Accessibility to Relativization: A Reassessment[*]

Yehuda N. Falk
Department of Linguistics
The Hebrew University of Jerusalem
`msyfalk@mscc.huji.ac.il`
`http://pluto.mscc.huji.ac.il/~msyfalk/`

1. The Accessibility Hierarchy

One of the most enduring results of typological research has been the Accessibility Hierarchy (AH) for relativization (Keenan and Comrie 1977). While the AH has generally been considered only in relation to relative clauses, under the widely held view (Chomsky 1977, Kaplan and Bresnan 1982, Falk in preparation) that relative clauses are a variety of *wh* (or long-distance dependency) construction[1], it should hold for all such constructions. In this paper, I will reassess the hierarchy in relation to the broader class of *wh* constructions. My conclusion will be that the hierarchy as generally understood is epiphenomenal, and that the issue of accessibility to relativization is more complex than suggested by the AH.

The basic idea behind the AH is that the grammatical function of the relativized element within the relative clause (henceforth the "downstairs" function/position) determines its accessibility to relativization: as is typical for hierarchy effects, different languages draw the line on the hierarchy in different places. The hierarchy is stated as (1a) by Keenan and Comrie (1977) and as (1b) by Comrie (1989).

(1)   a.   SU > DO > IO > OBL > GEN > OCOMP
        b.   subject > direct object > non-direct object > possessor

There are two differences between these two versions: the later version omits OCOMP (object of comparison), which is probably not a unified grammatical function, and IO[2] (indirect object) because, as already noted by Keenan and Comrie (1977: 72), the status of indirect object is unclear. (For more on the typology of indirect objects and secondary objects, see Dryer 1986). In this paper, the genitive (or possessor) will also be omitted from consideration,[3] resulting in the following hierarchy:

(2)   SUBJ > OBJ > OBL

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[1]I will use the term *wh* construction in this paper for this family of constructions, and, to remain theory-neutral, I will use the expression "involved in a *wh* dependency" in place of such expressions as "undergoing *wh* movement" or the equivalent in other theoretical frameworks.

[2]More precisely, indirect objects and obliques are unified as non-direct objects.

[3]The inclusion of the possessor is problematic because it is not the same type of grammatical function as the others: it is an NP-internal grammatical function and thus does not represent the argument of the verb. In terms of the structure of *wh* constructions such as relativization, this means that the *wh* path needs to cross the boundaries of NPs (or NP functions), adding an additional layer of complexity.

This is a version of the now-familiar Relational Hierarchy (RH), which has been implicated in one form or another in many phenomena (see, inter alia, Perlmutter 1983, Bresnan 1982, Pollard and Sag 1994, Aissen 2003, Bresnan 2001, Falk 2006).

The extension of the AH/RH to other phenomena was already noted by Keenan and Comrie (1977: 95), and there is no question that the RH has proven to be a useful concept. Nevertheless, its original application in terms of the accessibility to relativization is problematic, both theoretically and empirically. In section 2, the theoretical problems raised by the AH will be discussed, and in section 3 we will see that the empirical facts confirm the concerns raised by theoretical consideration. In section 4, the findings will be summarized.

I take it to be axiomatic that typological and theoretical studies need to inform each other. A typological account is meaningless in the absence of a theoretical explanation, and theorizing without a full grasp of the typological facts is doomed to be wrong. The goal of this study, then, is to combine the theoretical and typological sides of relativization and the AH.

A word is in order as to what is meant by relativization. Keenan and Comrie (1977) refer to the primary relativization strategy, by which is meant whatever strategy applies at the upper end of the AH. However, a perusal of examples makes it clear that what is really meant is strategies involving a gap, with or without a relative pronoun; resumptive pronouns are generally found lower on the AH, apparently as a method of allowing relative clause constructions that would otherwise be disallowed. This is made explicit in the account provided by Comrie (1989). For our purposes, the relevant relative clause strategies are those involving gaps. In addition, there are languages which have special (generally subject-only) strategies involving participial verb forms. These are also outside of the purview of this study.

2. Theoretical Context
2.1. The Relational Hierarchy and Grammatical Functions

We begin by considering the place of the RH in syntactic theory. The RH (including the version of the AH in (2)) is generally stated in terms of such grammatical functions as SUBJ, OBJs (direct/indirect, primary/secondary), and OBLs. These are grammatical functions which express the nominal arguments of verbs. Other functions, such as adjuncts and grammaticized discourse functions (FOCUS, TOPIC, etc.), although generally recognized as forming part of the set of grammatical functions, are generally not included in versions of the RH. I state this as (3).

(3) **Definition**
The Relational Hierarchy ranks the grammatical functions which express the nominal arguments of verbs.

This view of the RH is implicit in much of the literature, and is stated explicitly in Falk (2006). The limitation to argument-expressing grammatical functions is plausible in the context of a view of argument expression which sees the mapping from thematic roles to grammatical functions in terms of a hierarchy-to-hierarchy alignment (Aissen 1999, Aissen 2003). Under such an approach, the RH is essentially derivative of the thematic hierarchy, although mismatches can occur (Falk 2006). The motivation of the limitation

to nominal arguments is less clear, and will play less of a role in what follows.

A definition like (3) requires a theory of grammatical functions. Most theories of grammatical functions (e.g. Bresnan 1982, Johnson and Postal 1980) recognize approximately the following divisions of grammatical functions:[4]

(4) a. Nominal arguments: SUBJ, OBJs, OBLs
         Non-nominal arguments: COMP, XCOMP (Bresnan 1982); UNION (Johnson
             and Postal 1980)
         Non-arguments: ADJ, XADJ (Bresnan 1982); CHO (Johnson and Postal
             1980)
         Grammaticized discourse (or overlay) functions: FOCUS, TOPIC, etc.

However, this is insufficient. A consideration of the typology of ergativity shows that the SUBJ function is not unitary. As discussed in such studies as Dixon (1994), Manning (1996), and Falk (2006), in syntactically ergative languages, the traditional grammatical function SUBJ is split between two elements. For example, in Inuit the controllee in an equi/control construction is the A argument of a transitive verb but it is the P argument that gets the wide scope typical of subjects (examples from Manning 1996).

(5) a. Miiqqat [Juuna ikiu- ssa- llu- gu]   niriursui- pp- u-   t.
         children Juuna help- FUT- INF- 3SG   promise-   IND- INTR- 3PL
         'The children promised to help Juuna.'

     b. Juuna- p   atuagaq ataasiq tigu- sima- nngi- la- a.
         Juuna- ERG book   one   get- PERF- NEG- IND- 3SG3SG
         'There is a book which Juuna hasn't got (yet).'

Similarly, in Philippine-type languages, subject properties are split between the S/A argument and the one which (in those Philippine-type languages that have case marking) is marked nominative. The following examples (from Schachter 1976 and Kroeger 1993 respectively) show that A antecedes reflexives and the nominative is raised.

(6) a. Iniisip   nila   ang   kanilang sarili.
         think.about.DO they.ERG NOM   their   self
         'They think about themselves.'

     b. Malapit   na   si   Manuel [na   hulihin   ng   polis].
         STAT.close already NOM   Manuel COMP   catch.DO   ERG   police
         'Manuel is about to be arrested by the police.'

The analysis of such studies as Dixon (1994) and Falk (2006) is that the traditional function SUBJ is an amalgam of an argument-expressing subject function, and a non-argumental function called pivot (henceforth PIV). The argument expressing function

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[4]This is, of course, very rough, and glosses over differences between theories of grammatical functions. However, it will suffice for present purposes.

is called subject by Dixon and $\widehat{GF}$, following LFG notation, by Falk. Here it will be referred to as SUBJECT/$\widehat{GF}$ As Dixon observes, the SUBJECT/$\widehat{GF}$ in transitive clauses is always the A (agent-like) argument, regardless of language type.

As a result of adding syntactically ergative and Philippine-type languages to the mix, the AH needs to be restated. In light of the definition in (3), which specifies that the RH, of which the AH is one instantiation, refers to argument-expressing grammatical functions, the "subject" position on the AH must be the argument expressing SUBJECT/$\widehat{GF}$ and not the non-argumental PIV. Our revised AH is (7).

(7)   SUBJECT/$\widehat{GF}$ > OBJ > OBL

2.2. *Wh* Constructions

The crucial theoretical question for determining the status of the AH is the nature of *wh* constructions and their licensing, more specifically the licensing of the downstairs position. If the licensing of the downstairs position in *wh* constructions involves grammatical functions expressing argument status, we would expect the AH to be relevant. If it does not, however, the relevance of the AH is hard to see.

The idea that argumenthood is involved in licensing the downstairs position in *wh* constructions has been most clearly adopted in work in Head-driven Phrase Structure Grammar (HPSG), starting with Chapter 9 of Pollard and Sag (1994). "The basic idea is that SLASH originates … from the head that licenses the 'missing' element" (Pollard and Sag 1994: 378). If the licensor of the *wh* dependency (represented in HPSG by the SLASH feature) is the head that selects the downstairs position, then the licensing is based on argumenthood. If argumenthood, in turn, is expressed in terms of grammatical functions,[5] such an approach would naturally accommodate the AH. Expressing it informally, the lexical entry of a verb would include the following specification.

(8)   My ARGUMENT$_X$ can be the downstairs element in a *wh* construction.

The ARGUMENT$_X$ here would have variable values, depending on the language, but it would follow the RH (Falk 2006), and thus the AH. In other words, in some languages it might be SUBJECT/$\widehat{GF}$, in others it might be SUBJECT/$\widehat{GF}$ or OBJ, and in others it might be SUBJECT/$\widehat{GF}$, OBJ, or OBL. In no language would we expect to find, for example, that OBJs or OBLs can be involved in *wh* dependencies to the exclusion of SUBJECT/$\widehat{GF}$s.

However, there is reason to question the argument-based approach to *wh* constructions. As noted by Bouma, Malouf and Sag (2001), this requires adjuncts to be treated as complement-like as well. Aside from the question of the desirability of treating adjuncts as a kind of complement, it also diverges from both the AH and other versions of the RH, in that adjuncts are not taken to be part of the hierarchy.

Another approach to *wh* constructions in which the downstairs element is characterized based on grammatical functions is the LFG approach of Kaplan and

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[5]Or some equivalent concept, such as relative obliqueness.

Zaenen (1989). Under this approach, a functional constraint associated with the upstairs position specifies that the downstairs position is located an arbitrary distance away along a path defined in terms of grammatical functions. The downstairs function can be limited; for example, Kaplan and Zaenen propose that in English the downstairs function of the Topicalization construction cannot be COMP (clausal complement). Kaplan and Zaenen do not appear to consider the possibilities for the downstairs function to be constrained by the AH (and the COMP function appears neither on the AH nor on other versions of the RH). From the present perspective, if the RH is tied to argumenthood relations, one would not expect the AH to be relevant under such an approach.

The other extreme is to treat *wh* constructions as being based on constituent structure; such a position is taken explicitly by Bresnan (1978), who refers to such constructions as "structure-dependent" (as opposed to "function-dependent" constructions like passive). In the earliest work in LFG (Kaplan and Bresnan 1982), this approach was adopted without question. A more subtle version of this is still assumed by some work in LFG. For example, Bresnan (2001) takes the position that the licensing for *wh* dependencies is triggered by an empty category (a syntactic node with no lexical terminal) in constituent structure. While the licensing constraint is expressed in terms of grammatical functions, the choice of what the downstairs element is based on what categories can be empty.

(9)   XP → e (which functions as the downstairs element in a *wh* construction)

The possible range of downstairs elements is thus based on category and totally detached from grammatical functions. There is no place in such an approach for the AH.

There are other possibilities as well. It is argued by Falk (2007) that consideration of cliticization phenomena in English provides evidence that there is an empty category in the constituent structure of *wh* constructions involving non-subjects, but none in *wh* constructions involving subjects. This leads to an analysis in which subjects as the downstairs element are licensed functionally but other elements are licensed structurally. Such a position is argued for different reasons by Falk (2006), where it is argued that only PIV can be licensed functionally as the downstairs element, with non-PIVs licensed structurally, as in (9). If this is correct, what is predicted is not adherence to the AH, but rather a distinction between "subjects" (by which is understood PIV; crucially not the SUBJECT/$\widehat{\text{GF}}$ that appears on the RH) and other elements.

What we see, then, is that the question of the applicability of the AH/RH to relative clause constructions in particular and *wh* constructions in general is intimately connected with the more theoretical issues of the nature of *wh* constructions and their licensing. On the one hand, theoretical approaches to *wh* constructions make predictions about the AH. From the opposite perspective, exploring empirically the validity of the AH can be used as a tool for choosing between different theoretical perspectives. It is for this reason that a reexamination of the AH is important.

3. Empirical Investigation
3.1. Overview

We now examine the empirical evidence for the AH, looking not only at relative

clauses but at *wh* constructions in general. The version of the AH that we are using is (7), repeated here.

(7)   SUBJECT/$\widehat{\text{GF}}$ > OBJ > OBL

There are thus three kinds of languages predicted: those that can only relativize SUBJECT/$\widehat{\text{GF}}$, those that can relativize SUBJECT/$\widehat{\text{GF}}$ and OBJ, and those that can relativize anything. This last group is uninteresting: the ability to relativize anything does not provide us with any information on constraints on relativization/*wh* constructions.

3.2. Subject-only

There is no doubt that there are languages which only allow subjects to be involved in *wh* dependencies. However, as we have seen, the concept "subject" is not precise enough; we need to determine whether the restriction is to SUBJECT/$\widehat{\text{GF}}$ or to PIV; a restriction to SUBJECT/$\widehat{\text{GF}}$ would be evidence for the application of the AH and the argumental licensing of the downstairs element, while a restriction to PIV would constitute evidence against these and in favor of an approach which distinguishes between PIVs and non-PIVs. This can, of course, be investigated only in languages in which PIV and SUBJECT/$\widehat{\text{GF}}$ are dissociated: syntactically ergative and Philippine-type languages.

Keenan and Comrie (1977) observe that most of the non–nominative-accusative languages that restrict relativization to subjects are Western Malayo-Polynesian languages. Most Western Malayo-Polynesian languages are Philippine-type; that is to say, they have more than one option for PIV choice, and the choice is signaled by verbal morphology. To take one of their examples, consider the following from Malagasy. Actor-focus is glossed ACT and direct object focus is glossed DO.

(10) a.   Nahita   ny vehivavy ny mpianatra.
            saw.ACT the woman   the student
            'The student saw the woman.'
      b.   ny mpianatra izay nahita   ny vehivavy
            the student   that saw.ACT the woman
            'the student that saw the woman'
      c.   *ny vehivavy izay nahita   ny mpianatra
            the woman   that saw.ACT the student
            'the woman that the student saw'
      d.   Nohitan' ny mpianatra ny vehivavy.
            saw.DO   the student   the woman
            'The woman was seen by the student.'
      e.   ny vehivavy izay nohitan' ny mpianatra
            the woman   that saw.DO the student
            'the woman that was seen by the student'

What we see in these examples is that it is the PIV that is accessible to relativization in Malagasy. This pattern is evident, both for relativization and for other *wh* constructions, in other Philippine-type languages as well. Consider the following from Tagalog

(Guilfoyle, Hung and Travis 1992):

(11) a. Sino   ang   bumili   ng   damit para sa   bata?
        who   COMP ACT.bought ACC dress for   DAT child
    b. *Sino   ang   binili   para   sa   bata ang   damit?
        who   COMP DO.bought for   DAT child NOM dress
    c. *Sino   ang   ibinili   ng   damit ang   bata?
        who   COMP BEN.bought ACC dress NOM child
    'Who bought the dress for the child?'

(12) a. *Ano   ang   bumili   para sa   bata ang   tao?
        what   COMP ACT.bought for   DAT child NOM man
    b. Ano   ang   binili   ng   tao para sa   bata?
        what   COMP DO.bought ERG man for   DAT child
    c. *Ano   ang   ibinili   ng   tao ang   bata?
        what   COMP BEN.bought ERG man NOM   child
    'What was bought for the child by the man?'

(13) a. *Sino   ang   bumili   ng   damit ang   tao?
        who   COMP ACT.bought ACC dress NOM man
    b. *Sino   ang   binili   ng   tao ang   damit?
        who   COMP DO.bought ERG   man NOM   dress
    c. Sino   ang   ibinili   ng   tao ng   damit?
        who   COMP BEN.bought ERG man ACC dress
    'Who was bought the dress (for) by the man?'

In these *wh* questions, we see that only the piv can be the downstairs element; the verbal morphology needs to be altered to allow whichever element that is being questioned to be the PIV.

   This conclusion is reinforced by syntactically ergative languages. Keenan and Comrie themselves note some of the facts: in Dyirbal only the P argument (OBJ) of a transitive verb can be relativized, and in Tongan only the P argument is relativized without a resumptive pronoun. Here are the Tongan data they cite.

(14) a. 'oku 'ikai 'ilo 'e   ha   tata 'a   e   tangata na'a ku taa'i
        PRES not   know ERG any one ABS ART man   PST I hit
        (*ia)
        (*him)
        'Nobody knows the man who I hit.'
    b. Te   mo   fetaulaki mo   e   tangata 'oku ne   fua   'a
        FUT 2DU meet   with ART man   PRES 3SG carry PART
        e   sioki vai.
        ART jug   water
        'You will meet a man who is carrying a jug of water.'
    c. Ko   e   'eiki eni na'e langa mo'ona 'a   e   fale   lahi.
        PART ART chief this PST build for-3SG PART ART house big
        'This is the chief for whom the big house was built.'

Other syntactically ergative languages behave similarly, as seen in these examples from

Inuit (Manning 1996).

(15) a.   nanuq   [Piita- p   tuqu- ta-   a]
            polar.bear Peter- ERG kill-   TR.PART- 3SG
            'a polar bear that Peter killed'

     b.   miiraq [kamat- tu-   q]
            child   angry- REL.INTR- SG
            'the child who is angry'

     c.   *angut [aallaat tigu- sima- sa-   a]
            man   gun   take- PERF- REL.TR- 3SG
            'the man who took the gun'

I know of no languages in which involvement in a *wh* dependency is restricted to SUBJECT/$\widehat{\text{GF}}$. The conclusion that I draw is that while there are languages which can only relativize "subjects," the relevant notion of subject is PIV, not SUBJECT/$\widehat{\text{GF}}$. Since PIV is not part of the AH/RH, this restriction to "subject" does not provide support for an AH condition on relative clauses, or *wh* constructions in general. Instead, the evidence points to an asymmetry between PIV and non-PIV, as predicted by Falk (2006).

The distinction between "subject" and non-"subject" extraction (as opposed to the hierarchy-based approach) receives additional support from the Quechua languages (the data here, due to Cole 1982, are from Imbabura Quechua). In Quechua the situation normally seen, in which it is only subjects that can be involved in *wh* dependencies such as relative clauses and questions, is reversed. At least for embedded clauses,[6] non-subjects can be part of *wh* dependencies while subjects[7] cannot.

(16) a.   Subject
        *[Marya Juzi-   man ni- shka [Ø Juan- ta   riku- shka]]- ta
        María   José-   to   say- NMNL   Juan- ACC see- NMNL- ACC
        warmi   llugshi- rka.
        woman leave-   PST
        'The woman who María told José saw Juan, left.'

     b.   Direct object
        [NP   chay [S Marya [S Juzi Ø riku- shka]-   ta   kri-   j]
               that   María   José   see- NMNL- ACC believe- NMNL
        wawa] ña-   mi   ri- rka.
        child   already- FOC go- PST.3
        'The child who María believes José saw already left.'

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[6]This is not true for the matrix clause of *wh* constructions, where both subjects and non-subjects can be relativized, questioned, etc. Falk (2006) proposes that matrix subjects can be assigned the FOCUS or TOPIC function "in situ", on the basis of the lack of *do*-support in English questions. This would account for Quechua matrix subjects as well.

[7]Since the Quechua languages are nominative-accusative, they do not provide any evidence for the distinction between SUBJECT/$\widehat{\text{GF}}$ and PIV.

c. Indirect object
[NP chay [S Marya [S Juzi Ø libru- ta   kara- shka]-   ta
    that   María   José   book- ACC give- NMNL- ACC
kri-   j]   wawa] ña-   mi   ri- rka.
believe- NMNL child   already- FOC go- PST.3
'The child to whom María believes José gave the book already left.'

It is hard to see how a hierarchy-based approach could account for this; this is the opposite of what one might expect. On the other hand, a theory in which subjects and non-subjects are licensed differently can say that Quechua lacks the subject (PIV) licensing, just as the languages discussed above lack the non-PIV licensing.

3.3. Objects and obliques

The AH predicts that there are languages that can relativize objects but not obliques. More broadly, viewing relative clauses as a kind of *wh* constructions, there are languages in which objects but not obliques can be involved in *wh* dependencies. While Keenan and Comrie (1977) ostensibly present some evidence to this effect, it turns out that the facts are more complex.

One language which ostensibly draws the line between objects and obliques is Hebrew. Keenan and Comrie (1979: 338) state laconically:

> The basic order of modern colloquial Hebrew is SVO. RC's present the head to the left, and introduce the restricting clause with the invariable particle [complementizer —YNF] *she*. Normally personal pronouns are retained in the NP_rel position, although this is not in general done for subjects…, and only optionally for DO's.

In other words, SUBJ and OBJ allow relative clauses with no resumptive pronoun, but OBLs do not. This is illustrated in the following examples.

(17) a. Ha- kosem maca lev   avur iš   ha- pax.
         DEF- wizard found heart for   man DEF- tin
         'The wizard found a heart for the Tin Man.'
     b. ha- kosem še   maca lev   avur iš   ha-   pax
         DEF- wizard that found heart for   man DEF- tin
         'the wizard that found a heart for the Tin Man'
     c. ha- lev   še   ha-   kosem maca avur iš   ha-   pax
         DEF- heart that DEF- wizard found for   man DEF- tin
         'the heart that the wizard found for the Tin Man'
     d. iš   ha-   pax še   ha-   kosem maca lev   *Ø/*avur/✓avur- o
         man DEF- tin that DEF- wizard found heart *Ø/*for/✓for-   3MSG
         'the Tin Man that the wizard found a heart for'

When the OBL argument is relativized, a resumptive pronoun (which in Hebrew is obligatorily suffixed onto the preposition) is required.

The problem with this example, however, is that the oblique argument of the verb 'find' is not 'the Tin Man', but rather 'for the Tin Man'. What is being relativized is thus not the oblique argument itself, but rather the object noun phrase within the oblique. Like many languages, Hebrew does not allow preposition stranding. The

preposition *avur* can therefore not be left without an object following it. The OBL PP itself cannot be relativized because only NPs can be relativized. We are thus left with a situation in which the intended relative clause cannot be created without a resumptive pronoun, but this situation is not the result of the AH.

One indication that this conclusion is correct comes from the behavior of OBJs. Hebrew, like many other languages, displays differential case marking of the OBJ. Accusative case marking in Hebrew consists of the preposition *et*, and the accusative pronouns in Hebrew consist of an allomorph of *et* (*ot-*) combined with the ordinary pronominal suffixes for prepositions.

(18) a.   Ha-   kosem   maca   lev.
            DEF-   wizard   found   heart
            'The wizard found a heart.'

      b.   Ha-   kosem   maca   et   ha-   lev.
            DEF-   wizard   found   ACC   DEF-   heart
            'The wizard found the heart.'

      c.   Ha-   kosem   maca   ot-   o.
            DEF-   wizard   found   ACC-   3MSG
            'The wizard found it.'

The range of possibilities for relativizing an OBJ are those that do not involve the stranding of the accusative preposition: no accusative preposition, and accusative preposition with suffixed resumptive pronoun.

(19) a.   ha-   lev   še   ha-   kosem   maca
            DEF-   heart   that   DEF-   wizard   found

      b.   *ha-   lev   še   ha-   kosem   maca   et
            DEF-   heart   that   DEF-   wizard   found   ACC

      c.   ha-   lev   še   ha-   kosem   maca   ot-   o
            DEF-   heart   that   DEF-   wizard   found   ACC-   3MSG
      'the heart that the wizard found'

This pattern is what one would expect if the relevant constraint here is one against preposition stranding.

More importantly, *wh* questions show that OBLs can be involved in *wh* dependencies. The constraint against preposition stranding still applies.

(20) a.   Avur   mi   maca   ha-   kosem   lev   ?
            for   who   found   DEF-   wizard   heart
            'For whom did the wizard find a heart?'

      b.   *Mi   maca   ha-   kosem   lev   avur ?
            who   found   DEF-   wizard   heart   for
            'Who did the wizard find a heart for?'

Thus the whole OBL PP can be involved in a *wh* dependency, but not the NP embedded within it. What makes relative clauses different from *wh* questions is, as noted above, that in relative clauses the relativized element is restricted to being a nominal (NP,

DP, …); it cannot be a PP. As a result of the widespread ban on preposition stranding, relative clauses thus present the illusion that OBLs cannot be involved in *wh* dependencies. However, this is not a constraint based on the grammatical function OBL, but rather a constituent structure constraint on preposition stranding. The evidence from relativization of Hebrew OBJs and questioning of Hebrew OBLs shows this.

This appears to be the case in other languages discussed by Keenan and Comrie (1977). Consider Hausa. Keenan and Comrie show that relativization is possible for SUBJ and OBJ without a resumptive pronoun, but impossible for OBL. For what they characterize as "indirect object", the resumptive is optional.

(21) a. SUBJ
          dokin da   ya   mutu
          horse REL 3SG.AGR died
          'the horse that died'
      b. OBJ
          mutumin da   na gani (*shi)
          person   REL I   saw (*him)
          'the person that I saw'
      c. OBJ_{Indirect}
          yaron da   suka gaya {wa / masa }
          child REL they said {to / to.him }
          'the child whom they told'
      d. OBL
          wuqad da   ya kashe ta da   ita
          knife   REL he killed her with it
          'the knife with which he killed her'

However, Hausa, like Hebrew, does not allow preposition stranding (Halpern 1989: 136).[8] Relative clauses thus do not serve as a test for whether or not OBL arguments can be involved in a *wh* dependency. In other *wh* dependencies, such as interrogatives and focus fronting, OBLs are not a problem, as in the following examples from Jaggar (2006).

(22) a. Tôo à ìnaa kukè   ?
          OK at where 2PL.FOC-IMPFV
          'OK, where are you (=where do you live)?'
      b. Muu à K'oofàr̃ Maataa mukè.
          we   at Gate.of Women 1PL.FOC-IMPFV
          'Us, we're at the Women's Gate.'

I therefore conclude that there is no restriction against involving OBLs in a *wh* dependency in Hausa.

In fact, as noted by Falk (in preparation), many languages that normally use a

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[8]The particle *wa* which appears in (20c) with the gloss 'to' is not a preposition. Halpern (1989: 125, 133) characterizes it as an applicative morpheme which always immediately follows the verb and is never part of an oblique argument.

"deletion" strategy for relative clauses switch to a relative pronoun strategy when relativizing OBLs, as a way of avoiding adposition stranding. One such example, mentioned by Keenan and Comrie, is Malay, for which they cite the following data.

(23) OBJ (SUBJ is the same)
      Ali bunoh ayam   yang Aminah sedang memakan.
      Ali kill   chicken REL   Aminah PROG   eat
      'Ali killed the chicken that Aminah was eating.'

(24) OBL
      a.   *perempuan yang Ali beri ubi ketang itu kapada
            woman   REL Ali gave potato   the to
            'the woman that Ali gave the potato to'
      b.   *perempuan kapada yang Ali beri ubi ketang itu
            woman   to   REL Ali gave potato   the
            'the woman that Ali gave the potato to (…to that Ali gave the potato)'
      c.   perempuan kapada siapa Ali beri ubi ketang itu
            woman   to   who   Ali gave potato   the
            'the woman to whom Ali gave the potato'

Here, it is clear that the problem isn't with the *wh* dependency, since the version with the relative clause involves a *wh* dependency.

A different approach to the stranding problem is taken by languages like Korean and Imbabura Quechua: they delete the adposition.

(25) a.   Korean (Keenan and Comrie 1977)
            Hyənsik- i   kɨ lä- lɨl ttäli- n   maktäki
            Hyensik- NOM the dog- ACC beat- REL stick
            'the stick with which Hyensik beat the dog'
      b.   Imbabura Quechua (Cole 1982)
            [$_{NP}$ chay [$_{S}$ Marya [$_{S}$ Juzi Ø libru- ta   kara- shka]- ta
                     that   María   José   book- ACC give- NMNL- ACC
            kri-   j]   wawa] ña-   mi ri- rka.
            believe- NMNL child already- FOC go- PST.3
            'The child to whom María believes José gave the book already left.'

It is not clear whether there is any generalization as to when a language will allow an adposition to be deleted in order that the NP object within the OBL can be relativized. This seems to be a less common option, presumably because meaningful information is lost.[9]

4. Conclusion

We have shown that the AH is epiphenomenal. While the phenomena described by it exist, they do not constitute a single hierarchically based property. Instead, there

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[9]Korean and Quechua are both postpositional, but I don't know if this is significant.

are two primary unrelated aspects: the distinction between "subjects" and non-"subjects" (more precisely pivots and non-pivots), and the constraint in many languages against adposition stranding, combined with the restriction of relativized elements to nominals.

The typological consequence of this investigation is that the widely accepted conclusion that accessibility to relativization is constrained by a hierarchy of argument-expressing grammatical functions is incorrect. In retrospect, it is easy to see how Keenan and Comrie (1977) were led to such a conclusion: in the 1970s, much less was known about syntactically ergative and Philippine-type languages, and the relation of relativization to other *wh* constructions was less clear. As with many proposals in the typological literature, the AH has proven to be fertile ground for cross-linguistic studies, including the present one. However, its usefulness and longevity do not make it correct.

From the theoretical perspective, we have uncovered new evidence in favor of a theory of the licensing of *wh* constructions along the lines proposed by Falk (2006). Under this approach, pivots and non-pivots are licensed as participants in *wh* dependencies in different ways: pivots by virtue of bearing the grammatical function PIV, and non-pivots on the basis of category.

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