Tough complementation and the extraclausal propagation of argument descriptions

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1   Introduction: the problem and some background

My major claims in the discussion below are that

- none of the classical arguments for treating *for Mary* in *John is easy for Mary to please* as a PP are borne out by the full set of relevant data;
- there is a set of arguments which point unequivocally to clausal status for *for Mary to please*;
- this analysis however requires that the CONTENT description of *tough* predicates have access to the index specifications of the clausal subject *Mary.* So information about the subject must be able to propagate extraclausally.

Several serious misinterpretations of familiar data have contributed to the impression widely held among syntacticians of English that the syntactic evidence for PP VP (or PP S), which I will refer to as the control analysis of *tough* complementation, is decisive. This view of the debate on the complement structure of *tough* constructions also reflects the fact that a a number of phenomena strongly pointing to a clausal analysis ([S *for* [S *Mary to please*]]) have been overlooked in some cases and in others have been, in essence, disregarded, A reassessment on both fronts leads however to the conclusion that a wide domain of data support the clausal over the control analysis, and that the iconoclastic adoption of this analysis in Gazdar et al. 1985, often criticized at the time, was entirely correct.[1]

2   Classical arguments that *for us* is a PP complement of *easy*

The following arguments are the principle bases for the claim that *tough* predicates select the control complement structure, along with a brief indication of why these arguments fail to establish the point.

• (Bresnan 1971, Sag 1982) Argument 1: There are semantic/pragmatic restrictions on the post-*for* NP that can easily be imposed if this NP is an argument of the *tough* predicate, but not if it's the subject of a clausal complement.

COUNTER: This argument only holds on the assumption that there cannot be an extraclausal semantic relationship involving such a subject. If enough syntactic evidence demands it, then some way must exist for this linkage to be established. Hence Argument 1 is parasitic on strictly structural arguments.

• (Bresnan 1971) Argument 2:

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[1]The clausal structure was first assumed in Postal 1971, though the control alternative was not discussed there.

Bresnan's first strictly syntactic argument is that truly clausal infinitivals can be involved in extraposition relations with respect the VP that these infinitivals appear as subjects of:

(1)   a. It is surprising for a woman to act that way.
       b. For a woman to act that way is surprising.

On the other hand, *tough* infinitivals with *for* NP strings cannot:

(2)   a. It would be tough for a woman to act that way.
       b. *For a woman to act that way would be tough.

Therefore such *tough* infinitivals are not clausal.

COUNTER: the logic of Bresnan's argument from extraposition crucially rests on two implicit claims which are, respectively empirically and theoretically untenable. Specifically, her argument appears to take the fact that some 'extraposed' infinitival clauses have 'intraposed' analogues as a warrant for the assumtion that *all* extraposed clauses have intraposed analogues, subject to the further assumption that the UDC versions of *tough* constructions are derived from the extraposed versions. Neither of these assumption is motivated. So far as the first is concerned, the data in question actually only show that *if* a predicate takes a clausal infinitival subject, there exists a corresponding extraposed structure headed by that predicate. They can hardly be taken to demonstrate that *only* if a predicate takes an infinitival clausal subject are we justified in taking the extraposed variant to be clausal. To illustrate the point, we need look no further than the corresponding relationship between finite clausal subjects and their extraposed variant:

(3)   a. It $\left\{ \begin{array}{c} \text{seems} \\ \text{appears} \\ \text{(so) happened} \\ \text{developed} \\ \text{fell out} \\ \text{transpired} \end{array} \right\}$ that Robin became a spy.

       b. That Robin became a spy $\left\{ \begin{array}{c} *\text{seems} \\ *\text{appears} \\ *\text{(so) happened} \\ *??\text{developed} \\ *??\text{fell out} \\ *??\text{transpired} \end{array} \right\}$

It is evident here that Bresnan's crucial assumption—that a clearly clausal complement of a predicate with a dummy *it* subject will be able to serve as the subject of that predicate—is empirically false. Note also that there are no 'intraposed' analogues of examples such as

(4)   It $\left\{ \begin{array}{c} \text{looks} \\ \text{sounds} \\ \text{seems} \end{array} \right\}$ $\left\{ \begin{array}{c} \text{like} \\ \text{as if} \end{array} \right\}$ Terry's in a lot of trouble.

Thus, Bresnan's premise that an intraposed version of a genuinely clausal extraposition always exists is factually unsupported for finite clauses. Why then should it be taken have any diagnostic validity for nonfinite clauses? By the same token, there is no a priori basis for projecting the structure of the UDC analogues of the 'extraposed' constructions from the latter unless one can demonstrate a derivational relation between the two variants.latter are derived from the former. In light of theoretical developments since Bresnan's paper, there is no reason at all to take properties of one version of the construction to entail properties of a different version. In current terms, the selectional properties of the lexical entry that gives rise to *John is easy to please* are in no way logically dependent on those of *It is easy to please John*; the question of their relationship is, in fact, exactly the issue to be resolved, and to reason from assumptions about the former to assumptions about the latter is to embed the conclusions in the premises. It follows, therefore, that Bresnan's extraposition argument cannot be taken to Shave a bearing on the optimal analysis of the UDC version of *tough*.

• (Bresnan 1971) Argument 3: the stress pattern of *Robin is easy (for us) to please* is exactly what would be predicted by the operation of the Nuclear Stress Rule from SPE if there were no cycle on the complement of *easy*, i. e., if *(for us) to please* were nonclausal. Thus phonological evidence is taken to provide independent confirmation of the syntactically supported PP VP analysis.

COUNTER: even in terms of then-current assumptions, Bresnan's argument fails. Note first that *too/enough* constructions are by Bresnan's own criteria necessarily clausal, since they freely allow dummy subjects following *for*:

(5)   a. The park you describe sounds too small for there to have been a riot in.
        b. Some bureaucrats are too stupid for there to be any hope for.
        c. This theorem is too tangential for there to be any point in proving.

Yet the intonation contour of *tough* and *too/enough* constructions is in the relevant respects exactly the same:

(6)   Robin would be $\left\{ \begin{array}{c} \text{smart enough} \\ \text{dangerous} \end{array} \right\}$ to talk to — about the case.

Hence the phonological argument cannot have any bearing on the internal structure of the *tough* complement.

• Argument 4 (Chomsky 1973, Lasnik and Fiengo 1974)
    An observation often cited as lending particularly strong weight to the control analysis hinges on the apparent possibility of the *for* + NP sequence following the *tough* predicate undergoing topicalization, e.g.

(7)   a. It is easy for us to learn Latin.
        b. For us, it is easy to learn Latin.

(Chomsky 1973).

(8)   a. John is easy for Bill to please.
       b. For Bill, John is easy to please.

(Lasnik and Fiengo 1974). The apparently well-motivated conclusion is that this displacable sequence must be a constituent.

COUNTER: the evidence is actually quite clear that these 'fronted' PPs not only need not be topicalized constituents, but *cannot* be. Exactly the same so-called displacement patterns appear in the parallel missing object construction involving *worth*, where, as (9)c shows, *for John* cannot appear in situ:

(9)   a. John isn't worth talking to (*him).
       b. For John, Mary isn't worth talking to.
       c. Mary isn't worth talking to, for John.
       d. *Mary isn't worth for John talking to.

This is unsurprising; *worth* worth clearly selects a gerundive phrase, and such phrase are exclusively nominal or verbal, never prepositional:

(10)   a. Robin isn't worth (you) getting so upset about.
       b. Leslie isn't worth your spending so much time resenting.

(11)   I can't get over ($\left\{ \begin{array}{c} \text{you} \\ \text{your} \end{array} \right\}$) having driven so dangerously this morning.

And in fact the *for* phrase here shows up in exactly the contexts we'd expect to find not a topic, but an adverbial adjunct:

(12)   a. For you Robin isn't worth talking to.
       b. Robin, for you, isn't worth talking to.
       c. Robin isn't, for you, worth talking to.
       d. Robin isn't worth talking to you, for you.

Compare this pattern with that in (13):

(13)   a. Certainly, Robin is a spy.
       b. Robin certainly is a spy.
       c. Robin is certainly a spy.
       d. Robin is a spy, certainly.

These data motivate a structure such as (14):

(14)

```
                          S
              ┌───────────┴───────────┐
             PP                       S
          ┌───┴───┐          ┌────────┴────────┐
        for     NP:①      ...               VP
                                             │
                                            ...
                                    ┌────────┴────────┐
                                    A        VP[SUBJ ⟨NP: ①⟩]
                                                 ┌────┴────┐
                                                   ... t ...
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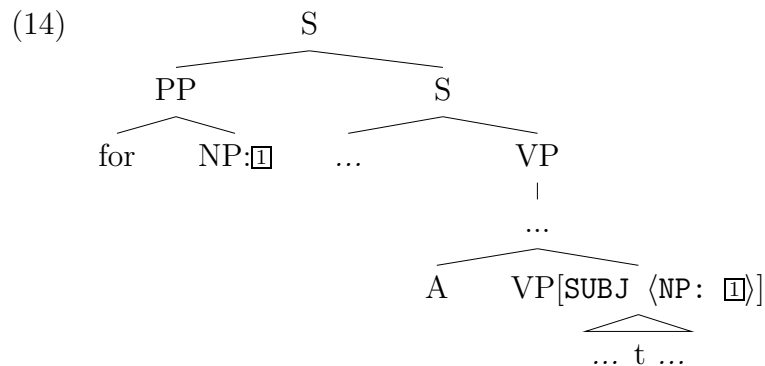
Support for the existence of such structures, and the possibility of such control by *for* PP adverbial, comes from the French *difficile* construction data (see Kayne 1975, p.340, for a summary). The crucial point are the following:

(i) There can be no post–adjective *pour* complement in this construction:

(15)   *Ce livre est facile pour Jean–Jaques à lire.   This book is easy for Jean–Jaques to read.'

(ii) Yet it is possible to use the MO *difficile* construction to translate *This book is easy for Jean–Jaques to read.* Although no *pour* PP is possible as a complement to the adjectival head, both preposed and postposed PPs are possible:

(16)   a. Pour Jean–Jaques, ce livre est facile à lire.
       b. Ce livre est facile à lire, pour Jean–Jaques.
          This book is easy for Jean–Jaques to read.'

It is hardly possibly to suggest here, as Jacobson (1992) does for *worth*, that the badness of (15) arises from some linear inseparablility property holding between the nonfinite complement and the adjectival head, because in the case of French, there is a pleonastic version of the construction in which the *difficile* predicate has an unequivocal PP complement intervening between the same predicates and their infinitival complements:

(17)   Il est difficile $\left\{ \begin{array}{c} \text{pour} \\ \text{à} \end{array} \right\}$ Marie de contenter Jean.
       'It is easy for Marie to make Jean happy.'

The point then is that it is not plausibly possible to take the peripheral *pour* PPs in (16) to arise from displacement of the PP from a position where it could not appear legally in situ, since the latter configuration is exactly what we find in the pleonastic construction (17). There is clearly no linear prohibition on *difficile* + PP[*pour*] + infinitive VP sequences in general; what is forbidden is such a sequence in the extraction variant of the construction. The necessary conclusion is that something very much like (14) is the correct analysis of the fronted PP form of the *difficile* construction. French thus provides us with an airtight existence proof that grammatical theory must countenance such structures, with the indicated

control possibilities, with English *worth* constructions displaying essentially the identical properties.

And just as the clausal but not the control hypothesis predicts, the *for* NP sequence has just the same adverbial distribution, exhibited in (18):

(18) a. For me, Robin is easy to please.
       b. Robin, for me, is easy to please.
       c. Robin is, for me, easy to please.
       d. Robin is easy to please, for me.

This distribution is emphatically different from that revealed by actual PP complements, as (19) and (13) show:

(19) a. I am worried about Robin.
       b. About Robin, I am worried.
       c. *??I about Robin am worried.
       d. *??I am about Robin worried.

(20) a. Leslie$_i$ is waiting for Sandy [$_{\text{VP[SUBJ|INDEX }i]}$ before leaving].
       b. *Leslie, for Sandy, is waiting before leaving.
       c. *Leslie is, for Sandy, waiting before leaving.
       d. *Leslie is waiting before leaving, for Sandy.

where in the second through fourth examples, the assumed reading is nonbenefactive.

3   Why the clausal analysis is preferable to the control analysis

Having argued that the classical arguments for the control analysis do not stand up to critical scrutiny, I now offer a set of arguments that this analysis is inferior to the clausal hypothesis.

3.1   The argument from comparatives

The data in (21) directly contradicts the [$_{\text{AP}}$ A PP VP[inf]] analysis of *tough* constructions:

(21)   Robin would be easier for US to bribe — with favors than for YOU to coerce — with threats.

The appearance of the string *for* NP VP[inf] in the second component of the comparative does not in itself prove the constituency of this string; cf. *I'm happier for Robin$_i$ that she$_i$ got to keep her old job than for Leslie$_j$ that he$_j$ was offered a new one*, which many speakers find unexceptionable. The true impact of (21) on the issue emerges when we consider adjectives such as *good*, which have been recognized from at least Bresnan 1971 on as having a double analysis:

(22) a. Robin would good for you to hire.
       b. Robin$_i$ would be [$_{\text{AP}}$ [$_{\text{A}}$ good][$_{\text{PP}}$ for you] [$_{\text{VP}}$ to hire —$_i$]] (i.e., it would be good for you if someone were to hire Robin

c. Robin$_i$ would be [$_{AP}$ [$_A$ good][$_S$ for [$_S$ [you] [$_{VP}$ to hire ___$_i$]]]] (i.e., it would be good in general if you were to hire Robin)

These readings are associated in a compositionally natural way with the two different structures in (22)b and c respectively. Note however that in the case of (23), only the reading parallel to (22)c survives:

(23) a. Robin would be better for you to hire immediately than for us to get into drawn-out negotiations with.(Sole reading: it would be better in general if you were to hire Robin immediatley than it would be if we were to get into drawn-out negotiations with him/her.)
b. Robin would be [$_{AP}$ [$_A$ better] [$_S$ for [$_S$ you to hire ___ immediately] than [$_S$ for [$_S$ us to get into drawn-out negotiations with ___]]

Thus, where both the complement PP and the clausal complement structures are available, as with predicates such as *good*, only the latter structure is available in such comparatives, as illustrated in (23)b. It then follows immediately that in the case of (21), we are dealing with a clausal complement structure in both parts of the comparative, strongly pointing to a clausal, not a PP complement, analysis of the A PP VP string.

3.2 The argument from parasitic gaps

The data in question, first presented so far as I am aware in Hukari and Levine 1990, are parasitic gap constructions of the following form:

(24) a. These books proved tough for critics of ___ to praise ___ sincerely.
b. That hypothesis was easy for opponents of ___ to poke holes in ___ .
c. Certainly it's the kind of policy that would be logical for opponents of ___ to pretend to like ___ .

Compare the situation with undisputed NP complements of MO predicates, such as *take* and *cost*:

(25) a. This policy had cost opponents a lot of effort to block ___ successfully.
b. This cake will take chefs a lot of time to get the ingredients for ___ .

Parasitic gaps in such constructions, parallel to the unexceptionable cases in (24), are uniformly awful:

(26)
a. *Such hypotheses$_i$ take critics of ___$_i$ a long time to refute ___$_i$.
b. *This policy$_i$ cost [opponents of ___$_i$] a lot of credibility to attack ___$_i$ publically.

Let's assume something very much like the approach to SLASH propagation in MO constructions (and weak UDCs generally) from Pollard and Sag 1994. The badness of (26) follows immediately. Although Jacobson (1992) acknowledges the well–formedness of the contrasting examples (24), she offers no account of their licensing, continuing to insist on the correctness

of the PP VP analysis. Yet the existence of such examples is altogether unexpected under the PP VP, given the behaviour of MO complements already discussed.

On the clausal account, absolutely nothing new need be added to the theory to motivate such examples. The structure in (27) will be unproblematically licensed by the theory presented in Pollard and Sag 1994:

(27)

```
                              S
                ┌─────────────┴─────────────┐
            ③NP                            VP
          [LOC ②₁]]           ┌─────────────┴─────────────┐
         ┌────┴────┐      V[SUBJ ⟨ ③ ⟩]         AP[SUBJ ⟨ ③ ⟩]
      that hypothesis        │              ┌────────┴────────┐
                            was             A                 S
                                            │          [INHER|SLASH {②}]
                                          easy      ┌────────┴────────┐
                                                  COMP                S
                                                   │          [INHER|SLASH {②}]
                                                  for        ┌────────┴────────┐
                                                           NP                  VP
                                                    [INHER|SLASH{②}]    [INHER|SLASH {②}]
                                                           │                   │
                                                   opponents of t      to poke holes in [NP/NP t]
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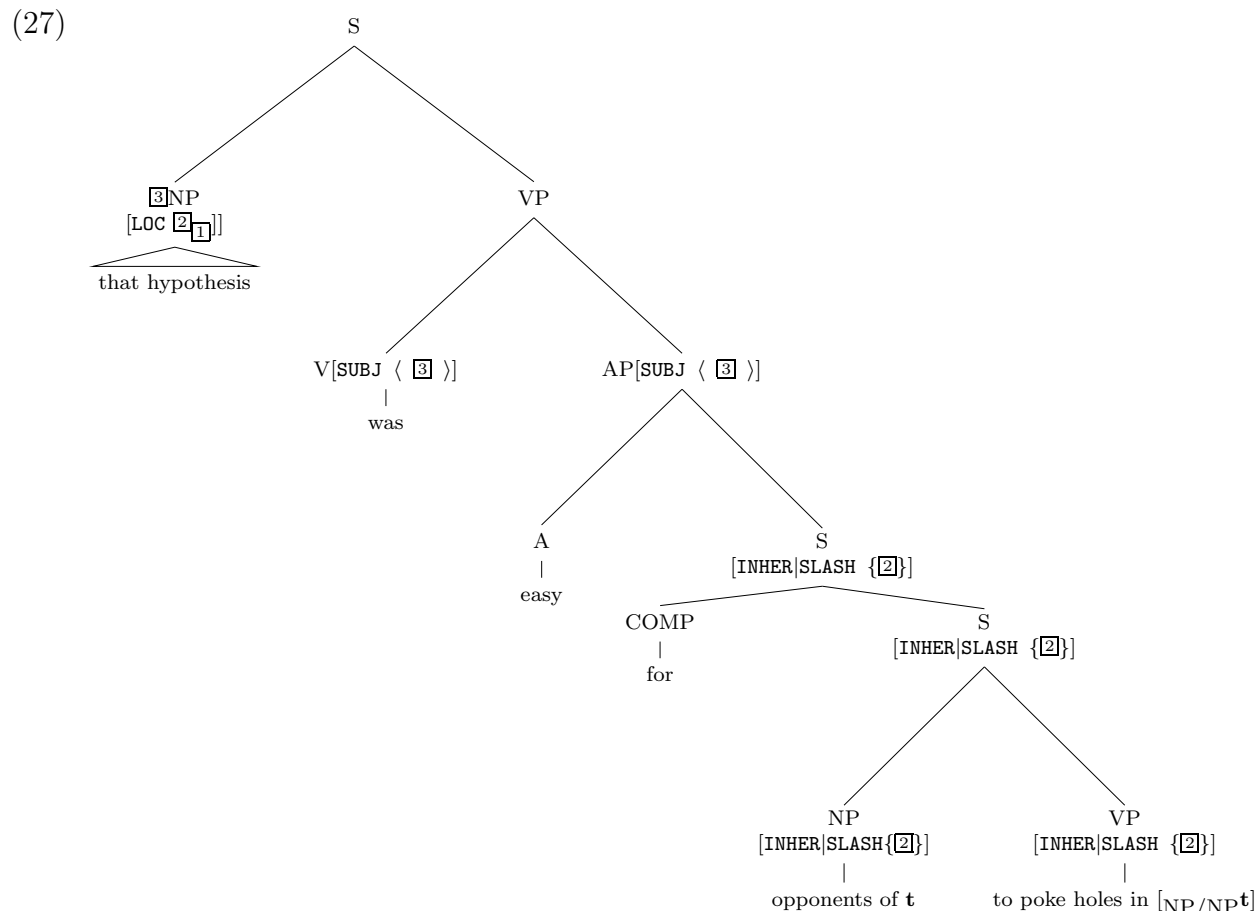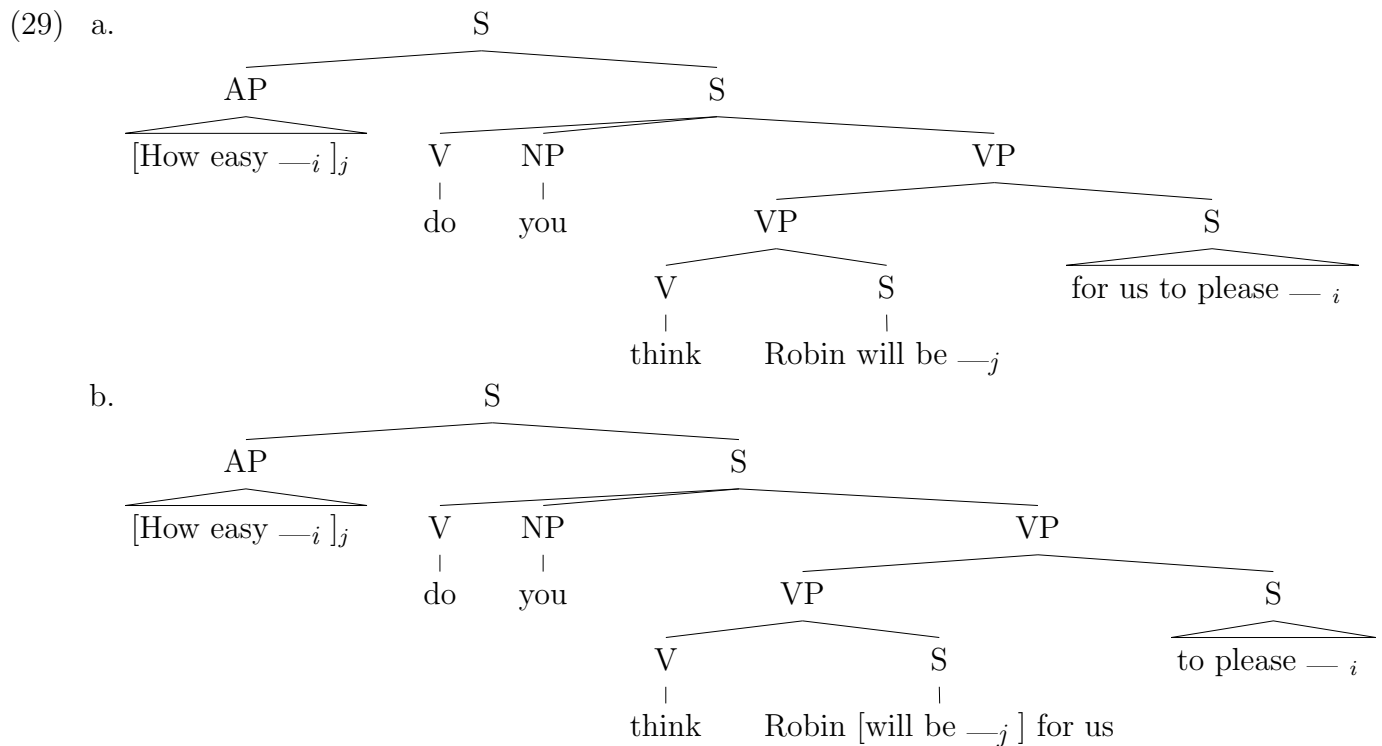
3.3   The argument from extraposition

Still another indication that the clausal analysis is the correct treatment of *tough* complementation emerges from consideration of examples such as

(28)   How easy do you think Robin will be for us to please?

Since *how easy* do not form a constituent, there is no possibility that this string itself represents a filler linked to a gap site. Rather, we must suppose that *how easy* plus the rest of the AP is the fronted *wh* phrase and that some substring of this AP appears in extraposed position. There are two possible analyses compatible with this supposition: on the one hand, we might take the extraposed element to be *for us to please*; on the other, we might assume that *for us* is a sentence adjective in clause final position, as in (18)d, and that only the infinitival VP appears in extraposed position. The two structures are illustrated in (28):

(29)　a.

```
                              S
              ┌───────────────┴───────────────┐
             AP                                S
        ┌─────┴─────┐         ┌────────┬────────┴──────────────┐
   [How easy —ᵢ ]ⱼ  V        NP                        VP
                    │         │        ┌──────────────┴────────┐
                   do        you      VP                       S
                              ┌────────┴────────┐      ┌────────┴────────┐
                              V                 S      for us to please — ᵢ
                              │                 │
                            think        Robin will be —ⱼ
```

$$\text{(29a tree)}$$

```
                              S
              ┌───────────────┴───────────────┐
             AP                                S
        ┌─────┴─────┐         ┌────────┬────────┴──────────────┐
   [How easy —ᵢ ]ⱼ  V        NP                        VP
                    │         │        ┌──────────────┴────────┐
                   do        you      VP                       S
                              ┌────────┴────────┐      ┌────────┴────────┐
                              V                 S      to please — ᵢ
                              │                 │
                            think     Robin [will be —ⱼ ] for us
```

b.

It is in fact possible to show that the first of these is the correct structure. The reasoning is similar to that of the argument from comparatives presented above. Consider, to begin with, the data in (30):

(30)　a. Robin would be better for us to hire.
　　　b. How much better to hire would Robin be, for us?
　　　c. How much better would Robin be (,d'ya think,) for us to hire?

The first example is ambiguous between two senses, one of which involves a benefit to us with the agent left nonspecific, the other of which identifies us as the agent with the beneficiary left nonspecific. This is a standard class of cases, discussed since Bresnan 1971 in essentially these terms.

　　Note now that it is difficult to not infer from the second that the speaker is inquiring about the benefit to us. But in the third example, normal intonation seems to block this reading almost absolutely and presents us solely with the other reading from (30)a: the question is, what are the pros and cons for the world at large, or some relevant subportion of it, of us undertaking to hire Robin? This is the reading that is standardly associated with the CLAUSAL structure associated with (30)a. That is, if we assume a straightforward mapping between structures and readings, it seems quite difficult to motivate a structure for (30)c based on an extraposition of the infinitival VP in (30)b, since that structure, with a postposed adverbial PP, corresponds to the other reading.

　　But this conclusion in turn implies that the source of (30)c is extraposition of a clausal complement. If, in the structure corresponding to (30)b, an extraposition of the VP by itself

were POSSIBLE, then we would expect to have a second structure for (30)c in addition to the clausal extraposition, with consequent ambiguity. But the lack of ambiguity in this example strongly suggests that no such VP extraposition can occur here.

This example therefore constitutes strong evidence that extraposition of a VP to the right of an adverbial PP controller following the tough AP gap is simply not available as an alternative structure, but with parallel intonation, to the extraposition of a sincle clause from such a wh AP filler. It follows that in examples like

(31)   How easy would Robin be(,d'ya think,) [for us to please]?

the source of *for us to please* must be extraposition of a complement clause, adding still further support to the hypothesis defended in previous sections.

4   Semantic interpretation in a clausal analysis

If the foregoing arguments are sound, we have to face the fact that a correct semantic analysis of *tough* constructions must be able to define a relationship between a proposition and the NP-type corresponding to the subject of that proposition. There is independent evidence that such relationships exist in natural language grammars. Consider the so–called *Richard* construction:

(32)   a. $\left\{ \begin{array}{c} \text{It} \\ *\text{There} \end{array} \right\}$ looks like Robin's in trouble.

   b. Robin sounds like $\left\{ \begin{array}{c} *\text{It seems that he's in trouble} \\ \text{he seems to be in trouble} \end{array} \right\}$.

   c. There looks like $\left\{ \begin{array}{c} \text{there's going to be rain} \\ *\text{it's going to rain} \end{array} \right\}$.

Richard indicates that information about at least the index of the embedded subject is available to the matrix subject. Bender and Flickinger 1998 offer roughly comparable evidence from the grammar of English tag-question formation. The question then is how to provide this information without compromising the selectional locality of heads in HPSG's feature architecture ensured by the restriction of valence lists to *synsem* objects and of ARG–ST lists to lexical heads. Meurers (1999) has already argued, quite persuasively, in my view, that information about subjects must persist above the clauses which contain them in order to ensure proper case-marking. To mininize the unrestricted flow of information out of clauses that such solutions lead to, Meurers introduces a head feature SUBJECT, whose value is structure-shared (via a lexical rule) with the least oblique element on the head's valence, but which is type-marked to ensure that it corresponds to a realized combinatorial partner of the head. The head of nonfinite clauses thus contains, in its SUBJECT specification, a description of its subject, and this description is consequently visible to a raising verb which combines with the nonfinite clause, ensuring that the structural case assigned to this description is nominative.

Guyanese Creole (GC) provides an extremely interesting corroboration of the need to allow structures with properties comparable to those of English *tough* phenomena in which

lexical items denote relations between undisputed individuals and individuals corresponding to some term in the propositional argument. The relevant data involve the GC *tough* construction, as discussed in Winford 1993, where we have evidence of a *tough* construction paralleling English, insofar as an NP in a subject argument position is linked to a site within a verbal projection serving as an argument of a predicate, and where there is an term demonstrably within that verbal argument which which is also a semantic argument of the predicate with the role of experiencer with respect to that predicate.

Note in the first place that GC does not distinguish nominative from accusative in the first and second persons, but in third person provides a nominative form *i* and an accusative *am*. We find both pleonastic and MO versions of *tough* constructions in GC; in cases of the former, very much as in English *It's pleasant for the rich for the poor to do the hard work*, the adjective can be followed by two instances of the morpheme *fu* + NP, where *fu* is homophonous with both a prepositional and a complementizer status:

(33) I wuda gud fu mi fu i laas all i moni. 'It would have been good for me for him to lose all his money.'

Because the complement clause *fu i laas all i moni* is finite, it is possible to identify the third person pronoun, which reflects nominative case, as a subject, rather than leaving its status unclear as in English. Given the finiteness of the verb, (33) is exactly what would be predicted on the basis of standard treatments of the pleonastic *tough* construction in English. Interestingly, when an NP is unequivocally a semantic argument of the adjective, the accusative forms appear with no overt subject in the complement:

(34) I haad fu $\left\{ \begin{array}{c} \text{am} \\ \text{*i} \end{array} \right\}$ fu laas all dat moni. 'It's hard on him to lose all that money'.

(Winford 1993, 335.) What is particularly striking, in terms of the present investigation, is the pattern of pronominal distribution in the MO version of *tough* in GC. The ordinary case is again parallel to English:

(35) a. Jan iizi fi pliiz. 'Jan's easy to please.'
      b. Dem piiz-de haad fi shel. 'Those peas are hard to shell.'
      c. Taiga na bin iizi fi kech. 'Jaguars weren't easy to catch.'

(Winford 1993, 340–341). But when we observe the analogue of the MO version corresponding to *John is easy for Mary to please* in GC (one of the very few dialects of Carribean English Creole that displays this construction), what we find following *fu* is invariably nominative, not accusative:

(36)

a.   Savi haad fu $\left\{ \begin{array}{c} \text{i} \\ \text{*am} \end{array} \right\}$ fuul. 'Savi$_i$'s hard for her/him$_j$ to fool.'

b. Jan iizi fu $\left\{\begin{array}{c}\text{Mieri}\\ \text{i}\\ *\text{am}\end{array}\right\}_j$ biit. 'John$_i$'s easy for $\left\{\begin{array}{c}\text{Mary}\\ \text{him/her}\end{array}\right\}$ to beat.'

(Winford 1993,) Thus, judging by the patterns that hold throughout the rest of GC, we have prima facie evidence that the complement of the MO form of *tough* is clausal, that the NP following *fu* is the subject of the clause, and that its referent is therefore selectionally inaccessible to the relation denoted by the GC class of *tough* predicates on the kind of mechanical compositional approach that has been assumed, implicitly or explicitly, to be the only interpretive mechanism at work in projecting the semantic interpretation of *tough* constructions from their syntactic form. Maintaining the latter view in the face of the GC pattern thus appears to entail that the subject NPs in question are not in fact semantic arguments of the *tough* predicate in GC, notwithstanding what is suggested by the English translation. This entailment is implausible on the face of it, and is indeed incorrect; the interpretation of these examples is identical to that of the English analogues. In (36)a, the difficulty of fooling Savi is specifically posited as something experienced by whomever the third person subject pronoun refers to. Thus, just as in the case of the English *Richard* construction, these GC *tough* constructions appear to require that the interpretation mechanism be able to access a term at a point in the interpetation where it is no longer available to a simple Montegovian or strictly type–driven mapping of the sort given, for example, in Sag 1982.
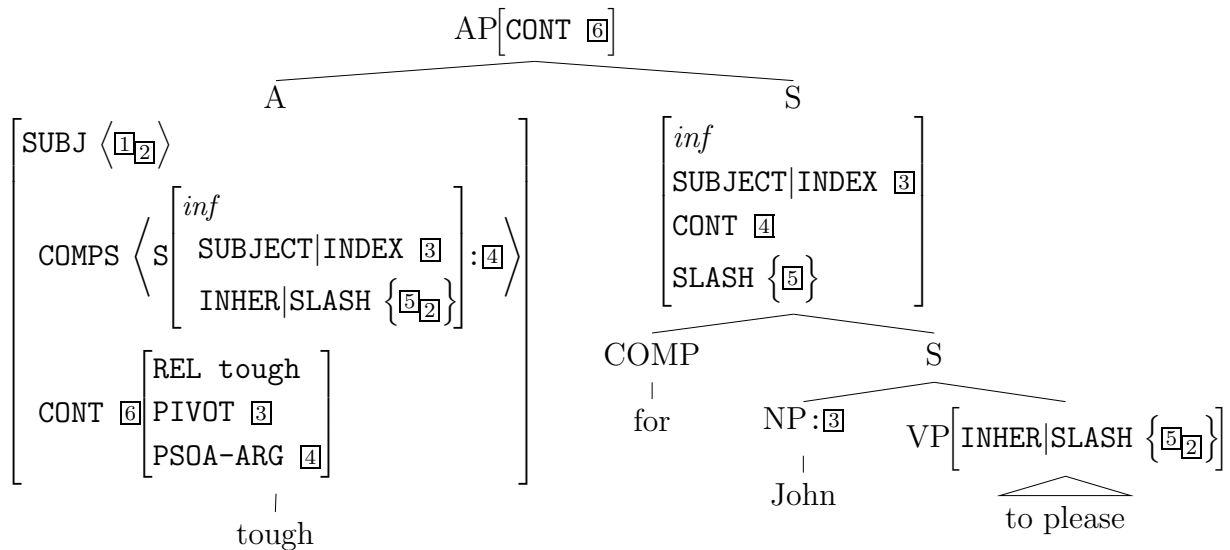
And this solution is just what we are led to seek for the English *tough* data, given the analyses argued for in §3. Adopting Meurers' proposal directly into English allows us to write partial lexical descriptions of the following kind:

(37) $\begin{bmatrix}\textit{verb}\\ \text{HEAD|SUBJECT } \boxed{1}{:}\boxed{2}\\ \text{SUBJ } \left\langle\boxed{1}\right\rangle\\ \text{COMPS } \boxed{3}\end{bmatrix}$

(38) $\begin{bmatrix}\textit{tough-class-adjective}\\ \text{LOC}\begin{bmatrix}\text{CAT}\begin{bmatrix}\text{SUBJ } \left\langle\boxed{4}\boxed{5}\right\rangle\end{bmatrix}\\ \text{COMPS }\left\langle\text{S}\begin{bmatrix}\textit{inf}\\ \text{HEAD|SUBJECT } \boxed{6}\boxed{7}\\ \text{NONLOC|INHER|SLASH }\left\{\boxed{9}\boxed{5}\right\}\end{bmatrix}{:}\boxed{8}\right\rangle\\ \text{CONT}\begin{bmatrix}\text{REL } \textit{tough-reln}\\ \text{PIVOT } \boxed{7}\\ \text{PSOA-ARG } \boxed{8}\end{bmatrix}\end{bmatrix}$

Such descriptions give rise to structures such as (39):

(39)

$$
\begin{array}{c}
\text{AP}\big[\text{CONT}\ \boxed{6}\big]\\[4pt]
\end{array}
$$

A

$$
\begin{bmatrix}
\text{SUBJ}\ \big\langle \boxed{1}\boxed{2} \big\rangle\\[6pt]
\text{COMPS}\ \left\langle \text{S}\begin{bmatrix} inf\\ \text{SUBJECT}|\text{INDEX}\ \boxed{3}\\ \text{INHER}|\text{SLASH}\ \big\{\boxed{5}\boxed{2}\big\} \end{bmatrix}:\boxed{4}\right\rangle\\[18pt]
\text{CONT}\ \boxed{6}\begin{bmatrix} \text{REL tough}\\ \text{PIVOT}\ \boxed{3}\\ \text{PSOA-ARG}\ \boxed{4} \end{bmatrix}
\end{bmatrix}
$$

|
tough

S

$$
\begin{bmatrix}
inf\\
\text{SUBJECT}|\text{INDEX}\ \boxed{3}\\
\text{CONT}\ \boxed{4}\\
\text{SLASH}\ \big\{\boxed{5}\big\}
\end{bmatrix}
$$

COMP S

|
for   NP:$\boxed{3}$ VP$\big[\text{INHER}|\text{SLASH}\ \big\{\boxed{5}\boxed{2}\big\}\big]$

|
John   to please

where the neutral attribute name PIVOT refers to the semantic role associated with the complement clause subject. The semantic content of this AP is a relation between a *psoa* (identified by the tag $\boxed{4}$) and an NP denotation corresponding to the subject of the clause denoting that *psoa* (identified by the tag $\boxed{3}$), exactly as in previous analyses which employed a misanalyzed syntax to support the indicated interpretation of *tough* predicates.

By the same token, *tough* complement clauses with quantified subjects, such as (40), receive correct interpretations.

(40) Robin is easy for NOBODY to please.

An appropriate interpretation for (40) requires that the quantifier in (41) appear in the QSTORE set of the AP *difficult for no one to please* and be retrieved at an appropriate point in the structure, including one reading where it has widest scope.

(41)
$$
\begin{bmatrix}
\text{DET no}\\[4pt]
\text{RESTIND}\ \begin{bmatrix} \text{INDEX}\ \boxed{2}\\ \text{RESTR}\ \begin{bmatrix} \text{RELN person}\\ \text{INSTANCE}\ \boxed{2} \end{bmatrix} \end{bmatrix}
\end{bmatrix}
$$

And this interpretation can be straightforwardly licensed by any of the various quantifier scoping mechanisms available in the HPSG literature.

5 Conclusion

Given the conclusions of the preceding section, it is useful to revisit some of the earlier arguments for the control analysis analysis and show how they essentially disappear, once the possibilities of the assumed representation are appropriately exploited. Thus, consider again Bresnan's arguments about the selectional accessibility of the NP following *for* in *tough* constructions. The crucial points are (i) that these NPs may not be expletives and (ii)

that they may not be nonvolitional referential NPs. In fact, as already argued, both points are subsumed in the observation that the NP following *for* must be capable of volitional behavior.[2] Let us assume that there is a partition of the type *ref* into subtypes *volitional* and *nonvolitional*. Then it is trivial to refine the description in (38) to read as in (42):

$$
(42)\quad
\begin{bmatrix}
\textit{tough-class-adjective} \\[4pt]
\text{LOC}
\begin{bmatrix}
\text{CAT}\begin{bmatrix}\text{SUBJ } \langle \boxed{4}\boxed{5}\rangle\end{bmatrix} \\[10pt]
\text{COMPS } \left\langle \text{S}\begin{bmatrix}\textit{inf} \\ \text{HEAD}|\text{SUBJECT } \boxed{6}\boxed{7}_{vol} \\ \text{NONLOC}|\text{INHER}|\text{SLASH } \{\boxed{9}\boxed{5}\}\end{bmatrix}:\boxed{8}\right\rangle
\end{bmatrix} \\[24pt]
\text{CONT}\begin{bmatrix}\text{REL } \textit{tough-reln} \\ \text{PIVOT } \boxed{7} \\ \text{PSOA-ARG } \boxed{8}\end{bmatrix}
\end{bmatrix}
$$

There is, therefore, no further reason to take the saturated status of the constituent containing the element which will also contribute a semantic argument to a predicate outside that constituent as an argument on behalf of the control analysis. By the same token, the nonoccurrence of dummy elements or idiom chunks to appear following *for* in *tough* constructions, as in **That park would be easy for there to be a riot in*, would follow immediately from (42).

It remains to be seen, however, whether this approach can be part of a more general treatment of the way in which infinitival subjects are grammatically engages with constituents outside them in unexpected ways. For example, it is clear from examples such as

(43) No, you've got it backwards—it's [S for [S ROBIN to get the job]] that I'm so eager —
.

that the complement of *eager* is an infinitival clause. Yet the reflexivation facts are mysterious under this analysis: *John$_i$ is naturally eager for himself$_i$ /*??him$_i$ to get the job* suggest that speakers regard *himself* as locally o-commanded by *John*, contrary to the independent syntactic evidence alluded to. There thus seems to something more general going on, involving a kind of ambivalent status for subjects of an embedded infinitival clause that has no counterpart in the case of finite clauses. Whether this phenomenon and that of the propagation of information about *tough* complement subjects are related represents a interesting question for future research.

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[2]It is not clear that this is the correct generalization. Examples such as *That breakwater will prove difficult for even the biggest ocean waves to get past* seem quite acceptable, although, to my ear and that of several informants, there is something slightly odd about them, involving some residual attribution of sentience to ocean waves and the like. These qualifications are irrelevant to the point at issue.

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