Control vs. Raising in English
A Dependency Grammar Account

Timothy Osborne
Zhejiang University
Hangzhou
China
tjo3ya@yahoo.com

Matthew Reeve
Zhejiang University
Hangzhou
China
mjreeve@zju.edu.cn

Abstract
This contribution presents a dependency grammar (DG) account of control and raising in English. Due to the minimalism of DG analyses of sentence structure, the difference between control and raising cannot be captured in the syntactic structure alone. The situation forces the DG account to reach to some other aspect of dependency syntax other than the raw hierarchies of structure to account for the differences between control and raising. This other aspect is valency. Valency has, of course, been a central subtheory of dependency syntax since Tesnière (1959/2015: Book D). By augmenting the valency frames of predicates to distinguish between valents that are and are not semantic arguments of the predicate at hand, the differences between control and raising can be acknowledged and accommodated.

1 Control vs. raising
The distinction between control and raising predicates in English and related languages is well established. These two types of predicates have a combinatory potential that appears to be essentially the same at first blush, e.g.

(1) a. Sam preferred to stop.
b. Sam seemed to stop.

The control predicate preferred and the raising predicate seemed both combine with a to-infinitive. This similarity obscures the fact that there are important differences in how the two behave semantically.

Consider in this regard that many DGs would produce structural analyses of these two sentences that are hierarchically the same, e.g.

(1) preferred
Sam
\hspace{2em} to
\hspace{2em} stop
a'. Sam preferred to stop.

The finite verb in these cases is clearly the clause root, and the subject and to-infinitive are then dependents of the root. Given this state of affairs, it might seem that DG has nothing to say about the differences between these two classes of predicates.

The differences between control and raising predicates are substantial. For instance, one can often form the passive of a control predicate, but not of a raising predicate, e.g.

(2) a. To stop was preferred (by Sam).
b. *To stop was seemed (by Sam).

The expletive there can often combine with a raising predicate, but not with a control predicate, e.g.

(3) a. *There preferred to be objections.
b. There seemed to be objections.

Further, raising often allows the alternative formulation with expletive it and a full clause or to-infinitive, e.g.

(4) a. *It preferred that Sam stopped.
b. It seemed that Sam stopped.

The aspect of control and raising predicates that helps one understand how these differences exist lies with the (in)ability of the predicate at hand to semantically select (one of) the valent(s) that it takes. Control predicates semantically select their valent(s), whereas raising predicates do not semantically select (one of) their valent(s).

Semantic selection is indeed the concept necessary for accounting for examples (2–4). The control predicate prefer semantically selects an experiencer valent (Sam in 1a). The raising predicate seem does not, in contrast, place any semantic restrictions on its subject valent, but rather its subject valent must be compatible with the embedded...
predicate. This means that just the embedded predicate to stop in (1b) semantically selects the subject Sam, whereas both the matrix predicate preferred and the embedded predicate to stop in (1a) semantically select the subject predicate Sam. The primary difference between control and raising predicates therefore resides with the locus of semantic selection, i.e. matrix predicate and/or embedded predicate.

Acknowledging that there are indeed important differences between control and raising predicates, DG would seem to be challenged, since the structural analyses DGs produce of such predicates cannot distinguish any significant hierarchical difference between them, as illustrated with the trees (1a'-b').

The greater goal of this manuscript is to investigate the distinction between control and raising predicates from a DG perspective. The message delivered is that the differences between the two predicate types indeed cannot be captured in the hierarchy of structure, but rather it should be located in the subtheory of valency. Valency frames that are sufficiently augmented to distinguish between argument and non-argument valents can capture the differences between control and raising.

2 Terminology

A control predicate such as prefer involves so-called subject control, because the matrix subject is also the understood subject of the embedded predicate. A raising predicate such as seem is known as a raising-to-subject verb because it appears as though the subject of the embedded predicate has been raised into the position of the matrix subject. We build on this sort of terminology here, although the specific terms we employ to denote these predicate types are more exact: prefer is called a subject-to-subject (S-to-S) control predicate, and seem a subject-from-subject (S-from-S) raising predicate.

The motivation for this use of terminology is illustrated schematically as follows:

\[
\begin{align*}
\text{S-to-S control} & \\
(4) & \\
\text{a. Bill prefers } & \text{to nap in the afternoon.} & \text{S-from-S raising} \\
\text{b. Bill seems } & \text{to nap in the afternoon.}
\end{align*}
\]

The arrows now show the distinction between control and raising. The appearance of to or from in the two terms captures the fundamental distinction just sketched in the previous section. The subject valent of the matrix predicate prefers in (4a) is conveyed to the embedded predicate, so that it can serve as the subject of that predicate. In contrast, the raising predicate seems in (4b) raises its subject valent from the subject position of the embedded predicate.

Note that our use of terminology should be understood metaphorically. We do not, namely, advocate a transformational understanding of these structures, but rather we are employing the terminology in a manner that we think is accessible to the widest possible audience. The type of DG we advocate is decidedly monostratal in syntax.

The schematic notions just employed can be extended to denote other types of control and raising predicates. Cases of so-called object control and raising-to-object can be denoted more exactly as object-to-subject (O-to-S) control and object-from-subject (O-from-S) raising, e.g.

\[
\begin{align*}
\text{O-to-S control} & \\
(5) & \\
\text{a. Sue asked Jim } & \text{to stay.} & \text{O-from-S raising} \\
\text{b. Sue expected Jim } & \text{to stay.}
\end{align*}
\]

The there-diagnostic verifies that ask is a control predicate, and expect a raising predicate: *Sue asked there to be a problem vs. Sue expects there to be a problem.

The dependency hierarchies for these sentences are as follows:

\[
\begin{align*}
\text{asked} & \\
\text{Sue} & \text{Jim to stay} & \text{expected} \\
\text{a'. Sue asked Jim to stay.} & \\
\text{b'. Sue expected Jim to stay.}
\end{align*}
\]

These trees demonstrate again that from the DG perspective, there is no hierarchical difference in the syntactic structure across control and raising predicates. The differences lie, rather, in the lexicon with the combinatory potential of the distinct predicate types.

The types of control and raising predicates mentioned so far are widely acknowledged and have been studied a lot, as is apparent in textbook
accounts (e.g. Haegeman 1991: 237–70, 282–95, Radford 2013: 431–50, Carnie 2013: 431–56). The terminology adopted here suggests, however, that the typology goes further, that is, that additional types of control and raising predicates can be discerned. This is indeed the case. One can also identify S-to-O and O-to-O control predicates as well as S-from-O and O-from-O raising predicates. The following tables provide an overview of all eight predicate types with representative examples given.

| Control predicates |
|-------------------|
| **S-to-S**        |
| ask, attempt, begin, eager, expect, happy, have, hope, refuse, reluctant, start, stop, try, too+adjective, want, willing |
| **S-to-O**        |
| available, heavy, light, pretty, ready, soft, tasty, too+adjective |
| **O-to-S**        |
| ask, encourage, force, hear, help, listen, persuade, tell |
| **O-to-O**        |
| bring, build, buy, create, give, take |

| Raising predicates |
|-------------------|
| **S-from-S**      |
| appear, apt, certain, happen, have, likely, prove, seem, tend, threaten, unlikely |
| **S-from-O**      |
| bad, easy, difficult, fun, good, hard, tough, |
| **O-from-S**      |
| assess, believe, consider, deem, expect, judge, make, need, see, view, want |
| **O-from-O**      |
| have, get, want  |

Four of these predicate types have already been mentioned and illustrated above. The status of the remaining four as control and raising predicates is less known and certainly controversial. They are illustrated and discussed below in Section 8.

Observe that some predicates appear in more than one category. Many predicates can license control or raising based on context, e.g. expect, want. This points to an important aspect of these categories. Most control and raising verbs and adjectives (and nouns) have a combinatory potential that is to a greater or lesser degree flexible, hence often two or more (often many more) distinct valency frames characterize the combinatory potential of a given verb or adjective (or noun).1

### 3 Structural analysis

The dependency trees (1a–b') and (5a–b') have demonstrated that the basic structural analyses that DGs produce do not distinguish between control and raising in the hierarchy of structure. This fact seems problematic in view of the differences across the two. One might expect, namely, that given the differing behaviors with respect to passivization, there-insertion, and it-extraposition that significantly different structures for each would obtain.

Indeed, one might strive to accommodate the differences by pursuing distinct structural analyses. For instance, sentences (5a–b) could be analyzed as follows:

![Diagram](Image)

The analysis given as (5a') is the same as (5a). The analysis given as (5b'), however, is different from (5b'); the object Jim has been subordinated to the particle to in a manner that suggests a small-clause-type account. Certainly, other variations on the analysis given as (5b') are also conceivable. The point to be established next, though, is that there are good reasons to reject analyses along the lines of (5b'). The ternary branching analysis given as (5b') is in fact well motivated (cf. Kunze 1975: 111–2, Schubert 1987: 94–6, and Heringer 1996: 76–7)).

O-to-S control predicates like ask and O-from-S raising predicates like expect actually behave the same with respect to a battery of other diagnostics, as illustrated next:

**Topicalization**

(6)  

a. *Jim to stay* Sue ask. 

b. *Jim to stay* Sue expect. 

c. *Jim* Sue did ask to stay. 

---

1 That nouns license control and/or raising is evident with NPs such as *These hot wings are bitch to enjoy*. Due to space limitations, however, nouns in this role are not examined in this contribution.
d. ...but Jim Sue did expect to stay.

Clefting

(7) a. *It was Jim to stay that Sue asked.
b. *It is Jim to stay that Sue expected.
c. It was Jim who Sue asked to stay.
d. It was Jim who Sue expected to stay.

Passivization

(8) a. *Jim to stay was asked (by Sue).
b. *Jim to stay was expected (by Sue).
c. Jim was asked (by Sue) to stay.
d. Jim was expected (by Sue) to stay.

Reflexivization

(9) a. *Sue did ask her to stay.
b. *Sue did expect her to stay.
c. Sue did ask herself to stay.
d. Sue did expect herself to stay.

Each of these four data sets illustrates an aspect of control and raising predicates that supports the relatively flat, ternary-branching analyses given as (5a'–b').

The topicalization data illustrate that Jim to stay cannot be fronted, whereas Jim alone can. Similarly, the clefting data illustrate that Jim to stay cannot be focused as the pivot of cleft sentence, whereas Jim alone can be. The passivization data demonstrate that Jim to stay cannot become the subject of a passive sentence, but Jim alone can; and the reflexivization data show that if co-reference obtains across the subject and object, then the object must appear as a reflexive; this fact is, then, congruent with the flat analysis, where the object is a dependent of the matrix predicate. In sum, the four diagnostics are consistent with the flat analysis, where Jim to stay does not form a constituent (i.e. a complete subtree) and both Jim and to stay are immediate dependents of the matrix predicate.2

There is a fifth observation that further strengthens the ternary branching analysis given as (5a–b). It is possible to insert an adverb that modifies the matrix predicate between the object nominal and the embedded predicate, e.g.

(10) judged

The arrow dependency edge (pointing from once to judged) marks once as an adjunct. Using a particular visual convention like this in the dependency tree to identify adjuncts has precedent, although the specific convention used varies (e.g. Tarvainen 1981: 61, Engel 1994: 44, Eroms 2000: 85–6).

The position of the adverb once between the object him and the to-infinitive is accommodated if the structural analysis shown is assumed. There is no semantic contradiction, since the adverb once modifies the ‘judging’, and the adverb twice, the ‘lying’. The alternative analysis that positions him as a dependent of to (or have) would incur a projectivity violation, since once would still necessarily be a modifier, i.e. a dependent, of judged.

In sum, the fact that control and raising structures receive the same structural analysis here is well motivated and should therefore not be construed as a problem for DG more generally. It does, though, raise the basic question about how DGs can capture the distinction in an insightful way. The point established below is that a DG can do this in terms of the combinatorial potential of the relevant predicates. This combinatorial potential is captured with valency frames.

4 Phrase structure accounts

Before proceeding to the discussion of valency frames, it is worth considering how the control vs. raising distinction is addressed in some phrase structure grammars (PSGs). The Government and Binding framework explored the distinction between control and raising extensively (e.g. Chomsky 1981: 55–92). It captured the distinction in terms thematic marking and null elements. The null element PRO was put forth as a means of understanding control, and in cases of raising, a trace t was placed in the base position of the raised constituent.

2 See Hays (1960:261, 1964:520) and Kunze (1975:13) for the use of the term complete subtree of dependency syntax as being analogous to the constituent of phrase structure syntax.
Given the null elements PRO and t, control and raising predicates were analyzed along the following lines:

Subject control
(11) a. Neil₁ refused PRO₁ to slow down.
   Object control
   b. They forced Neil₁ PRO₁ to slow down.

Raising-to-subject
(12) a. Neil₁ appeared t₁ to slow down.
   Raising-to-object
   b. They need Neil₁ t₁ to slow down.

Hence the fundamental insight that control predicates do, but raising predicates do not, semantically select (one of) their valent(s) is captured via the presence of distinct types of null elements and, in the case of raising, the assumption that movement occurs.

Stepping back for a moment, positing the existence of null elements such as PRO and t is independent of the dependency vs. phrase structure distinction. In this regard, nothing prevents a DG from also addressing the control vs. raising distinction in terms of null elements and movement. One could, for example, advocate for the following structural analyses of the examples just given:

A theory of syntax that acknowledges such null elements takes the control vs. raising distinction to be a phenomenon of syntax. This is particular true of traces, since their existence is contingent upon the occurrence of movement, a transformational notion that is located entirely in syntax.

While nothing prevents a DG from positing the existence of null elements and movement, DGs have traditionally been loath to do so. DG by nature is strongly lexical. This is in fact a necessity, since the minimalism of dependency structures cannot accommodate the richness of category distinctions associated with some PSGs. For instance, DGs are incapable of locating in the rich hierarchy functional categories posited by the Minimalist Program (MP), e.g. Focus Phrase (FP), Agreement Phrase (AgrP), Tense Phrase (TP), Topic Phrase (TopP), etc.

What all this means for the DG analysis of control and raising predicates is that an approach that looks to the lexicon is more consistent with the spirit of dependency syntax. The distinction between control and raising predicates resides with the combinatory potential of the relevant predicates, and this combinatory potential is captured via valency frames.

5 Three options

There are three basic options for addressing control and raising in dependency syntax:

1. Networks,
2. An augmented inventory of syntactic relations, and/or
3. Augmented valency frames

The first option, i.e. networks, stipulates additional dependencies to show the extent to which control and raising predicates designate one of their valents to serve as the valent of a lower predicate. The second option adds more syntactic relations and then addresses the difference between control and raising in terms of these additional relations. The third option locates control and raising entirely in the lexicon and distinguishes between them in terms of valency frames. The third option is the one pursued below.
Most DGs conceive of syntactic structure in terms of trees. Trees are not a necessity, however. When a dependency grammar allows a given word to have more than a single parent word, it assumes networks. Word Grammar (e.g. Hudson 1990) is perhaps the most prominent DG to assume networks. The Word Grammar analysis of control and raising structures is along the following lines:

(13)

a. Frank tried to understand.

b. Frank appeared to understand.

The fact that Frank is the logical subject of both the matrix and the embedded predicate is indicated directly in these cases by the fact that both tried/appeared and understand are shown as the parent of Frank.

While these networks accommodate the fact that Frank is the valent of two predicates at the same time, the presence of the additional dependency does not alone distinguish between control and raising. Something more is needed to this end. This necessity brings the discussion to the second option, namely an augmented inventory of syntactic relations.

Many DGs take the syntactic relations to be primitive and grant them an important role in the theory of syntax. In this regard, the distinction between control and raising might be addressed in terms of an augmented list of syntactic relations – cf. Mel’čuk and Persov (1987). The additional relations would be such that they would discern when control or raising is present. One might, for instance, posit distinct syntactic relations along the following lines (SUBJC = subject control, SUBJR = subject raising):

(14)

a. Frank is trying to understand.

b. Frank should appear to understand.

The presence of the labels indicating the pertinent syntactic relations in these two cases would discern and distinguish between control and raising. Note, however, the presence of the auxiliary verbs, is in (14a) and should in (14b). Their presence combined with the fact that the subject is an immediate dependent of the finite verb obscures the insight that it is the content verbs tried and appeared that are responsible for the presence of the syntactic realtions SUBJC and SUBJR.

The points just established reveal difficulties associated with the first two options for discerning and distinguishing between control and raising in dependency syntax. The first option, i.e. networks, is rejected here in part because we believe trees are a simpler and more principled basis for dependency syntax. The second option, i.e. an augmented inventory of syntactic relations, is also deemed insufficient for capturing the distinction between control and raising because they alone do not make clear that control and raising phenomena are closely linked to specific predicates.

The third option, namely valency frames, avoids networks at the same time that it ties control and raising closely to specific predicates. The discussion now turns to these valency frames.

6 Valency frames

There is a long tradition of using valency frames, especially in the German language literature. In German, a valency frame is often called a Satzmuster ‘sentence pattern’. Dictionaries of German provide dozens of Satzmuster as a guide to correct use of verbs and adjectives (and other types of predicates), e.g. div Wörterbuch der deutschen Sprache (1978: 30–3). To my knowledge, however, these dictionaries do not distinguish between control and raising predicates in a consistent and principled manner. The discussion here henceforth demonstrates how these frames can distinguish between control and raising predicates in English.

Table 3 gives the symbols employed in the valency frames below. The table is intended to serve as a quick reference guide to the valency frames introduced and discussed further below.

| Symbol | What the symbol means |
|--------|-----------------------|
| a      | Marks an argument valent; the absence of this subscript indicates that the valent is not an argument of its governor |
7 To/from-subject predicates

The following four subsections provide examples of the four types of control and raising predicates already mentioned above. These predicates have the/a matrix valent serving as the subject argument of the embedded predicate. In order to have more space for the discussion for the more controversial types of control and raising discussed in Section 8, the discussion in this section is very brief.

7.1 S-to-S control

S-to-S control predicates are numerous and they occur frequently. Both verbs and adjectives can establish S-to-S control, e.g.

(15) tried
        Frank        to
        rest

a. Frank tried to rest.
b. TRY$_f$ [N$_a$, T$_a$]

(16) would
        Susan        to
        drink vodka.

a. Susan would like to drink vodka.
b. LIKE$_{af}$ [N$_a$,$\uparrow$, T$_a$]

(17) are
        They        to
        continue

a. They are reluctant to continue.
b. RELUCTANT [N$_a$,$\uparrow$, T$_a$]

The single underline under N marks that valent as controlling the embedded to-infinitive predicate. Hence the single underline marks that valent as the understood subject valent of the to-infinitive. The up-arrow in (16b) indicates that that valent is not a dependent of the nonfinite like, but rather it appears higher in the structure – in this case, as a dependent of the root verb would.

The up-arrow is a convention that helps characterize the primary combinatory difference between finite verbs and other nonfinite forms of predicates. For the use of similar means to indicate that the subject valents are typically not dependents of nonfinite forms, see Heringer (1996: 44, 62) and Starosta (2003: 275–6).

7.2 S-from-S raising

S-from-S raising also occurs with both verbs and adjectives, e.g.

(18) is
certain

She
to
fall asleep

a. She is certain to fall asleep.
b. CERTAIN [R$_\uparrow$, T$_a$]

(19) a. The fridge is threatening to explode.
b. THREATEN$_{af}$ [R$_\uparrow$, T$_a$]
(20) a. They are unlikely to succeed.
   b. UNLIKELY [ R↑, T,a]
These valency frames differ from those just given in the previous section regarding the presence of R and the absence of the a subscript on R. The R indicates that that valent is not syntactically selected by its parent, and the absence of the a subscript always indicates that that valent is also not semantically selected by its parent. At the same time, the single underline continues to indicate that that valent serves as the subject argument of the embedded infinitival predicate.

7.3 O-to-S control
O-to-S control predicates are also numerous, and they occur frequently as well. Examples follow:

(21) a. She asked me to come early.
   b. ASK↓[N,a, N,b, T,a]

(22) a. They have forced him to try it.
   b. FORCE↓[N,a, N,b, T,a]

(23) a. Jill told us to start immediately.
   b. TELL↓[N,a, N,b, T,a]

The object now controls the embedded to-infinitive, functioning as its subject argument. The single underline continues to indicate that that valent serves as the understood subject valent of the embedded predicate.

7.4 O-from-S raising
O-from-S raising predicates have the matrix object, as opposed to the matrix subject, being semantically selected by the embedded nonfinite predicate. Only verbal predicates can do this, e.g.

(24) a. We consider you to be reliable.
   b. CONSIDER↓[N,a, N,b, T,a]

(25) a. They will need us to help them.
   b. NEED↓[N,a, R↑, T,a]

(26) a. He wants them to leave.
   b. WANT↓[N,a, R↑, T,a]

The R and the absence of the a subscript on the R are again the means by which raising is indicated. The single underline continues to show that that valent serves as the subject valent of the embedded predicate.

8 To/from-object predicates
The following four subsections consider S-to-O and O-to-O control predicates as well as S-from-O and O-from-O raising predicates. The extent to which the predicates discussed are indeed control or raising predicates is less acknowledged and/or controversial. This, then, is arguably the merit of the current account; it discerns generalizations about control and raising predicates that have been overlooked.

8.1 S-to-O control
The typical S-to-O control predicates is an adjective, e.g. available, fit, heavy, light, pretty, ready, soft, tasty, ugly, unavailable:

(27) a. Susan is pretty to look at.
   b. PRETTY [ N,a↑, T,b]
   c. *It is pretty to look at Susan.

(28) a. These nuts are tasty to snack on.
   b. TASTY [ N,a↑, T,b]
   c. *It is tasty to snack on these nuts.

(29) a. This coat is soft to touch.
   b. SOFT [ N,a↑, T,b]
   c. *It is soft to touch this coat.

The unacceptability of the c-sentences here reveal that pretty, tasty, and soft are not raising predicates. The b-examples show how the combinatorial potential of these predicates is captured in valency frames. The double underline marks the subject valent as controlling an object that appears lower in the structure. The fact that the subject N bears the a subscript indicates that raising is not involved.

An interesting aspect of S-to-O control is that many adjectives can be coerced into becoming such predicates by the appearance of too, e.g.
n cases of a lower predicate, valency is hence problematic. This matter is open issue and that an account of such data in terms of such movement indicates that the R valent serves as the object of that predicate. Note that in such cases of a predicate used attributively, the up-arrow in the valency frame continues to capture the fact that the subject valent of the predicate is not a dependent of that predicate. Note also that the R valent does not occur. In cases of attributive use, the subject valent is always a nominal.

8.2 S-from-O raising

S-from-O raising is more widely known under the rubric of tough-movement – a reference to the adjectival tough as the typical predicate that licenses such movement (e.g. McCawley 1998: 107–10, Culicover and Jackendoff 2005: 342–47). The double underline again serves to indicate that the valent serves as the object of a lower predicate, e.g.

(30) couch
     is
     large
     to move
     The
     too

a. The couch is too large to move.
b. TO LARGE [R↑, Tₙ]

(31) a. Tom is too clever to fool.
b. TOO CLEVER [R↑, Tₙ]

(32) a. This essay is too long to read.
b. TOO LONG [R↑, Tₙ]

Without too, the adjectives large, clever, and long are not control predicates. The ability of the degree adverb too to coerce adjectives that alone are not control predicates is also true in cases of S-to-S control, e.g.

(33) a. Frank is too lazy to get up early.
b. TOO LAZY [R↑, Tₙ]

(34) a. Larry is too slow to catch us.
b. TOO SLOW [R↑, Tₙ]

(35) a. Harriet is too careful to get caught.
b. TOO CAREFUL [R↑, Tₙ]

The combinatorial difference across (30–32) and (33–35) is captured with the underlines, double vs. single.³

8.3 O-to-O control

Candidates for an analysis in terms of O-to-O control are listed next: bring, build, buy, create, find, give, take, e.g.

(37) a. The floor is easy to clean.
b. EASY [R↑, Tₙ]
c. It’s easy to clean this floor.

(38) a. A break is good to get.
b. GOOD [R↑, Tₙ]
c. It’s good to get a break.

The double underline shows that that valent serves as the object of the/a predicate appearing lower in the structure. The R and the absence of the subscript on the R valent indicate that that valent is neither syntactically nor semantically selected by the predicate.

The valency frames just introduced to capture the combinatory potential of S-from-O raising are also capable of characterizing these predicates when they are used attributively – although an additional assumption is necessary, e.g.

(39) book
     is
     over
     to read
     A fun
     
     there

a. A fun book to read is over there.
b. FUN [R↑, Tₙ]

The attributive adjective fun clearly governs the to-infinitive to read. The word order is such, however, that a non-projective structure should obtain due to the intervening noun book. To overcome this non-projective structure, rising is assumed, as indicated with the dashed dependency edge and the subscript (see Groß and Osborne 2009). Note that in such cases of a predicate used attributively, the up-arrow in the valency frame continues to capture the fact that the subject valent of the predicate is not a dependent of that predicate. Note also that the R valent does not occur. In cases of attributive use, the subject valent is always a nominal.

³ An anonymous reviewer points out that combinations such as too large, too lazy, etc. are not stored in the lexicon as single lexical items and that an account of such data in terms of valency is hence problematic. This matter is open issue.
8.4 O-from-O raising

The final type of raising is O-from-O raising. This type of raising occurs infrequently. We are aware of just a couple of verbs that qualify as such predicates: have, get, and want, e.g.

\[\text{have} \quad \text{to} \quad \text{tease} \]

\[\text{I} \quad \text{have} \quad \text{to} \quad \text{tease.}\]

\[\text{GET}_{T} \quad [N_{a}, R, T_{a}]\]

\[\text{You} \quad \text{her} \quad \text{to} \quad \text{kiss} \]

\[\text{You} \quad \text{got} \quad \text{her} \quad \text{to} \quad \text{kiss.}\]

\[\text{GET}_{T} \quad [N_{a}, R, T_{a}]\]

Observe as well that the object R in these examples is a definite pronoun. This fact again supports the flat analysis shown, since it contradicts the alternative analysis that positions the to-infinitive as a dependent of the object – definite pronouns do not accept postdependents. Observe that as with the examples of O-to-O control in the previous section, nonobligatory subject control is also present in these examples. We again know that control is pragmatically determined in such cases because it is possible to vary the understood subject of the to-infinitive, e.g. For my kids, I want these to eat.

Another interesting aspect of these predicates is that they also alternatively license O-from-S raising, e.g.

\[\text{had} \quad \text{a} \quad \text{house} \quad \text{painted} \]

\[\text{I} \quad \text{had} \quad \text{a} \quad \text{house} \quad \text{painted.}\]

\[\text{hab}_{T} \quad [N_{a}, R, P_{a}]\]

\[\text{I got my paper corrected.}\]

\[\text{GET}_{T} \quad [N_{a}, R, P_{a}]\]

\[\text{They wanted it revised.}\]

\[\text{WANT}_{T} \quad [N_{a}, R, P_{a}]\]
Used in this way, the predicates have, get, and want no longer involve control. The appearance of the passive participle forces the account to assume that the object functions as the subject of the embedded participle, rather than as its object.

9 Conclusion

This contribution has presented a DG account of obligatory control and raising. Due to the minimal nature of dependency structures, the distinction cannot be captured in the hierarchy of words; it can, rather, be captured in valency frames. The valency frames introduced here distinguish between control and raising mainly via the presence/absence of the subscript and the R valent. When a subscript is absent, the valent is not semantically selected by the predicate. A particular merit of the approach is its ability to distinguish between various types of control and raising predicates, eight in all.

References

Andrew Carnie. 2013. Syntax: A Generative Introduction, 3rd edition. Wiley-Blackwell, Malden, MA.
Noam Chomsky. 1981. Lectures on Government and Binding: The Pisa Lectures. Foris Publications, Dordrecht.
Peter Culicover and Ray Jackendoff. 2005. Simpler Syntax. Oxford University Press.
dtv Wörterbuch der deutschen Sprache. 1978. Herausgegeben von Gerhard Wahrig. Deutscher Taschenbuch Verlag GmbH, München.
Ulrich Engel. 1994. Syntax der deutschen Gegenwartsprache, 3rd fully revised edition. Erich Schmidt, Berlin.
Hans-Werner Eroms. 2000. Syntax der deutschen Sprache. de Gruyter, Berlin.
Thomas Groß and Timothy Osborne. 2009. Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43–90.
Liliane Haegeman. 1991. Introduction to Government & Binding Theory. Blackwell, Oxford, UK.
David G. Hays. 1964. Dependency theory: A formalism and some observations. Language 40, 511–25.
Hans Jürgen Heringer. 1996. Deutsche Syntax Dependentiell. Staufenberg, Tübingen.
Richard Hudson. 1990. English Word Grammar. Basil Blackwell, Oxford, UK.
Jürgen Kunze. 1975. Abhängigkeitsgrammatik. Studia Grammatica 12. Akademie Verlag, Berlin.
James McCawley. 1998. The Syntactic Phenomena of English, 2nd ed. The University of Chicago Press.
Igor Mel’čuk and Nikolai Pevtsov. 1987. Surface syntax of English: A formal model with the Meaning-Text Framework. John Benjamins, Amsterdam.
Klaus Schubert. 1987. Metataxis: Contrastive dependency syntax for machine translation. Foris Publications, Dordrecht.
Stanley Starosta. 2003. Dependency grammar and lexicalism. In Vilmos Ágel et al. (eds.), Dependency and Valency: An International Handbook of Contemporary Research, vol. 1, pp. 270–81. Walter de Gruyter, Berlin.
Kalevi Tarvainen. 1981. Einführung in die Dependenzgrammatik. Max Niemeyer Verlag, München.
Lucien Tesnière. 1959. Éléments de syntax structurale. Klincksieck, Paris.
Lucien Tesnière. 2015 (1959). Elements of structural syntax, translated by Timothy Osborne and Sylvain Kahane. John Benjamins, Amsterdam.