+	-	+	-
dharona kOra/hOowa		+	-	+	-
SOndeho kOra/hOoa		+	-	+	-
Jana		-	+	-	+
Sona		-	+	-	+
dEkha		-	+	-	+

The binaries in the table do not say that if a particular predicate shows - extraction then it cannot involve in any extraction kind structures. The binary values simply convey the most convenient contexts for the predicates.

Based on this feature matrix and looking at the structures in which they seem to appear most conveniently we now classify indirect dependency constructions into two types. One that conveniently undergo movement and generally yields narrow scope are *Weak* indirect dependency predicates such as **jana**(to know), **Sona**(to hear), **dEkha**(to see) and the other set might be called *Strong* indirect dependency predicates which yields better result than the weak ones in an indirect dependency structure.

4.1. The Mixed Construction:

I would like to attract special notice to the mixed construction of indirect dependency and clausal pied piping. This type of construction can be only applied to sentences containing two embedded clauses. Generally for such cases, one will need two Wh-scope markers separately for both of the embedded clauses, as in Hindi-

120. *jaun kya* soctaa hal, anu *kya* kahegii, meri kis-se
John what think.Prs Anu what say.FUT Mary who.ASSC
baat karegii?
Talk.FUT

'Who does John think Anu will say Mary will talk to?'(Example 8.b, in Dayal 1994).

In this example the two italicized items are the two isomorphic scope-marking Whs that are seen often to be in use in the normal speech. We don't deny such possibilities in Bangla too.

121. Neela ki suneche Sumit ki bhebechilo ke aasbe?
Neela what hear.Pst Sumit What think.Pst who come.FUT

'Who has Neela heard Sumit thought will come?'

But a different type of construction can be formed in the way that we can drop the second Wh scope-marker in the higher embedding and instead just pied-pipe the whole CP containing the Wh, the most embedded one to the higher one. The structure would look like this-

122. [CP₁ Neela ki suneche[CP₂ sumit [CP₃ ke asbe]_i bhebechilo....t_i].

Most interestingly this has been the normal choice for native speakers over the original scope marking constructions as registered in languages like Hindi. This deviation from the original scope marking composition is dangerous for Dayal (1994) has noticed that in Hindi (like in German) when there are multiple embeddings, each intermediate clause must have a scope marker. The case of example 8 surely violates

that. So a new question arises at this point which is: Are these Bangla interrogatives constructions- isomorphic to Hindi Scope marking constructions -real scope-markers?

What is the possible syntax of this kind of constructions? In line of the Hindi direct dependency analysis we can say that an expletive is generated at the matrix[Spec, CP] which then co-indexes with the embedded content question which has also moved to Spec at LF. But following Dayal, this sort expletive generation is questionable. Looking at the positions of these so called scope-marking wh expletives we cannot really say that. Instead she proposes for Hindi later on that the expletive is optionally present at the matrix clause direct object position and thus in an argument position from Lahiri we came to know that the Hindi expletive 'yeh' is actually an argument to the matrix verb. Similarly, in Bangla we can generalize such facts from examples similar to Hindi-

123. SEmol *e-Ta* jane je robi kaj cheRe diyeche
 Shyamal Expletive.CLA know.Prs COMP Rabi work leave.Inf give.Pst

“Syamal knows this fact that Robi has left the job

124. SEmol *ki* jane je robi *ki* cheRe diyeche
 Shyamal Expletive.CLA know.Prs COMP Rabi what_i leave.Inf give.Pst

So, let us suppose expletive 'e-Ta' can also appear in the preverbal direct object position. Then in a multiple embedding structure we move them at LF from their base position to Spec positions. This far derivation works well, then, what happens such that the second expletive which is again a mandatory part of the whole structure can get replaced by a clausal complement in overt syntax? Does that happen just after the second expletive moves at LF as a variety of expletive replacement? But that is essentially an LF phenomenon. So clearly that is not the case. This remains a puzzle to solve.

5. Conclusion:

From the previous sections we have analysed facts under both movement hypothesis as well as under indirect dependency analysis.

The movement facts are pretty much fascinating in the sense that almost all possible interrogative structures undergo movement in overt syntax. The disguised position of finite complements in Bangla is working behind this. The positioning of the finite complements either to the left or to the right of the selecting verb proposes a certain flexibility which is seen to be utilized in all possible movement operation that we have tried to look at in this paper. May be not all of the movement operations are possible but certainly clausal pied piping seems to work across the board. There can be debates about the possible landing sites of the wh-expressions (whether at the post-subject position or at the sclause initial position), or the type of flexible focus movement (flexible in the sense the focus particle can land at all of the clauses where as wh-movement is much constrained) as attested in Bangla but the facts arguing for it holds. The necessary island constraints all proved to be successful.

Let us now come to the discussion of the questionnaire. In the questionnaire people have preference over mostly two types of constructions, the indirect dependency one and the clausal pied piping construction. The Questionnaire was intended to generate a preference among the native speakers and except two instances the preference seemed unbiased to at least these two abovementioned constructions.

None of the informants could throw off the movement structures which are a crucial fact for an Indic language which is canonically described as SOV and in situ and proves itself otherwise.

Alongside the movement or extraction operations there exist some sort of indirect dependency operations in Bangla and this also an attested fact. These differs from the Hindi scope marking structures in at least two grounds,

- a) Bangla can accommodate its finite complements either to the left or to the right of the selecting verb. Only when matrix clause is needed then the freedom of positioning withers away and the complements has to appear at preverbal positions. Hindi does not allow finite CPs in any argument positions due to case resistance principle, and thus the preverbal matrix

direct object position remains an empty site for expletives like 'yeh' in Hindi. Hindi takes advantage of this situation and thus questioning out of sub-ordinate or multiple embeddings do not have any other option than scope-marking operations (whether by direct or indirect dependencies). In Bangla as there can be options in the position of finite complements both of the strategies can be applied to make wh-dependencies: either via movement and binding the trace from the landing site in overt syntax or by staying in situ and getting matrix scope by means of a similar kind of indirect dependency strategy.

- b) Even if Bangla can accommodate indirect dependencies these are different than their Hindi counterparts. In multiple embeddings all the clauses need to have a wh-scope-marker. This is needed because of the semantic need of full interpretation at LF. The complements of a scope-marker have to be of the same type and the scope-markers in each of the clauses have to be invariant. The matrix clause must be able to take [-WH] complements but the actual complement have to be [+WH]. Hindi fulfils requirement pretty well while in Bangla we can have both scope marking as well as clausal pied piping or Wh-DP extraction in the same construction: this is what we have termed as the mixed construction (cf, example 126). This proves the fact that movement is more natural in Bangla than in situ operator binding.

From the section 3 we gather some interesting facts for Bangla. There are differences between predicate and verbs that interact in interrogative constructions. We can establish from the investigations that certain predicates seem to prefer an in situ analysis, preferably in indirect dependency kind of a style while some other predicate hardly get wide or matrix scope when they interact with such a system. The Predicates which have stronger affinity to indirect dependency structure, give away singular replies packed with semantic content, which prove that a single wh-chain has been formed and scope of the embedded questions is mapped on to the matrix clause. The weak predicates always have an affinity towards a yes/no interpretation of the subordinate question i.e. they are more prone to yield narrow scope. This distinction is evident.

Hence, we can conclude by saying that Bangla is primarily a movement language which sometimes employs indirect dependency structures to mark long distance wh-dependencies. The phenomenon of scope-marking is not completely absent in Bangla as factive, cognitive etc kinds of predicates are more prone to a dependency analysis. In fact scope marking is a restricted strategy for Bangla wh-expressions, as indirect dependency structures are may be harder to process than the extraction structures but they are pretty well in use in the colloquial speech as well as form acceptable grammatical constructions which are used to form questions in Bangla.

Appendices.

Appendix 1: The Questionnaire.

Name of the informant: _____

Age:

sex:

Instructions for the Informants:

In the questionnaire you will find a few sets of interrogative constructions. These constructions follow from some contexts which are given for your better reading of the questions. These contexts are termed here as 'Discourse Contexts'. After each sets of interrogative constructions you will find an additional set of questions to answer for yourself. This set of questions will ask you about your choices over the interrogative constructions given in the list and the answers that can follow from that set. The questions numbered as 1, 2, 3, etc has options like a, b, c, etc along with them. Mark these with v or × according to your choice. The separate table which says 'Match the questions with the answers' asks you to find the right match between the questions and the answers provided in the tabular list. There may be cases where some construction may seem to be bad for you; in such cases mark such constructions with '#' on the left side of it, if that one is completely bad for you; otherwise mark it with a '?' if you have doubt over your judgments. If it seems that in a set of question none of the questions match the answer and you have a different construction in mind please write that in the space you are given.

The respondents should carefully read the pronunciation manual given below.

O - Pronounce in the manner of Bangla 'onek', opurbo'

S - Pronounce in the manner of Bangla 'subidha', 'sohoj' but not 'snan'

T- Pronounce in the manner of Bangla 'tapur-tupur'

The Questionnaire:

- Discourse context 1:

Three or four students are having a chat over a cultural event that their institution is going to organize. None of them seem to know who is going to be the major attraction of the event. In the mean time you come in and the students ask you whether you have any idea about it or not.

a.) tumi ki jano ke aSbe?

b.) tumi ke aSbe jano? b'.) tumi ke je aSbe jano?

c.) ke aSbe tumi jano?

1. Which among the question forms above are appropriate? a.) b.) c.)

2. Which one among the questions is inappropriate as question? a.) b.) c.)

3. Between b.) and b'.) which one is better formed and which one is not? b.) b'.)

4. Match the questions with the answers:

1. tumi ki jano ke aSbe?	a. ram./ ram aSbe ami jani
2. tumi ke aSbe jano? / tumi ke je aSbe jano?	b. ami jani je Ram aSbe
3. ke aSbe tumi jano?	c. Hnae; ram aSbe.

--

Discourse Context 2 :

Mini's father asks Mini about her boyfriend Robi. Later on while the parents were having a discussion about Mini, Mini's mother enquires on Robi's present state of living. The question surfaces on that occasion.

a.) mini ki bollo robi kothay kaj kOre?

b.) mini robi kothay kaj kOre bollo? b'.)mini robi je kothay kaj kOre bollo?

c.) robi kothay kaj kOre mini bollo?

d.) mini kothay bollo robi kaj kOre?

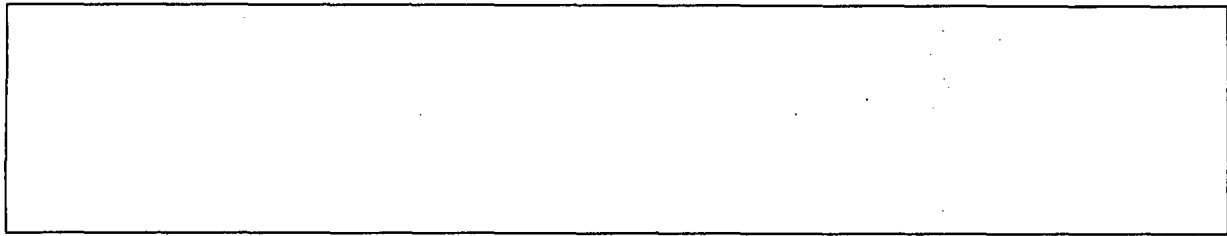
1. Which among the question forms above are appropriate? a.) b.) c.) d.)

2. Which one among the questions is inappropriate as question? a.) b.) c.) d.)

3. Between b.) and b'.) which one is better formed and which one is not? b.) b'.)

4. Match the questions with the answers.

1. mini ki bollo robi kothay kaj kOre?	a. robi indian railways-e kaj kOre mini bollo.
2. mini robi kothay kaj kOre bollo? /mini robi je kothay kaj kOre bollo?	b. indian railways e.
3. robi kothay kaj kOre mini bollo?	c. mini bollo je robi ndian railways e kaj kOre.
4. mini kothay bollo robi kaj kOre?	d. mini indian railways e bollo robi kaaj kOre.



Discourse Context 3 :

Sumit had thrown a party. Some people that Sumit expected to come did not come. So he is angry over that issue. Sumit's friends were having a chat afterwards about that incident. They were asking each other who have they heard that Sumit thought may come. Neela being a close friend to Sumit, must have known this. Somebody among them asks this question in that context.

- a.) neela ki Suneche Sumit ki bhebechilo ke aSbe?
- b.) neela ki Suneche Sumit ke aSbe bhebechilo?
- c.) neela ke aSbe Suneche Sumit bhebechilo? c') neela ke je aSbe Suneche Sumit bhebechilo?
- d.) neela ke Suneche Sumit bhebechilo aSbe ?
- e.) ke aSbe neela Suneche Sumit bhebechilo?

1. Which among the question forms above are appropriate? a.) b.) c.) d.) e.)
2. Which one among the questions is inappropriate as question? a.) b.) c.) d.) e.)
3. Between c.) and c'.) which one is better formed and which one is not? c.) c'.)
4. Match the questions with the answers.:

1. neela ki Suneche Sumit ki bhebechilo ke aSbe?	a. Neela Suneche Sumit or school er bondhuraa aasbe bhebechilo.
2. neela ki Suneche Sumit ke aSbe bhebechilo?	b. neela Suneche Sumit bhebechilo or school er bondhura aSbe .
3. neela ke aSbe Suneche Sumit bhebechilo?/ neela ke je aSbe Suneche Sumit bhebechilo	c. Sumit er skul er bondhuraa.
4. neela ke Suneche Sumit bhebechilo aSbe ?	d. Or skul er bondhura je aSbe Sumit bhebechilo neela Suneche.
5. ke aSbe neela Suneche Sumit bhebechilo?	e. Sumit er skul er bondhura aSbe neela Suneche.

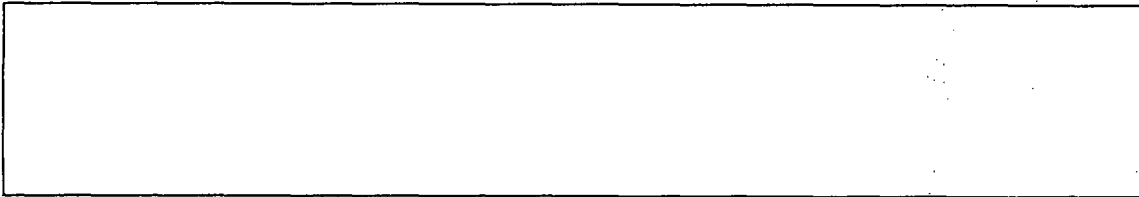
Discourse Context 4 :

Someone has been killed. The police has come for investigation. They ask a colleague of the victim whom does he suspect to be the killer. The colleague knew the person was engaged in a property dispute with his cousin brothers. In that context the police asks this question.

- a.) apni ki mone kOren ke apnar bondhu-ke khun koreche?
- b.) apni ke apnar bondhu-ke khun koreche mone kOren? b')apni ke je apnar bondhu-ke khun koreche mone kOren?
- c.) ke apnar bondhu-ke khun koreche apni mone kOren?
- d.) ke apnar bondhu-ke khun koreche apni mone kOren?

1. Which among the question forms above are appropriate? a.) b.) c.) d.)
2. Which one among the questions is inappropriate as question? a.) b.) c.) d.)
3. Between b.) and b'.) which one is better formed and which one is not? b.) b'.)
4. Match the questions with the answers:

1. apni ki mone kOren ke apnar bondhu-ke khun koreche?	a. ami mone kori amar bondhu ke tar bhai-ra khun koreche
2. apni ke apnar bondhu-ke khun koreche mone kOren? /apni ke je apnar bondhu-ke khun koreche mone kOren?	b. amar bondhur bhai-ra.
3. ke apnar bondhu-ke khun koreche apni mone kOren?	c. amar bondhu ke tar bhai-raa khun koreche bole ami mone kori.
4. ke apnar bondhu-ke khun koreche apni mone kOren?	d. ami mone kori je amar bondh ke tar bhai-ra khun koreche.



Discourse Context 5:

Suppose a game of racing is going on in a racing circuit. Two bookies are discussing on which team to bet. Bookie B tries to convince bookie A that team-Ferrari will win this game. But bookie A is not convinced at all about Ferrari. So, the other bookie asks this question.

- a.) tumi ki bhabcho ferrari kaeno jitte parbe na?
- b.) tumi kaeno bhabcho ferrari jitte parbe na?
- c.) tumi kaeno ferrari jitte parbe na bhabcho? c') tumi kaeno je ferrari jitte parbe na bhabcho?
- d.) kaeno ferrari jitte parbe na tumi bhabcho?

1. Which among the question forms above are appropriate? a.) b.) c.) d.)
2. Which one among the questions is inappropriate as question? a.) b.) c.) d.)
3. Between c.) and c'.) which one is better formed and which one is not? c.) c'.)
4. Match the questions with the answers:

1. tumi ki bhabcho ferrari kaeno jitte parbe na?	a. ami bhabchi ferrari jitte parbe na karon other back up-Ta baje.
2. tumi kaeno bhabcho ferrari jitte parbe na?	b. other back up-Ta baje bole ami bhabchi ferrari jitte parbe na
3. tumi kaeno ferrari jitte parbe na bhabcho?/tumi kaeno je ferrari jitte parbe na bhabcho?	c. karon other back up-Ta baje.
4. kaeno ferrari jitte parbe na tumi bhabcho?	d. ferrari je jitte parbe na ami bhabchi tar karon holo other back up-Ta baje.

Discourse Context 6:

Friends are chatting over their friend Riju's passiveness. They think that Riju cannot motivate anybody as a friend. Sucheta has a different opinion about Riju and she thinks that he is the person who can help their friend Sita who is emotionally distressed at present. As the chat goes on friends ask each other who can get benefited by listening Riju and thus the question follows.

- a.) Sucheta ki biSSaS kOre riju kake Sahajjo korte pare?
- b.) Sucheta ki biSSaS kOre kake Sahajjo korte pare riju??
- c.) Sucheta kake biSSaS kOre riju Sahajjo korte pare? c') Sucheta kake je biSSaS kOre riju Sahajjo korte pare?
- d.) kaake Sucheta biSSaS kOre riju Sahajjo korte pare?

1. Which among the question forms above are appropriate? a.) b.) c.) d.)
2. Which one among the questions is inappropriate as question? a.) b.) c.) d.)
3. Between c.) and c'.) which one is better formed and which one is not? c.) c'.)
4. Match the questions with the answers:

1. Sucheta ki biSSaS kOre riju kake Sahajjo korte pare?	a. Sucheta Sita-ke riju Sahajjo kOrte pare biSSaS kore.
2. Sucheta ki biSSaS kOre kake Sahajjo korte pare riju?	b. Sita-ke.
3. Sucheta kake biSSaS kOre riju Sahajjo korte pare? /Sucheta kake je biSSaS kOre riju Sahajjo korte pare?	c. Sucheta biSSaS kOre riju Sita-ke Sahajjo kOrte pare.
4. kake Sucheta biSSaS kOre riju Sahajjo korte pare?	d. riju je Sita-ke Sahajjo korte pare Sucheta biSSaS kOre.

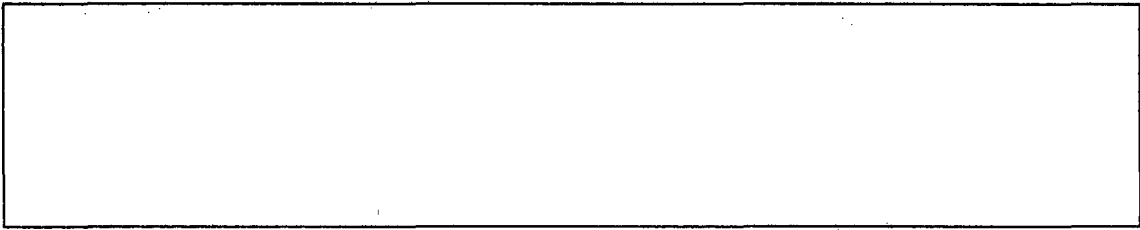
Discourse Context 7:

In a school board examination the question review committee has called a meeting of the paper setters over the issue of mathematics paper being exceptionally tough. Paper setters A and B asks C-who made the controversial draft-who according to her will be able to answer the questions.

- a.) tomar ki dharona Onko-gulo kara korte parbe?
- b.) tomar onko-gulo kara korte parbe dharona?
- c.) tomar kara dharona Onko-gulo korte parbe? c') tomar kara je dharona Onko-gulo korte parbe?
- d.) kara Onko-gulo korte parbe tomar dharona?/ kara tomar dharona Onko-gulo korte parbe?

1. Which among the question forms above are appropriate? a.) b.) c.) d.)
2. Which one among the questions is inappropriate as question? a.) b.) c.) d.)
3. Between b.) and b'.) which one is better formed and which one is not? b.) b'.)
4. Match the questions to the answers:

1. tomar ki dharona Onko-gulo kara korte parbe?	a. SOb chatroi Onko-gulo korte parbe amar dharona.
2. tomar onko-gulo kara korte parbe dharona?	b. Sob chatroi parbe.
3. tomar kara dharona Onko-gulo korte parbe? /tomar kara je dharona Onko-gulo korte parbe?	c. amar dharona je SOb chatroi Onko-gulo korte parbe.
4.kara Onko-gulo korte parbe tomar dharona?/ kara tomar dharona Onko-gulo korte parbe?	d. Sob chatroi amar dharona Onko-gulo korte parbe



Discourse Context 8:

A trial is at its course in the court-house. Rekha has been found guilty of murder. During the trial the court asks her to accept the crime-charges upon her as there is adequate evidence against her. Rekha is in constant denial of his crime and claims that somebody named Moti has committed the crime.

- a.) rekha ki dabi korche khun-ta ke koreche?
- b.) rekha khun-ta ke koreche dabi korche? b')rekha khun-ta ke je koreche dabi korche?
- c.) khun-ta ke koreche rekha dabi korche?
- d.) rekha ke dabi korche khun-ta koreche?

1. Which among the question forms above are appropriate? a.) b.) c.) d.)
2. Which one among the questions is inappropriate as question? a.) b.) c.) d.)
3. Between b.) and b'.) which one is better formed and which one is not? b.) b'.)
4. Match the questions to the answers:

1. rekha ki dabi korche khun-ta ke koreche?	a. rekha khun-ta moti koreche dabi korche.
2. rekha khun-ta ke koreche dabi korche?	b. moti khun-ta koreche rekha dabi korche
3. khun-ta ke koreche rekha dabi korche? /ekha khun-ta ke je koreche daabi korche?	c. moti.
4. rekhaa ke dabi korche khun-ta koreche?	d. rekha dabi korche je khun-ta moti koreche.

Appendix 2: Tabular Results From the Informant Based questionnaire Survey.

	Discourse Context 1	Discourse Context 2	Discourse Context 3	Discourse Context 4	Discourse Context 5	Discourse Context 6	Discourse Context 7	Discourse Context 8
Informant 1 Age-22+	1.a,b,c. 2. b. 3. *b'. 4. 1-c 2-b 3-a	1. b,c,d. 2. a. 3.*b'. 4. 1-c 2-c 3-b 4-a	1. b, c, d. 2. a. 3. *c'. 4. 1-b 2-a 3-d 4-e 5-c	1. b, c, d. 2. a. 3. *b'. 4. 1-d 2-a 3-b 4-c	1. b, c, d. 2. a. 3. *c'. 4. 1-a 2-d 3-b 4-e	1. b, c, d. 2. a. 3. *c'. 4. 1-c 2- 3- 4-b	1. b, c, d. 2. a. 3. *b'. 4. 1-a 2-c 3-b 4-c	1. b, c, d. 2. a. 3. *b'. 4. 1-d 2-b 3-c 4-a.
Informant 2 Age-22+	1. c. 2. 3.* b'. 4. 1- 2- a,b 3-c	1. a, b, c. 2. d. 3. *b'. 4. 1-b 2-c 3-a 4-d	1. a, b, c. 2. d, e. 3.* c'. 4. 1- 2-a 3-d 4-b 5-c	1. a,b,c,d. 2. 3.* b'. 4. 1-a 2-d 3-b 4-c	1. a,b,c,d. 2. 3. *c'. 4. 1-a 2-b 3-d 4-c	1. a, b, c. 2. d. 3.* c'. 4. 1-c 2-a 3-d 4-b	1. a, b, d. 2. c. 3.* c'. 4. 1-d 2-a 3-c 4-b	1. a, b, c. 2. d. 3.* b'. 4. 1-a 2-b 3-d 4-c
Informant 3 Age-22+	1. a. 2. b'. 3.* b'. 4. 1-c 2-c 3-a	1. a. 2. d. 3. *b'. 4. 1-b 2-b 3-b 4-b	1. b. 2. e. 3. *c'. 4. 1-a 2-b 3-a 4-b 5-e	1. a. 2. b. 3. *b'. 4. 1-a 2-a 3-c 4-c	1. b. 2. a. 3. *c'. 4. 1-c 2-c 3-c 4-c	1. a. 2. c. 3. *c'. 4. 1-c 2-c 3-c 4-b	1. a, d. 2. b. 3. *c'. 4. 1-c 2-a 3-c 4-a	1. a, b. 2. d. 3. *b'. 4. 1-d 2-a 3-b 4-c
Informant 4 Age-22+	1. a. 2. b. 3. *b'. 4. 1-c 2- 3-a	1. a, c. 2. b, d. 3. *b'. 4. 1-c 3-a 4-b 2-	1. a. 2. b. 3. *c'. 4. 1-b, c 2-a, 3- 4-e, 5-d, c	1. a. 2. b. 3. *b'. 4. 1-d, b 2- 3-a, b 4-c, b	1. a. 2. 3. *c'. 4. 1-b, c 2-d, c 3-c 4-a' c	1. a. 2. b. 3. *c'. 4. 1-c, b 2- d,b 3- 4-a, c	1. a. 2. b, c. 3. *c'. 4. 1-c, a 2-a, b 3-b 4-d, a	1. a. 2. b, d. 3. *b'. 4. 1-d 2-a 3-c, a 4-c

Informant5 Age-22+	1. a. 2. b'. 3. *b'. 4. 1-b 2-c 3-c	1. a. 2. d. 3. *b'. 4. 1-c 2- 3-a 4-d	1. b. 2. a. 3. *c'. 4. 1- 2-b 3- 4-	1. a. 2. b'. 3. *b'. 4. 1-d 2-b 3-a 4-a	1. a. 2. d. 3. *c'. 4. 1-b 2-c 3-d 4-a	1. a. 2. d. 3. c'. 4. 1-c 2-b 3-a 4-c	1. a. 2. c. 3. *c'. 4. 1-c 2-b 3- 4-a	1. a. 2. b. 3. *b'. 4. 1-d 2-a 3-c 4-c
Informant6 Age-22+	1. a, b, c. 2. b'. 3. *b'. 4. 1-b 2-b 3-a, b	1. a, b, c, d. 2. b'. 3. *b'. 4. 1-c 2-c 3-a, b 4-b	1. b. 2. a, c, d. 3. *b, *b'. 4. 1- 2-a, b 3- 4-	1. a, b, c. 2. d. 3. *b'. 4. 1-a, c, d 2-a, d 3-c 4-b, c	1. a, b, c, d. 2. c'. 3. *c'. 4. 1-a 2-c 3-c, a 4-b	1. a, b, d. 2. c, c'. 3. ??c, *c'. 4. 1-c 2-c 3- 4-b	1. a, b, c. 2. c'. 3. ??c, *c'. 4. 1- c,a,d 2-a 3-d 4-a	1. a, b, c. 2. b', d. 3. *b'. 4. 1-d, b 2-a 3- 4-
Informant7 Age-50+	1. a. 2. b, b'. 3. *b'. 4. 1-c 2-b 3-a	1. c 2. d. 3. *b'. 4. 1-c 2-b 3-a 4-d	1. b. 2. d, #c. 3. *c'. 4. 1-a 2e 3-d 4-b 5-c	1. c. 2. b. 3. *b'. 4. 1-a 2-b 3-c 4-d	1. b. 2. a. 3. *c'. 4. 1-a 2-b 3-d 4-c	1. d. 2. a. 3. *c'. 4. 1-a 2-b 3-d 4-c	1. d. 2. b. 3. *c'. 4. 1-c 2-b 3-a 4-b	1. c. 2. d. 3. *b'. 4. 1-c 2-b 3-d 4-a
Informant8 Age-50+	1. a. 2. b', c, b. 3. *b'. 4. 1-b 2-c 3-a	1. c. 2. *d, b, a. 3. *b'. 4. 1-c 2-b 3-a 4-d	1. b. 2. c', e. 3. *c'. 4. 1-b 2-c 3-d 4- 5-e	1. c. 2. b', d. 3. *b'. 4. 1-b, c 2-b, a 3-d 4-	1. b. 2. c', a. 3. *c'. 4. 1-b 2-a 3-c 4-d	1. a. 2. d. 3. *c'. 4. 1-b 2-c 3- 4-	1. a, d. 2. c. 3. *c'. 4. 1-c 2-d, b 3- 4-b	1. a. 2. d. 3. *b'. 4. 1-d 2-c 3-b 4-
Informant9 Age-50+	1. a, c. 2. b. 3. *b'. 4. 1-c 2-b 3-a	1. a, c. 2. b, d. 3. *b'. 4. 1-c 2-a 3-b 4-d	1. b. 2. c 3. *c 4. 1-a 2-b 3-d 4- 5-c	1. a. 2. b. 3. *b. 4. 1-c 2-b 3-c 4-a	1. b. 2. d. 3. *c. 4. 1-a 2-b 3-a 4-c	1. a. 2. c. 3. *c. 4. 1-c 2-b 3-c 4-c	1. a. 2. c. 3. *c. 4. 1-c 2-d 3-b 4-c	1. a. 2. b. 3. *b. 4. 1-d 2-b 3-c, a 4-d

Informant10 Age-50+	1. a.	1. a.	1. a, b.	1. a	1. b.	1. a	1. a	1 a.
	2. b'.	2. b',	2. c,	2. b',	2. c	2. c	2. c	2.b
	3.*b'.	d, c.	c', e.	b.	3. *c'.	3. *c'.	3. *c'.	3. *b'.
	4. 1-b	3. *b'.	3. c.	3. *b'.	4. 1-a	4. 1-c	4. 1-c	4. 1-d
	2-c	4. 1-a	4. 1-b	4. 1-c	2-c	2-	2-d	2-a
	3-a	2e	2-c	2-a	3-c,	3-	3-a,	3-b
		3-d	3-c	3-d	a	4-b	b	4-c
		4-b	4-a	4-	4-b		4-c	
		5-c	5-e					

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