Wh-movement and Focus-movement in Bulgarian

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This paper argues that Bulgarian has a functional projection below CP into whose specifier interrogative wh-pronouns and focused constituents move. A unified account is offered of subject-verb inversion in questions and of fronting in focusing constructions.

1. Introduction

A common assumption in the generative literature is that wh-movement targets Spec, CP, irrespective of whether a relative or an interrogative pronoun is fronted. This is also the account given for Bulgarian in Rudin (1986, 1988). Here I present arguments that the landing site of wh-movement in Bulgarian systematically varies: while relativization is to Spec, CP; interrogative wh-words are moved to a sentence-internal position, the Spec of FocusP.

The question of where interrogative wh-pronouns are placed is initially motivated by the observation that wh-questions in Bulgarian exhibit obligatory subject-verb ‘inversion’, as shown in (1) and (2).¹

(1) a. Koe pismo napisa deteto?
    which letter wrote the-child
    ‘Which letter did the child write?’

b. *Koe pismo deteto napisa?

(2) a. *Tja me popita kade rabotij.
    she me asked where works he
    ‘She asked me where he works.’

b. *Tja me popita kade toj rabotij.

¹ This is a well-established fact about Bulgarian, discussed in Rudin (1986), Kasakow (1990), and Rivero (1993a), among others. It has to be noted that for some native speakers the (b) sentences are degraded, not totally impossible. For consistency with the previous literature I continue to mark such sentences with a * and not with a **.

In contrast, relativization does not trigger obligatory inversion (although in relative clauses the subject can optionally appear postverbally).

(3) Pismoto, koeto deteto napisa, e na masata.
    the-letter which the-child wrote is on the-table
    ‘The letter which the child wrote is on the table.’

The problem we would want to explain is why inversion is necessary in Bulgarian and why relative clauses and questions differ with respect to it. To show that this behavior of wh-interrogatives is not an isolated phenomenon will be highly desirable. Finally, we would like to see the facts of subject-verb inversion follow from a general principle in the grammar of Bulgarian. The answer to these questions eventually leads to a reconsideration of the standard assumption that wh-movement in this language has a single landing site.

2. Stylitic inversion in French

A possibility that needs to be investigated is whether the above facts are not an instance of Stylistic Inversion (SI), a subject-rightward movement rule in French which, as Kayne and Pollock (1978) have argued, is triggered by wh-movement. Several differences exist between the two phenomena. First, SI applies in both questions and relative clauses. The inversion described in section 1 involves interrogative wh-words only. SI is optional; the inversion in (1) and (2) is obligatory. SI postpones the subject to the end of the sentence; the displaced subject cannot precede the object. While in Bulgarian the subject can appear last in wh-questions, it also can appear preceding the object:

(4) Koga razbra Paulina vsičko tova?
    when learned Paulina all this
    ‘When did Paulina learn all this?’

The heaviness of the NP greatly increases the probability of SI. While a heavier subject in Bulgarian will tend to be sentence-final rather than preceding the objects, the obligatoryness of subject-verb inversion is not affected. Even pronouns are not acceptable pre-verbally following the wh-interrogative word.

I conclude that the inversion in (1), (2), and (4) is different from French SI. Bulgarian has an optional rule of subject postponing responsible for the inversion in relative clauses and for the movement of the subject to a sentence-final position past the objects. Thus in wh-questions the appearance of the subject in a postverbal position is the result of the obligatory inversion; any subsequent movement rightwards is the effect of the optional postponing rule.
3. Hypothesis 1: Verb-raising to C

A first step in the analysis of the obligatory inversion is to consider whether it is due to movement of the verb to C (with the provision that, unlike in English, full verbs also raise, in matrix, as well as in embedded interrogative clauses). In essence, this is the proposal made by Torrego (1984) to account for the similar phenomenon of subject-verb inversion in wh-questions in Spanish.

After identifying some problems for the raising-to-C analysis, I offer an alternative account which attributes the 'inversion' to the fact that the postverbal subject is in Spec, VP. Adopting the VP-internal subject hypothesis (Fukui 1986, Koopman and Sportche 1991, among others), I have argued elsewhere (Izvorski 1993) that subjects in Bulgarian do not need to rise out of the VP for reasons of case assignment or licensing of agreement.

3.1. Adverb placement and interpretation

The relative order of adverbs and the finite verb in wh-questions and their respective answers can serve as a diagnostic of verb-movement. In Bulgarian, VP-modifying adverbs like бързо 'quickly', с невдълбоко 'reluctantly' can appear postverbally, adjoined to VP.3

(5) Ivan podade бързо / с невдълбоко писмото на Maria.
Ivan gave quickly reluctantly the-letter to Maria

If the obligatory inversion were due to raising of the finite verb to C, we would expect the word order in the corresponding wh-question to be as in (6):

(6) ??Kakvo podade Ivan бързо / с невдълбоко na Maria?
what gave Ivan quickly reluctantly to Maria

What did Ivan quickly reluctantly give to Maria?

This is what happens in English: the subject in Spec, IP appears before the adverb, which stays adjoined to VP. However, in Bulgarian (6) is degraded. The question corresponding to (5) is (7) instead:

(7) Kakvo podade бързо / с невдълбоко Ivan na Maria?
what gave quickly reluctantly Ivan to Maria

'What did Ivan quickly reluctantly give to Maria?'

The raising-to-C analysis of wh-extraction will have to explain, given (6) and (7), why the adverb also has to move. A non-raising analysis predicts exactly the word order in (7): the adverb is adjoined to VP, immediately following the finite verb as in the declarative (5), and the subject appears after the adverb in its base-generated position Spec, VP.

Further evidence against raising to C comes from adverb ambiguities. It is known that the interpretation of certain English adverbs changes as their position in the sentence varies. Sentence (8), in which the adverb precedes the verb, has two interpretations. When the adverb is postverbal, as in (9), the sentence loses interpretation (8a):

(8) John carefully read the book.
   a. John was careful (enough) to read the book.
   b. John read the book in a careful manner.

(9) John read the book carefully.

The adverb in (9) cannot be interpreted as subject-oriented but only as describing the predicate of the sentence. A number of Bulgarian adverbs exhibit similar behavior. In (10) правилно 'correctly' is preverbal and allows for one additional interpretation, that is absent when the adverb is postverbal:

(10) Ivan правилно отговори na вапрося im.
Ivan correctly answered to the-question their
'Ivan correctly answered their question.'
   a. Ivan did the right thing when he answered their question.
   b. Ivan gave a correct answer to their question.

(11) Ivan отговори правилно na вапрося im.
Ivan answered correctly to the-question their

(12) Ivan отговори на вапрося im правилно.
Ivan answered to the-question their correctly

Sentences (11) and (12) have only one meaning, the one given in (10b).

One would expect that a wh-question would preserve the way in which the adverb is interpreted. This is what happens in English: in (13), the result of object extraction in (8), the adverb has the same two readings:

(13) What did John carefully read?
   a. What was John careful (enough) to read?
   b. What did John read in a careful manner?
Now, if the obligatory subject-verb 'inversion' in questions was the result of \( f^1 \)-to-\( C^6 \) movement, (14) should be the interrogative counterpart of (10).\(^6\)

(14) Na kakvo ogotvari Ivan pravilno?
  to what answered Ivan correctly
  'What did Ivan correctly answer?'

As such, (14) should preserve the two readings of (10). However, the only interpretation (14) has is What did Ivan give a correct answer to? The sentence crucially lacks the high-attachment reading of pravilno 'correctly'. Therefore we have to conclude that (14) is not the question formed from (10). But the only other grammatical question with the verb immediately following the \( wi \)-word is (15) and it too has only the predicate-oriented meaning.

(15) Na kakvo ogotvari pravilno Ivan?
  to what answered correctly Ivan
  'What did Ivan answer correctly?'

Thus the verb-raising-to-\( C^6 \) analysis runs into problems in having to account for the apparent loss of a reading. If, however, we accept that the verb does not move higher than \( f^1 \) in questions, and that the subject can stay in Spec, VP, it will be obvious that (14) and (15) are the interrogative counterparts of (12) and (11), respectively. Then we would predict that (16) should be the question corresponding to (11):

(16) Na kakvo pravilno ogotvari Ivan?
  to what correctly answered Ivan
  'What did Ivan correctly answer?'

Indeed, (16) has two readings: What did Ivan give a correct answer to? and What did Ivan right to answer? Thus the interpretation of adverbs provides another piece of evidence that \( wi \)-questions do not involve verb raising to \( C^6 \).

3.2. Word order in compound tenses

Consider example (17). The presence of the adverb shows that the finite verb is not a clitic on the participle. Therefore, if the finite verb has raised to \( C^6 \), the subject should be able to appear after it and precede the participle, exactly as it happens in English. Yet this is not a possible word order as seen in (18):

(17) Za kakvo beše napâlno zabravila Maria?
  about what was completely forgotten-FEM.SG Maria
  'What had Maria completely forgotten about?'

(18) *Za kakvo beše Maria zabravila?
  about what was Maria forgotten-FEM.SG
  intended reading: 'What had Maria forgotten about?'

The fact that Maria has to follow the participle is problematic for the movement-to-\( C^6 \) analysis. But its surface position in (17) doesn't seem to be Spec, VP either. If the participle is VP internal the subject in Spec, VP should be able to precede it. However, the participle agrees in gender and number with the subject (its morphology also distinguishes between active and passive voice). It makes sense to assume that it actually moves to its own AgP to check agreement features, the same way the finite verb does. The participle AgP is generated lower than AuxP. Since the participle raises out of VP, it will always precede the VP-internal subject. This assumption about participle movement does not affect the argument about finite verb raising to \( C^6 \). If the latter were an option in Bulgarian we would still expect (18) to be grammatical.

The facts of adverb placement and word order in compound tenses lead to the conclusion that finite verbs do not raise to \( C^6 \) in \( wi \)-questions. In fact, this claim has been made, for theory internal reasons, in Rivero (1993a) as well.

It is still possible to try to account for the inversion facts by postulating some kind of prohibition against subject-raising when \( wi \)-movement has taken place. But to do this, we will still have to assume that interrogative \( wi \)-words land in Spec, CP, an account which, as I will show, is problematic.

4. Do interrogative \( wi \)-expressions land in Spec, CP?

4.1. Word order with respect to topicaized phrases

Bulgarian has a rule of Topicalization which moves XP's to a position adjoined to IP, as illustrated in (19):

(19) Razbrâh, če na Maria Ivan e posvetili tri ot knijite si.
  learned-so that to Maria Ivan is dedicated three of books REFL
  'I learned that Ivan has dedicated three of his books to Maria.'

If interrogative \( wi \)-words were fronted to Spec, CP, we would expect them to precede topicaized XP's. This is not what is attested, though:

(20) a. Popitah go novata si knjiga na kogo še posveti.
    asked-1sg him the-new REFL book to whom will dedicate
    'I asked him to whom he will dedicate his new book.'

b. *Popitah go na kogo novata si knjiga še posveti.

\(^6\) By \( f^1 \)-to-\( C^6 \) movement I mean the raising of the highest head in a split-Inf. Rivero (1988) proposes the following nodes for Bulgarian: i for modal elements like da to 'to' and te 'will', AgP, T, Aspect, (in descending order). Since this articulated structure is not immediately relevant, I will continue to use \( f^1 \) for all these functional heads.

\(^5\) Kraskov (1990) has proposed that a non-movement chain is formed between a [+wi] \( C^6 \) and a tensed \( f^1 \). Interruption of this chain by a subject is prohibited.
The unacceptability of (20b) is unexpected if interrogative *wh*-words surfaced in Spec, CP.  

4.2. Relativization out of embedded questions

Because relative and interrogative pronouns in English are fronted to the same position, relativization out of indirect questions is prohibited. (21) violates Subjacency: the Spec, CP of the most embedded clause is filled by *when* and the successive-cyclic movement of *whom* into the higher clause is blocked.

(21) *This is the child whom John doesn’t know when he will see.*

If interrogative *wh*-words in Bulgarian were moved to the same position as relative *wh*-pronouns, there is no reason to expect that relativization out of questions would be grammatical. Rizzi (1980) argues that non-Comp-to-Comp movement is possible in Italian as long as no more than one S'-boundary is crossed. But Bulgarian allows relativization out of more than one embedded questions. Rudin (1988) gives an example of extraction from two interrogative *wh*-clauses (her example (19)):

(22) Vidělás ednu knihu, kóto se cudja kóž znáš kóž prodává.
saw-1sg a book which RELP wonders-1sg who knows who sells.
I saw a book which I wonder who knows who sells it.

If we accept that relative and interrogative *wh*-words have different landing sites, we would have an explanation of why relativization out of embedded questions is permitted. Indeed, if interrogative *wh*-words are fronted not as high as Spec, CP, this position will remain free and the relative pronoun could move through it on its way to the higher clause. Assuming relativized minimality (Rizzi 1990), the interrogative pronoun will not count as a potential governor of the trace left by the relative pronoun.

5. Hypothesis 2: *wh*-words move to Spec, IP

In Izvorski (1993) I proposed that subjects appear in two different preverbal positions depending on their information status. Subjects-topics are adjoined to IP, subjects-foci are raised by Focus-movement to Spec, IP. If Spec, IP is the landing site for interrogative *wh*-movement, the ‘inversion’ facts would follow straightforwardly: the focused subject would compete with the *wh*-word for the same position and the subject-topic will necessarily precede it. In fact,

As Rudin (1986) notes, in main clauses *dali* adds the “nuance of wondering out loud”. Matrix *dali*-questions can thus be interpreted as having a performatice prefix clause like I wonder.

6. Yes-no questions

In this section I argue that the unified treatment of Bulgarian yes-no questions requires positing of an additional functional projection, (Focus) P.

Yes-no questions in Bulgarian are typically formed with the question particle *li*, used in both matrix and embedded clauses:

(23) Dekatá bjava li na kino?
the-children were at cinema
'Did the children go to the movies?'

(24) Ne znám decatá bjava li hodili na kino.
not know-1sg the-children were gone at cinema
'I don’t know whether the children have been to the movies.'

Another way to form yes-no questions is with the help of *dali*, the interrogative complementizer (as argued in Rudin 1986). It also can appear in both embedded and matrix clauses. *Dali* always precedes the verb:

(25) Dali decatá bjava na kino?
whether the-children were at cinema
'Did the children go to the movies?'

(26) Ne znám *dali* decatá bjava na kino.
not know-1sg whether the-children were at cinema
'I don’t know whether the children went to the movies.'

I assume that *dali* and *li* are two ways to lexicalize the [+Q] feature and type the clause as a question.

When *li* follows the finite verb, as in (23) and (24), the sentence is interpreted
as 'neutral': what is questioned is the proposition of the corresponding canonical declarative. However, li does not necessarily have to appear after the verb; it can also follow other constituents in the sentence.9

(27) Na kino li bajha decata?
at cinema were the-children
Was it to the movies that the children went?

An XP is fronted to a preverbal position preceding li. The question is no longer 'neutral'. Rather, (27) is the equivalent of the English interrogative cleft construction. It presupposes The children went to x and questions the value of x. In this sense the scope of the question is limited to the fronted XP only.

6.1. Previous analyses of li

Rudin (1986) suggests that a li-questioned constituent is placed in Focus position. I will show that this is indeed the case, but will argue against her analysis that the Focus position is an adjunction to S. Rudin's account does not specify the exact position of li in the phrase structure.10

Rivero (1993b) proposes that li is a bound morpheme generated in C0, which triggers a-to-C0 movement for morphological support. She notes that fronting of an XP to Spec CP, as in (27), is another option for providing the cleft with a host. Li in her analysis has the option of lowering to the verb when verb-raising is not possible.

The pattern of occurrence of li is indeed suggestive of the presence of movement. Li either follows the verb, or when it criticizes onto an XP, that constituent has to appear in a preverbal position. I do not, therefore argue against a movement analysis, but propose that li is generated as the head of a projection lower than CP. For reasons of space I cannot present here my arguments against li-lowering. The reader is referred to Izvorski (1994) where I argue that the apparent illusion of li-lowering is the effect of a phonologically determined movement that happens at PF and does not involve a syntactic reordering of the verb and the clitic.

6.2. Problems with the analysis of li in C0

The claim that li occupies C0 is initially challenged by the relative order of subjects with respect to the focused XP-li unit. The subject should be able to

follow li in C0 and still precede the verb, that is, appear adjoined to IP if a topic and in Spec IP if focused but this is not what happens.11

(28) *Na kino li decata bajha?
at cinema the-children were
Was it to the movies that the children went?

I0-to-C0 movement cannot be the reason for the 'inversion', because incorporation of the verb to C0, where li is supposed to be, will lead to the surface order V-li, as in (23) and (24), and not to the li-V order in (28). But if criticitization of li to an XP is not accompanied by verb-movement to C0, then it remains unclear why the subject is not allowed to appear preverbally and following the XP-li, that is adjoined to IP or in Spec IP.

A way out may be sought in the possibility of CP-recursion: li will occupy the higher C0 and the verb will move to the lower one, leaving the subject behind adjoined to or in Spec of IP. Yet, as Iatrudou and Kroch (1992) show, CP-recursion is allowed only in the complements of a limited type of verbs, an environment which (28) is not.

Still another attempt to defend the account of li in C0 may be to postulate a prohibition on the interruption of the chain between the [+Q] feature in C0 and the tensed verb in I0, as in (29).12

(29) 1CP C +TO IIP XP, V1 ... li

Since the subject agrees with the verb, the two will be coindexed in violation of (29). But if this was so, we would expect (29) to rule out a sentence like (30):

(30) Dali te vidjaha knigata?
whether they saw the-book
'Did they see the book?'
'Was the book that they saw?'

It is clear that in (30) the [+Q] feature in C0 and the verb in I0 do not form an uninterrupted head-chain. Therefore, the behavior of subjects in li-sentences is not due to any requirement on the relationship between the heads of CP and IP, and thus it remains an unexplained problem for the analysis of li as a complementizer.

Furthermore, sentences with dali also allow focused constituents and

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9 Li can also appear sentence finally, with the whole sentence receiving an echo interpretation. For a discussion see Rudin (1986: 65).

10 After this paper was presented at CONSOLE 2 I became aware of two recent accounts of li in Rudin (1993) and King (to appear). Both treat li as a complementizer and describe its focusing function.

11 In this respect the sentence is exactly parallel to the corresponding wh-question.

(1) *Kode decata bajha?
where the-children were
'Where were the children?'

Rudin (1993) also notes the ungrammaticality of sentences like (28).

12 A variation of this requirement has been proposed by Kraskiew (1990) for [+wh] and tensed li, as noted in footnote 5.
impose on them the requirement of fronting. Apart from the straightforward questioning of the proposition They saw the book, (30) has an additional cleft interpretation. And if we were to question the direct object, then fronting is as obligatory as with the li-questions:

(31) a. Dali knigata vidjaha te?
   whether the-book saw they
   Was it the book that they saw?

b. *Dali knigata te vidjaha?

Obviously, in (31) knigata `the book’ has not raised as far as Spec. CP. Note also the position of the subject in (31a) and (31b). We see here again the pattern, exhibited by li-sentences with respect to subjects. Apparently these are manifestations of the same phenomenon, for which the analysis of li in C0 cannot offer an explanation. This analysis claims that the focused element in the two constructions is in different positions. And if fronting for morphological support seems to be reasonable as an explanation for the case of li, fronting in dali-constructions remains unexplained.

6.3. An alternative analysis

Since XP fronting for focus occurs even in yes-no questions with dali where there is no need for providing morphological support, I propose that the two are separate phenomena and are only indirectly related in the case of li. On Rivero’s account li is generated in C0 to type the clause as a question; it then triggers movement of an XP or an XP whose only purpose is to make a host available for the bound morpheme. I propose that li is the lexical realization of a [+Q] feature, introduced in the derivation as the head of a maximal projection. F( Focus) P. Crucially FP is lower than CP. Head-movement of the verb to P0 and fronting of XP to Spec. FP are ways to provide lexical support for [+Q]. The latter movement is motivated by the need to check a [+Focus] feature in a Spec-head agreement with P0.

The proposal that li occurs on a lower head than C0 allows us to treat yes-no questions with li and dali uniformly. They both allow focused CP constituents, preceding in the case of the former and following in the case of the latter. This is exactly what we expect if we accept the proposal that CP dominates a functional projection FP of which li can be a head. To illustrate:

(32) a. \[CP c dali | P0 XP \_ \_ |]

b. \[FP \_ \_ | P0 F \_ \_ |]

Apart from achieving a unified account of li and dali sentences as focusing constructions, my proposal explains the unacceptability of preverbal subjects.

following li: li is not in C0 but in P0, the highest head in the split-Infl, and Spec. FP is the lowest preverbal position that subjects can appear in and only if they are focused. Topic-subjects are adjoined to FP, since this is the highest sentence-internal scope position. An example of such a construction is one of the readings of (30) where the subject follows the complementizer but is not interpreted as focused.

7. Wh-movement as Focus-movement

We concluded in section 5 that wh-interrogative pronouns are moved to the specifier of the highest functional projection in the split-Infl. In section 6 we saw that a new functional projection is motivated for the phrase structure of Bulgarian, F( Focus) P. FP is treated as IP related by Topicalization and verb-movement. Since FP is the highest functional projection in the split-Infl, is it the case that wh-interrogatives are moved to Spec. FP?

This is indeed what I propose. Wh-interrogatives typically bear the sentence stress, as claimed in Penčev (1980). They can cooccur with li as well. When this is the case, li has to follow the wh-word, nothing else can be focused:

(33) a. Kakvo li dade Ivan na Maria?
   what \_ gave Ivan to Maria
   What did Ivan give to Maria?

b. *Kakvo li dade Ivan na Maria?

c. *Kakvo na Maria li dade Ivan?

Wh-questions are also focus/presupposition structures. Sentence (33) has the presupposition Ivan gave Maria x, and asks for the value of x. What is x? My analysis also makes the prediction that the two movement rules will create islands for each other and this is indeed the case:

(34) *Kogo kaza Ivan Petur li obića?
   who \_ said Ivan Petur o loves
   ‘Who is the person such that Ivan said that Petur loved that person?’

(35) *Petur li kaza Ivan koga e celunala Ana?
   Petur \_ said Ivan when is kissed Ana
   ‘Was Petur the person about whom Ivan said when Ana had kissed him?’

Note that the distinction in native speakers’ intuitions about the acceptability of subjects following the wh-interrogative and the XP-li complex now has an explanation. Adjunction to FP is the canonical position for subjects-topics. Scrambling, however, can adjoin the subject to Agr/TP even though FP is projected. For those speakers that allow scrambling the word order wh-subject-verb and XP-li-subject-verb will not be impossible.

This was noted in Rudin (1986) as well.
Wh-movement therefore is an instance of Focus-movement. The difference between relativization and question-formation is reduced to a more general principle in the grammar of Bulgarian, that of Focus assignment. The phenomenon of subject-verb 'inversion' described in section 1 is shown to not be an independent rule but to have other correlates in the syntax.

Interestingly enough, multiple Focus-movement of quantified elements is allowed in Bulgarian. Sentence (36) is parallel to (37) and observes the same superiority effects:

(36) a. Nikož na nikogot ništó ne bešɛ kazal.
   nobody to nobody nothing not was said
   'No one said anything to anyone.'

   b. *Ništó na nikogot nikol ne bešɛ kazal.

(37) a. Koj na kogo kakvo bešɛ kazal?
   who to whom what was said
   'Who had said what to whom?'

   b. *Kakvo na kogo koj bešɛ kazal?

The pattern in (36)–(37) reveals another aspect of the affinity between interrogative wh-movement and Focus-movement.

10. Summary

In this paper I presented arguments that the landing site of wh-movement in Bulgarian varies depending on whether it involves a relative or an interrogative pronoun. I showed that in this language relativization targets Spec, CP while interrogative wh-words are moved to a sentence-internal position. I argued that there is evidence independent of wh-movement to posit a Focus Projection in Bulgarian into whose specifier interrogative wh-words and focused constituents move. It was proposed that the question particle li is the head of FP and that fronting for focus also provides li with a host: an X0 or an XP, satisfying its prosodic requirements but also providing lexical support for the [\{i\}] feature that it introduces.

The present proposal revealed the affinity between wh-questions and focus constructions, a relation found in other languages as well (see Horvath (1986) for Hungarian). Since multiple wh-fronting is to the Spec, FP position, Spec of CP can receive a uniform treatment crosslinguistically as a node that prohibits multiple adjunction in the overt syntax.

To my knowledge, this type of multiple fronting has not been discussed before.

Acknowledgements

I would like to thank David Embick, Michael Hagerty, Sabine Iatridou, Tracy King, Tony Kroch, and Miriam Meyerhoff, as well as the audience of CONSOLE 2, for valuable discussion and comments. This work was partially supported by a William Penn fellowship from the University of Pennsylvania and by an Open Society Fund scholarship.

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