The Semantic Basis of Control in English
Ray Jackendoff
Brandeis University
and Peter W. Culicover
The Ohio State University

To appear in *Language*

Abstract

The intent of the present paper, in the face of a persistent tradition of studying control in purely syntactic terms, is to reiterate the fundamental importance of semantics in the control problem, and to articulate some of the semantic factors more precisely than has heretofore been possible. After presenting familiar obstacles to a theory of control based on syntactic binding, we make a three-way distinction between ‘unique control’ (usually called Obligatory Control), ‘free control’, and ‘nearly free control’ (the last two falling under traditional Nonobligatory Control). We show that in a very large class of cases of unique control, the controlled VP denotes an action and the controller is the character who has the onus for that action. This analysis is applied to four major classes of control verbs and their nominals, as well as a class of adjectives, showing that semantic role reliably identifies the controller, and syntactic position does not. Through a formalization in terms of Conceptual Structure, we begin to be able to explain much of control directly from the lexical decomposition of the matrix verb. Several classes of exceptions to the conditions on unique control are treated as cases of coercion, in which extra conventionalized semantic material is added that is not present in syntax.*

*This paper is a companion piece to Culicover and Jackendoff 2001, which argues against Hornstein's (1999) proposal that control is actually a species of movement. Some of the discussion here requires repeating material discussed in our earlier paper, for which we beg the indulgence of readers familiar with it.

Some of this material was presented at the University of Stuttgart. We would like to thank Sten Vikner, Ian Roberts, and others in the audience for helpful comments and questions. We also thank Adele Goldberg for useful discussion of many of these issues, and Brian Joseph, Richard Oehrle, and two anonymous readers for many important comments on an earlier version. Naturally we alone are responsible for any deficiences.

This research was supported in part by NIH Grant DC 03660 to Brandeis University, in part by a grant from the James S. McDonnell Foundation to the Ohio State University, and in part by a Fellowship to Ray Jackendoff at the Wissenschaftskolleg zu Berlin.
1. Introduction. The control problem concerns how to determine the understood subject of infinitival or gerundive VPs that lack an overt local subject, for instance the bracketed constituents in 1.

(1) a. John likes \[to\_dance with Sarah\]
   b. John enjoys \[dancing with Sarah\]
   c. John talked to Sarah, about \[i/j/i+i+gen\_dancing with Jeff\]
   d. John urged Sarah, \[to\_j*i+i*r*i gen dance with Jeff\]

In 1a, b, John is understood as the character whose dancing is under discussion; John is said to control the complement VP or be its controller. We notate this relation by coindexing John with the verb it controls. In 1c, either John or Sarah – or both together – can be understood as the dancer(s) under discussion; the last of these possibilities is notated with the subscript \(i+j\). John may also be talking about dancing with Jeff in the abstract, with no particular dancer in mind; this interpretation is generally called 'arbitrary control' and is notated here with the subscript gen (generic). Like 1c, 1d presents two potential controllers in the main clause. But in this case only Sarah can be construed as controller, and joint and generic control are impossible. Solving the control problem thus requires identifying the factors that determine possible controllers in any given circumstance.


The intent of the present paper, in the face of a persistent tradition of studying control in purely syntactic terms, is to reiterate the fundamental importance of semantics in the control problem, and to articulate some of the semantic factors more precisely than has heretofore been possible. At the same time, we also pinpoint some syntactic factors relevant to control. We can by no means solve all the complexities of the control problem here, but we do cover a rich and important subclass of cases in detail, demonstrating their semantic basis.

A quick survey of where we are headed: Section 2 briefly presents some of the obstacles to a theory of control based on syntactic binding, then sorts out some aspects of control which are nevertheless purely syntactic. This sets the stage for a descriptive typology of control – the distinction between free control, nearly free control (the case shown in 1c), and unique control (shown in 1d), each offering a different range of possible controllers. Some aspects of this three-way distinction are familiar, but some are new; we take this distinction to replace the traditional distinction between Obligatory and Nonobligatory Control.

The question then arises as to what is responsible for this distinction. Most of the rest of
our discussion is devoted to unique (Obligatory) control: we show that in a very large class of cases of unique control, the controlled VP denotes an action – usually a voluntary action – and the controller is the character who has the onus for that action. Section 3 discusses lexical selection of actional arguments and shows that there is no reliable syntactic cue for this semantic category. Section 4 shows how this analysis applies to four major classes of control verbs and their nominals, as well as a class of adjectives. In particular, we show that semantic role reliably identifies the controller, and syntactic position absolutely does not. To some extent we cover familiar ground here, but we deepen the analysis with a broader range of examples. Section 5 begins to formalize the semantics, showing how the descriptive generalizations follow from the formal character of predicates that select actions as arguments. As a consequence, we begin to approach the goal of explaining much of control directly from the lexical decomposition of the matrix verb.

Section 6 deals with a well-known class of exceptions to the conditions of unique control, and, following Sag and Pollard 1991 and Pollard and Sag 1994, proposes that they are cases of ‘coercion’, in which extra conventionalized semantic material is added that is not present in syntax. We differ from Pollard and Sag, however, in our view of how coercion fits into the grammar and in the content of the specific coercions involved in these cases of control. Section 7 proposes a further instance of coercion to account for the phenomenon of partial control discussed at length by Landau 2000. Section 8 assesses the situation, in particular making clear how much is left to explain.

Our study suffers from the limitation that it is restricted to English. Our impression from the literature (e.g. Van Valin and LaPolla 1997) is that control behaves cross-linguistically in much the same fashion, but we will not verify this here. On the other hand, we make frequent appeal to control in English nominals, a class of evidence that is seldom cited in the literature (exceptions are Jackendoff 1972, 1974, Williams 1985, and Sag and Pollard 1991, Pollard and Sag 1994) but that proves exceptionally revealing.

2. A typology of control.

2.1. Motivation for pursuing a semantic solution. Let us begin with some relatively simple observations, most of which have appeared several times in the literature (yet are often neglected). First, a thoroughly syntactic theory of control (e.g. Chomsky 1981, Manzini 1983) treats control as a subcase of syntactic binding. This requires a syntactic NP (usually called PRO) to serve as the subject of the controlled VP, plus a syntactic NP that serves as the antecedent of PRO, to which PRO can be bound. In this approach, 1a is notated as 2.

\[(2) \quad \text{John likes [PRO, to dance with Sarah]}\]

The problem immediately arises of how to confine PRO to the subject of controlled complements and prohibit it in other NP positions; a considerable literature has been devoted to this problem alone (e.g. Chomsky 1981, Wurmbrand 2001, many of the papers in Larson et al. 1992).

One argument against such an approach to control is that on occasion there is no independently motivated NP that can serve as controller. Examples like 3a,b appear in Williams 1985; 3c appears in Sag and Pollard 1991; we believe 3d represents a new type.
(3)  a. Any such attempt [to leave] will be severely punished.
    b. Yesterday’s orders [to leave] have been canceled.
    c. How about [taking a swim together]?
       [controller is speaker and hearer jointly]
    d. Undressing myself/yourself in public may annoy Bill.

In 3a,b, the specifiers of the nominals order and attempt preclude an independent NP controller in the appropriate position. One could stipulate a phantom position in the specifier that can never be realized by anything but a null NP; alternatively one could stipulate a null by-phrase in 3a and a null to-phrase in 3b. However, such stipulations are patently motivated by the desire to provide a syntactic controller (as well as by theory-internal considerations such as the theta-criterion), and have no independent syntactic motivation. In 3c,d the situation is still worse, since the controller is the speaker and/or hearer, nowhere overtly mentioned in the discourse. Unless one is willing to resurrect Ross’s (1970) theory of performative deletion, long in disgrace (see Newmeyer 1986, Chapter 5) there is no way to provide a syntactic NP as the controller.2

A second sort of argument against a purely syntactic account of control – whether or not there is a PRO – comes from the fact that the choice of controller is often doubly dissociated from syntactic configuration: (a) the same syntactic configuration can be associated with different controller choice, as seen in 4; and (b) the controller can appear in different syntactic configurations, while preserving meaning, as seen in 5.

(4)  a. John persuaded Sarah to dance.
    b. John promised Sarah to dance.
    c. John talked about dancing with Jeff.
    d. John refrained from dancing with Jeff.

(5)  a. Bill ordered Fred to leave immediately
    b. Fred’s order from Bill to leave immediately
    c. the order from Bill to Fred to leave immediately.
    d. Fred received Bill’s order to leave immediately.

Should one wish to find a relevant syntactic difference between 4a and 4b and between 4c and 4d, it has to be motivated by the dogma that control is syntactic; there is no independent motivation. Intuition suggests that the differences are a consequence of what the verbs mean; we will be able to be more explicit later on. On the other hand, the syntactic differences among 5a-d are blatant; what remains constant is that Fred is recipient of the order, a semantic constancy. Many more such cases will appear below.

We therefore seek a treatment of control as a relation stated over the level of conceptual structure (in the sense of Jackendoff 1983, 1990) rather than over syntactic structure. On the face of it, conceptual structure (CS) is an appropriate level for stating control for three reasons:

• At the level of CS, syntactically implicit arguments are explicit, so that an antecedent is readily available for cases like 3.
• At the level of CS, the meanings of verbs are explicitly represented, in such a way that they can directly bear on control relations without special added machinery.
Finally, CS is the level at which thematic roles are structurally represented, so that the association of control with constant thematic roles is natural. No other level of linguistic structure offers these possibilities. Syntactically implicit arguments are indeed explicitly encoded in Lexical-Functional Grammar’s level of functional structure (Bresnan 1982), the level of argument structure (Grimshaw 1990), event structure (Levin and Rappaport Hovav 1999), the Government-Binding/Minimalist Program level of Logical Form (Chomsky 1981), and standard formal semantics logical representations (e.g. Bach 1979, Chierchia 1988). But the structured meanings of verbs and the structural representation of thematic roles are not explicit in these levels. Thus they all require control to be handled in terms of item-by-item lexical marking (or diacritics such as object-control verb or Agent-control verb) rather than as an organic part of meaning. Our own intuition (shared by Dowty 1985, Farkas 1988, Sag and Pollard 1994, and Van Valin and LaPolla 1997) is that the control behavior of persuade and promise is an essential part of their meanings; there could not be a verb that meant the same thing as persuade but that had the control behavior of promise. This requires a level of representation where the requisite aspects of meaning are structurally explicit: conceptual structure.

2.2 One purely syntactic dimension: possibility of a local subject. It is well known that some infinitival and gerundive complements permit a local subject and others do not. 6-11 present some minimal pairs, selected to present as close a semantic parallelism as possible.

(6) a. John attempted (*for his kids) to have a better life.
   b. John strove (for his kids) to have a better life.3

(7) a. Sally beseeched Bill (*for his kids) to leave.
   b. Sally begged Bill (for his kids) to leave.

(8) a. Fred hoped (for Sally) to leave.
   b. Fred's hopes of (*Sally's) leaving

(9) a. Vera left George so as (*for Fred) not to go crazy.
   b. Vera left George in order (for Fred) not to go crazy.

(10) a. Before (*John's) mentioning Harry, Bill was already nervous.
    b. Without (John's) mentioning Harry, Bill was already nervous.

(11) a. the best place at which (*for you) to buy hummus
    b. the best place (for you) to buy hummus

6 and 7 contrast semantically related verbs; 8 contrasts a verb and its nominal; 9 and 10 contrast semantically parallel subordinating conjunctions. 11 is the well-known case of infinitival relatives, where the contrast turns on whether there is an overt wh-phrase.

It is hard to imagine anything in the semantics of these pairs that could be responsible for the syntactic distinction, particularly since each pair represents a different semantic class. We therefore conclude that this distinction is a matter of lexically determined syntactic selection, cutting broadly across semantic classes. Some heads such as attempt, beseech, and so as select a simple to-VP complement; others such as strive, beg, and in order select a (for-NP)-to-VP complement. We know of no heads that select for-NP before an infinitive complement.

Using the pretheoretical terminology of Baker 1995, we will call the former case an
Infinitival Phrase (InfP) and the latter an Infinitival Clause (InfC). Thus, attempt selects an InfP and strive an InfC. Similarly, before selects a Gerundive Phrase (GerP) and without a Gerundive Clause (GerC). With a fronted *wh*, an infinitival relative requires an InfP; without a *wh*, it permits the more liberal InfC. Exactly how this distinction is formalized need not concern us here; different syntactic theories will account for these possibilities for selection in different ways.

The early literature (e.g. Rosenbaum 1967, Lakoff 1971) used terms such as ‘obligatory subject deletion’ and ‘obligatory Equi’ for the prohibition of a local subject with the infinitive or gerund. More recent literature (beginning as early as Williams 1980 and extending to e.g. Hornstein 1999 and Landau 2000, among many others) recognizes two major types of control, called Obligatory Control (OC) and Nonobligatory Control (NOC) (Bresnan 1982 uses instead ‘functional’ and ‘anaphoric’ control in much the same sense). However, this more recent use of ‘obligatory’ does not align with the earlier use, as we will see next.

2.3. Free control, nearly free control, and unique control. A more complex dimension of variation in control, and the one that concerns us here, is the choice among ‘free’, ‘nearly free’, and ‘unique’ control. Two other dimensions of variation, ‘exhaustive’ vs. ‘partial’ control and ‘obviative’ vs. ‘non-obviative’ control, will be discussed in sections 7 and 8 respectively. Many complements in subject position (and extraposed subjects) have the broadest range of possible controllers, as illustrated in 12. The gerund in 12 can be controlled by either NP, by both jointly (split antecedent control), or by an implicit generic person. The literature generally calls this range of possibilities ‘non-obligatory control’; since there prove to be so many ways that control can be non-obligatory, we will call this case ‘free control’.

(12) a. Amy, thinks that *dancing with Dan* intrigues Tom.
   b. Amy, told Tom that *dancing with Dan* might be fun.

Notice that *Amy* is outside the minimal clause that contains the controlled complement (as is *Tom* in 12b). This configuration for control was called ‘Super-Equi’ in the early literature (Grinder 1970); Ladusaw and Dowty 1988 call it ‘remote control’; it is now generally termed ‘long-distance control’, which is what we will call it here.

As observed by Bresnan 1982, the controller in this configuration can be a discourse antecedent (13a). It has not to our knowledge been previously noticed [to be added in proof: noticed by Cantrall 1974] that the controller can also be the speaker and/or hearer (13b). The speaker and an NP in the sentence can also jointly control the complement (13c).

(13) a. Brandeis, is in a lot of trouble, according to today's newspaper. Apparently, firing the football coach has turned off a lot of potential donors.
   b. Here's the thing: undressing myself/yourself/ourselves [=you and me] in public could cause a scandal.
   c. Here's the thing: it might really upset Tom to have to undress ourselves [=Tom and me] in public.

Speaker/hearer control is also the usual option in the curious construction illustrated in 3c above,
as seen in 14a. Richard Oehrle has suggested the final sentence of the dialogue 14b as a case where this construction has split discourse antecedents.

(14) a. How about undressing myself/yourself/ourselves in public?
    b. How about the girls taking a swim? – Okay.
        How about the boys taking a swim? – Well, okay.
        How about taking a swim together? [i.e. boys and girls]

In short, free control is a configuration in which the range of possible controllers includes (a) any NP in the sentence or surrounding discourse plus the speaker and hearer, (b) the possibility of split antecedents, and (c) the possibility of a generic controller.

Free control is not confined to subject complements; it also appears in certain object complements:

(15) a. Amy thinks that what you propose beats undressing herself/oneself/myself/yourself/
        yourselves [=you and me, Amy and me] in public.
        [also outranks, entails, is as good as]
    b. Fred makes undressing himself/oneself/myself/yourself/ourselves [=you and me, Fred
        and me] in public almost appealing.

Landau (2000, 109-111), citing previous literature, discusses some cases where the controller is not an argument of the main verb but is rather embedded in an argument, for instance:

(16) a. It would help Bill's development to behave himself in public.
    b. Finishing his work on time is important to John's development/John's friends.
    c. It would ruin Steve's figure/career to eat so much ice cream.

Given that help, important, and ruin all take subject complements with free control, our inclination is to see these as further examples of free control.

A slightly less free version of control occurs in a class of object complements such as 1c above. Here the controller may be either of two NPs in the sentence; split antecedents and generic controllers are also possible (17a). However, the options in 13 are not available: long-distance control (17b), a discourse controller (17c), and control by the speaker and/or hearer (17d). Discourse control is however possible in circumstances such as 17e (pointed out by Sag and Pollard 1991, based on Higgins 1973).

(17) a. John talked to Sarah about taking better care of himself/herself/
        themselves, taking better care of herself/herself/
        themselves, taking better care of himself/herself/
        themselves.
    b. * Amy knows that John talked to Bill about taking care of herself.
    c. * Brandeis is in a lot of trouble. John talked to Sarah about firing the football coach.
    d. * John talked to Sarah about undressing myself/yourself in public.
    e. A: John talked to Sarah about something.
       B: What was it?
A: I think it was taking better care of himself/herself/oneself. [also speak to NP, think, many others]

We will call this case ‘nearly free control’. It occurs consistently as a complement of verbs of communication and thought and of nouns that denote information-bearing objects such as book and hypothesis. The controlled complement always denotes a proposition being communicated, considered, or contained in an information-bearing object (as in a book about defending oneself). The controlled complement is typically a gerund serving as complement of about, but it also occurs as the direct object complement of the verbs mention and discuss:

(18) a. John mentioned/discussed Sally's taking care of herself.
    b. John, mentioned/discussed taking care of himself/oneself.
    c. John, Sally mentioned/discussed taking care of herself/himself/themselves.
    d. A: I think John mentioned/discussed something important.
       B: What was it?
       A: It might have been taking care of himself.
    e. * Amy thinks that John mentioned taking care of herself.
    f. * John discussed undressing myself in public with Sally.

We believe the distinction between free and nearly free control has not been made clearly in the literature before, both usually taken to fall under non-obligatory control.

The most restricted form of control is generally called obligatory control in the literature; it appears in many object complements and in adjunct clauses under in order to, before, without, and so on. Standard examples appear in 19a,b: there are two possible targets of control in the matrix clause, but only one of them can serve as controller. There can be no split antecedents (19c), generic control (19d), long-distance control (19e), or speaker/hearer control (19f).

(19) a. Sally persuaded Ben to take better care of himself/herself.
    b. Sally promised Ben to take better care of herself/himself.
    c. * Sally promised/persuaded Ben to take better care of themselves.
    d. * Sally promised/persuaded Ben to take better care of oneself.
    e. * Amy thinks that Ben promised/persuaded Fred to take better care of herself.
    f. * Ben promised/persuaded Fred to take better care of myself/yourself.

We will call this situation ‘unique control’. A major question is how the unique controller is determined. Most of the present article concerns how one important class of cases of unique control is determined by the semantics of the head that selects the controlled complement.

A further type of control occurs in infinitival indirect questions in object position: there is a choice between a single controller in the main clause and generic control, but the other options available in free and nearly free control are excluded (20a). If the wh- word is whether, generic
control is excluded (20b). However, infinitival indirect questions in subject position can behave like free control (20c).

(20) a. Harry, told Sally how to defend herself/oneself/*himself/*themselves/*myself.
   b. Harry asked Sally whether to take care of himself/*oneself/*herself.
   c. Amy knows that how to take care of herself/oneself/myself/yourself/ourselves [=you and me, Amy and me] is a tough question.

We might call the situation in 20a ‘unique+generic control’; we will have nothing to say about it here (though not for lack of interest!).

We emphasize that the syntactic position of a complement plays no direct role in the type of control it displays, contrary to a frequently cited claim of Manzini 1983. One half of her claim is that object complements require a controller (i.e. unique control) within the immediately dominating clause. But we have seen above examples of postverbal complements with free control (15), nearly free control (18), and unique control (19). The other half of her claim is that, in our terms, subject complements all have free control. We disprove this claim in section 4.2, where we discuss some subject complements with unique control.

Our claim, by contrast, is that the type of control a complement displays is a consequence of the semantic role it is assigned by the head that selects it, not a consequence of its syntactic position or that of its controller.

3. Actional complements. Most of the rest of this paper is devoted to illustrating the following claim, which is prefigured in the literature as early as Lasnik and Fiengo 1974:

(21) Infinitival and gerundive complements that are selected by their head to be of the semantic type Action have unique control. The unique controller is the character to which the head assigns the role of Actor for that Action – whatever its syntactic position.

The notion of Action is relatively familiar, but we take a moment to make our use of it clear. We use the term situation for any sort of state or event. Actions are a special subclass of situations, detectable by the standard test What X did was.

(22) a. Actions:
   What Roberta did was run the race/read a book/think about physics.
   b. Non-actions:
   What Roberta did was *grow taller/*strike Simmy as smart/*realize it was raining.

When the Actor of an Action is animate, the default interpretation is that the Action is performed voluntarily. Voluntary actions can be detected by standard tests such as the imperative and the adverbials voluntarily and on purpose.
(23) Voluntary actions:
   a. Run the race!  Roberta ran the race voluntarily.
   b. Be quiet! Roberta was quiet voluntarily.
   c. Be examined by a doctor! Roberta was examined by a doctor voluntarily.

Non-voluntary (non-)actions:
   d. * Grow taller! Roberta grew taller voluntarily.
   e. * Strike Simmy as smart! Roberta struck Simmy as smart voluntarily.
   f. * Realize it's raining! Roberta realized it was raining voluntarily.

As observed as long ago as Fischer and Marshall 1969, the possibility of a VP expressing a voluntary action is heavily conditioned by pragmatics. For example, passives are normally nonvoluntary, but the well-worn example be examined by a doctor can be voluntary; as an imperative it is understood as get yourself examined by a doctor. Similarly, be hungry cannot be voluntary, but be quiet can, under the interpretation make yourself quiet.

We will call complements that express actions actional complements and those that express situations (which include actions) situational complements. Some verbs select specifically for voluntary actions; some for any kind of action; others, still less choosy, permit their complements to be any sort of situation. The verb urge, for instance, selects voluntary actional complements: its complement must be something one can do voluntarily (24a), and this complement has unique control (24b). By contrast, talk to NP about NP allows its complement to be any state or event (25a), and control is nearly free (25b). (The residue of situations that are not actions does not appear to form a natural semantic class; there is no verb that selects for only such complements.)

(24) a. Miriam urged Norbert to dance with Jeff/*be 6 years old.
   b. Miriam urged Norbert to dance with Jeff.

(25) a. Miriam talked to Norbert about dancing with Jeff/being 6 years old.
   b. Miriam talked to Norbert about dancing with Jeff.

This illustrates the basic generalization stated in 21.

We will eventually show (section 6) that various interesting cases of control arise when the semantic type of a complement diverges from the type selected by the verb. Under such conditions the semantic composition of the sentence is subject to ‘coercion’, which inserts extra semantic material to establish well-formedness. Such coercions account for some well-known exceptions to control equations, as well as for some cases not previously cited.

As part of our argument that control is essentially a semantic phenomenon, we need to show that the selection of actional vs. situational complements cannot be reduced to some sort of syntactic selection – that the two do not correlate precisely.

Can actional vs. situational be correlated with infinitivals vs. that-complements? No. Some verbs, such as wish, hope, and claim, select that-complements and infinitival complements, both of which are situational.
(26) a. Nancy wishes/hopes that she will run the race/that she will grow taller.
    b. Nancy wishes/hopes to run the race/to grow taller.
    c. Beth claims that she ran the race/that she has grown taller.
    d. Beth claims to have run the race/to have grown taller.

*Plan* selects either a *that*-complement or an infinitival, both of which are actional.

(27) a. Hilary planned that she would run the race/*that she would grow taller.
    b. Hilary planned to run the race/*to grow taller.  

And some verbs, for instance *tell* and *persuade*, select situational *that*-complements and actional infinitival complements.

(28) a. Nancy told/persuaded Ben that he could run the race/that he would grow taller.
    b. Nancy told/persuaded Ben to run the race/*to grow taller.
    [also *swear, decide, forget, occur to NP, teach, learn*]

Thus the distinction between situational and actional complements does not correlate with *that*-clauses vs. infinitivals in syntax.

Can situational vs. actional be correlated with selecting InfC vs. InfP? No. At first glance this might seem promising. As seen above, *hope* and *wish* take situational complements; they also allow InfC. By contrast, *try* and *attempt* require actional complements and allow only InfP.

(29) a. Bill hoped/wished (for Harry) to run the race/to grow taller.
    b. Bill tried/attempted (*for Harry) to run the race/*to grow taller.

However, *plan* allows an InfC but requires an actional complement (30a), and *lucky* and *unlucky* allow a situational complement but require an InfP (30b).

(30) a. Hilary planned (for Ben) to run the race/*to grow taller.
    b. Norman is lucky/unlucky (*for Ben) to have run the race/to have grown taller.

Thus there is no correlation here either.

Finally, both situational and actional complements can be expressed as gerunds. Gerundive complements of verbs such as *discuss* and *mention* express situations, but gerundive complements of verbs such as *refrain from* and *pressure into* require voluntary actions.

(31) a. Sue discussed/mentioned running the race/growing older.
    b. Sue refrained from running the race/*growing older.
    c. Sue pressured Joe into running the race/*growing older.

Still, despite all this variation, there are strong tendencies: the default situational complement is a tensed *that*-clause, and the default actional complement is an InfP. InfC, GerC, and GerP seem
to fall somewhere in between. Although many verbs are lexically marked with a non-default syntactic selection, no verb totally reverses the default case, assigning a situational complement to an infinitival and an actional complement to a *that*-clause.

With the notion of selection of actional complements in place, we return to our proposed generalization 21: predicates that select actional complements require unique control. 32-34 offer examples of the generalization.

(32) Free control predicates: not restricted to actional complements
   a. Volitional actions
      Running the race
      Being quiet annoys Max/is a drag
      Being examined by a doctor
   b. Non-volitional actions
      Growing taller
      Striking Simmy as smart annoys Max/is a drag
      Realizing it's raining

(33) Nearly free control predicates: not restricted to actional complements
   a. Volitional actions
      running the race
      Marsha spoke to Ed about being quiet
      being examined by a doctor
   b. Non-volitional actions
      growing taller
      Marsha spoke to Ed about having struck Simmy as smart
      realizing it's raining

(34) Unique control predicates: restricted to actional complements
   Fred promised (Louise) ...
   Fred persuaded Louise ...
   a. Volitional actions
      to run the race
      to be quiet
      to be examined by a doctor
   b. Non-volitional actions
      *to grow taller
      *to strike Simmy as smart
      *to realize it was raining

As further confirmation of the generalization, notice that some verbs such as *tell*, *shout* and *call* (belonging to a class to be discussed in section 4.2) show an alternation in their complement types. When they occur with *about*+gerund, they select situations and take nearly free control. When they occur with infinitives, they select voluntary actions and take unique control.
(35) a. Fred told/shouted to/called to Louise about running the race/growing taller.
   b. Fred told/shouted to/called to Louise to run the race/*grow taller.

4. Unique control by objects and by subjects. We now turn to differentiating some of the cases of unique control. Among the standard cases of unique control are transitive verbs for which the object is unique controller, such as 
   persuade (19a), and transitive verbs for which the subject is unique controller, such as promise (19b). The promise class was Rosenbaum's (1967) leading exception to the Minimal Distance Principle (MDP), which claimed to determine the controller uniquely on the basis of counting nodes from potential controller to the complement in syntactic structure. This class retains its exceptional status in Hornstein's (1999) approach to control, which seeks to derive the MDP from constraints on movement. Of course the MDP already fails to account for long distance control in subject complements and for free and nearly free control in object complements (e.g. John talked to Sarah about defending himself). This suggests that, whatever its attractions, the MDP should be abandoned forthwith. The question is therefore what accounts for the difference in controller choice with persuade and promise.

The touchstone of semantically based analyses of unique control (see references in section 1) is that the difference has something to do with the meanings of these predicates. Section 4.1 reviews the evidence that the difference between persuade and promise has to do with semantics, not syntax; section 4.2 reviews two classes of communication verbs and a class of adjectives with unique control, driving the conclusion home further.

4.1. Unique control is determined by semantic roles. The verbs that require their objects to be unique controller span a number of semantic classes, some of which are shown in 36a,b,c. There are also verbs and nominals whose unique controller is the object of a PP complement, seen in 36d,e.

(36) a. John forced/helped/enabled/pressured Susan to take care of herself/*himself/*oneself.
   b. John kept/prevented Susan from taking care of herself/*himself/*oneself.
   c. John ordered/instructed/encouraged/reminded Susan to take care of herself/*himself/*oneself.
   d. John counted on/relied on/called upon Susan to take care of herself/*himself/*oneself.
   e. John’s order/instructions/encouragement/reminder to Susan to take care of herself/*himself/*oneself.

37 verifies that the verbs in 36 select for actional complements.

(37) John *forced/?helped/?enabled/*pressed Susan to be tall.
   ?John kept/prevented Susan from being tall.
   *John ordered/instructed/encouraged/reminded Susan to be tall.
   John ?counted on/?relied on/*called upon Susan to be tall.
There seems to be only one transitive verb, *promise*, that requires the subject to be the unique controller (38a). But there are several other verbs and adjectives that take PP complements and assign unique control to the subject (38b,c). The nominals of these verbs (38d), plus quite a few semantically related nominals (38e), also require unique control by the subject.\(^6\)

(38)

a. \(\text{John, promised Susan, to } \text{take care of } \text{himself/herself/oneself.}\)

b. \(\text{John, vowed to/pledged to/agreed with/is obligated to Susan, to } \text{take care of } \text{himself/herself/oneself.}\)

c. \(\text{John, learned from Susan, to } \text{take care of } \text{himself/herself/oneself.}\)

d. \(\text{John’s vow to/pledge to/agreement with/obligation to Susan, to } \text{take care of } \text{himself/herself/oneself.}\)

e. \(\text{John’s offer/guarantee/oath/commitment to Susan, to } \text{take care of } \text{himself/herself/oneself.}\)

39 shows that the verbs in 38 select actional complements.

(39) *John promised Susan to be tall.

*John vowed to/pledged to/agreed with/is obligated to Susan to be tall.

*John learned from Susan to be tall.

Since 36 and 38 are completely parallel in syntactic constituency, there is no overt syntactic basis for the difference in control. Manipulation of the nominals makes this even clearer. Compare 40, with *order*, and 41, with *promise*. These completely elude a solution in terms of syntactic structure: the controller is in too many different positions – including in a previous sentence. The clear generalization is that the complement is controlled by the recipient of the order and the giver/maker of the promise, wherever that character may be located in the syntax. (The thematic roles giver and recipient are notated by pre-subscripts and post-subscripts respectively on the nouns.)\(^7\)

(40)

a. \(\text{the order to Susan, from John, to } \text{take care of herself/himself}\)

b. \(\text{John, gave Susan, some kind of order, to } \text{take care of herself/himself.}\)

c. \(\text{Susan, got from John, some kind of order, to } \text{take care of herself/himself.}\)

d. A: \(\text{Susan got an order from John.}\)

\([\text{or John gave Susan an order.}]\)

B: What was it?

A: I think it was to take care of herself/himself.

[also *instructions, encouragement, reminder, invitation, advice*]
(41) a. the promise to Susan from John to take care of himself/*herself
b. John gave Susan some sort of promise to take care of himself/*herself.
c. Susan got from John, some sort of promise, to take care of himself/*herself.
d. A: John made Susan a promise.
   B: What was it?
   A: I think it was to take care of himself/*herself.
[also vow, offer, guarantee, pledge, oath]

The two paradigms together show that no principle based on syntactic structure can account for controller position, since apart from control the paradigms are syntactically identical. All that varies is the lexical semantics of the nominal. Control with the verbs order and promise follows the same generalization. With both verbs, the role of giver falls in subject position, and recipient falls in object position. 8

Order course undergoes a normal passive, in which case the surface subject is controller (42a). This case alone cannot show us whether control is syntactic or semantic. However, order and some other verbs in this class permit an impersonal passive of the form 42b – for which there is no corresponding active (42c).

(42) a. Susan was ordered by John to take care of herself.
   b. It is ordered/advised/encouraged by the authorities not to shoot oneself/*themselves.
   c. ??The authorities order/advise/encourage not to shoot oneself.

The controller in 42b is not the syntactically overt argument, but rather an implicit generic argument that functions as recipient of the order, advice, or encouragement.

As is well known, the verb promise is exceptional in that 43a, the passive of 38a, is ungrammatical – despite the fact that another subcategorization frame of promise does passivize (43b), and despite the fact that the corresponding nominal passive 43c is grammatical. We take this to be a syntactic fact but have no further explanation. 9

(43) a. * Susan was promised by John to take care of himself/herself.
   b. Susan was promised a new bike by John.
   c. the promise to Susan by John to take care of himself/*herself

However a passive is possible in the very special case 44 pointed out by Hust and Brame 1976; here, again exceptionally, the controller is the surface subject of the passive -- the Recipient of the promise.

(44) Susan was promised (by John) to be allowed to take care of herself/*himself.

Hust and Brame (and many subsequent writers) take this as a fatal counterexample to the thematically-based theory of control in Jackendoff 1972; but a little further examination is revealing. The relevant configuration is strikingly narrow: it is fully acceptable only when the complement is a passive verb of permission, as seen from the contrast between 44 and 45a. 45b
shows that the same complement shifts control to the Recipient of the promise in the nominal construction. 45c, pointed out by Bresnan 1982, shows an impersonal passive, closer in form to 45b. 45d,e, from Sag and Pollard 1991, are in our judgment less acceptable than 44 and 45b,c, but certainly better than 45a. We find the previously uncited 45f better than 45d,e.

(45) a. * Susan was promised to leave the room
   to be hit on the head
   b. the promise to Susan to be allowed to take care of herself
   c. It was promised to Susan to be allowed to take care of herself.
   d. ? Grandma promised the children to be able to stay up for the late show.
   e. ? Montana was promised (by the doctor) to be healthy by game time on Sunday.
   f. Susan was promised to be helped/encouraged/enabled to take care of herself.

Thus, if anything, this exceptional case depends more heavily on semantics than do the cases cited in 41. In particular, to the extent that 45d-f are acceptable, it is because the situation described by the complement is more plausible for the Recipient of the promise than for the promiser (the Source). This case generalizes with a paradigm to appear in section 4.2; we will work on a solution in section 6.10

Our other example of a subject control verb, learn from (38c), assigns control not to the source (the teacher), but to the recipient, which happens to fall in subject position. Examples like the following demonstrate this dependency.

(46) a. It was learned from Susan to take care of oneself/*herself.
   b. A: John learned something from Susan.
      B: What was it?
      A: I think it was to take care of himself/*herself.

(Oneself in 46a presumably is appropriate because the impersonal passive has an implicit generic underlying subject.) Further light is thrown on the contrast between the promise and persuade classes by four predicates that allow either subject or object control: contract with, bargain with, arrange with, and make a deal with -- not surprisingly, semantically related to each other. 47b shows that this is not nearly free control, since split antecedents and generic control are not possible.

(47) a. John, contracted with Susan, to take care of himself/him.
   b. * John, contracted with Susan, to take care of themselves/oneself.
      [also bargain with, arrange with, make a deal with]

We think that these verbs, like rent (rent X to Y/rent X from Y), have ambiguous thematic roles. One reading of contract with parallels hire: the object gets paid by the subject and controls the complement (48a). The other parallels hire oneself out: the subject gets paid by the object and
controls the complement (48b). 48c,d are another pair with exactly parallel semantics and different syntax.

(48) a. John hired Susan to take care of him/*himself.
b. John hired himself out to Susan to take care of her/*herself.
c. John gave Susan $500 to take care of him/*himself.
d. John got $500 from Susan to take care of her/*herself.

In each case the Recipient of the money is controller of the complement. We can see no independent motivation for a syntactic difference between the two control possibilities in 47a, nor any plausible candidates for alternative structures.

4.3. Some communication verbs and some adjectives with unique control. A class of verbs pointed out by Perlmutter 1971 has a paradigm like 49. With infinitival complements, they all express communication of an order or advice, and control generally goes with the addressee, expressed as the object of to (49b).

(49) a. John shouted (to Sally) for Harriet to leave.
b. John shouted to Sally to take care of herself/*herself/*themselves.11
   [also say, yell, call, signal]

Moreover, they all occur also with a that-complement; and as seen in 35a, many of them also take a gerundive complement with nearly free control. As seen in 35, the infinitival complements are restricted to voluntary actions (e.g. *John shouted to Sally to get hungry), but the that-complements and gerundives can be any situation.

   Semantically, tell also belongs in this class; but syntactically it differs, in that when it takes a clausal complement, the addressee is expressed as an indirect object.

(50) John told (*to) Sally to take care of herself.

Control here might be construed here as an ordinary case of the Minimal Distance Principle. However, given the failures of the MDP demonstrated in the previous subsection, we might instead seek a semantic explanation. The syntactic and semantic accounts make different predictions when the addressee is implicit, as in 51. The MDP predicts that control should shift to the subject, while the semantic account correctly predicts that control is still assigned to the addressee. (We take it that yourself in 51 refers to an implicit addressee.)

(51) John just shouted to look out for him/*himself/*oneself.

Sag and Pollard (1991, 93) present further examples of this sort, for instance 52a,b (their 89). Moreover, if the sentence is explicitly marked as generic, a generic implicit addressee immediately becomes possible (52c).
(52)  a. Mary realized that John had signaled to position herself near the door.
    b. Mary was on the alert. John had signaled to position herself behind the door.
    c. John always signals to position oneself/yourself near the door.

This paradigm closely resembles free control. However, for a number of reasons we believe it is not free control but rather unique control, as our analysis above predicts. First, free control permits any NP in the main clause or above to function as controller; by contrast, the present case specifically excludes control by the subject, who is the agent and source of the communicative act denoted by the verb. Second, free control permits generic control; the present case permits it only in a generic sentence. Third, the interpretation of a communication verb always includes an intended addressee, whether explicit or implicit. When the complement is infinitival, the controller always turns out to be the addressee, even if determined by pragmatic factors in the discourse. Consider a case like 53.

(53)  John was waving out the window in the direction of some police, down the street. Mary, standing next to John, realized that he was signaling to rescue her/herself.

The context fixes the implicit addressee as the police. Consequently the controller must be the police, not Mary, despite the fact that Mary is in the same structural position as in 52a. We conclude that the discourse effects in 51-53 are due to the pragmatics of determining the implicit addressee, not to how control is determined.\(^\text{12}\)

Paradigms involving nominals, parallel to those for the promise and persuade classes, confirm this thematic assignment of control.

(54)  a. the signal from Mary to John to look out for himself/herself
    b. Mary made some kind of signal to John to look out for himself/herself.
    c. John got some kind of signal from Mary to look out for himself/herself.
    d. A: John got some kind of signal from Mary.
       B: What was it?
       A: I think it was to look out for himself/herself.
       [also shout]

Another class of communication verbs is illustrated in 55; here the complement expresses the content of a request. As with the shout class, control generally goes with the addressee (55a), and the infinitival must express a volitional action (55b). The major difference from the shout class is that when the addressee is implicit, control shifts to the source of the speech act (55c). (Of course, this may look like a classic case of the MDP; we hope that by now the MDP is sufficiently discredited that we don't have to argue specifically against it here.)\(^\text{13}\)

(55)  a. John asked Sally to take care of herself/himself.
    b. John asked Sally to run the race/grow taller.
    c. John asked to take care of himself/himself/oneself/yourself
56-58 add further members of the class with different syntactic properties but parallel semantics and identical control properties.

(56) a. John pleaded (with Sally) for Harriet to leave.
    b. John, pleaded with Sally, to j,*take care of herself/*himself.
    c. John, pleaded to take care of himself/*him/*oneself/*yourself.

(57) a. John prayed (to Athena) for Harriet to leave.
    b. John, prayed to Athena, to j,*take care of herself/*himself.
    c. John, prayed (to be able) to j,take care of himself.

[also appeal]

(58) a. John beseeched *(Sally) for Harriet) to leave.
    b. John, beseeched Sally, to j,*take care of herself/*himself.
    c. * John beseeched to leave. [bad because addressee is syntactically obligatory]

As with various other classes we have examined, the syntactic variation among these verbs and the overlap of their syntax with other classes preclude a syntactic solution to control. In particular, suppose one were to adopt a solution to the shout verbs (like that of Manzini 1983) in which a null addressee in syntax controlled the infinitive structurally. Then, by parallelism, the ask verbs in 55-58 should also have a null addressee in syntax, and it too should control the infinitive. The contrast between 51 and 55c shows that this is the wrong solution; hence we have another case where syntactic structure cannot determine control.

Again we can test for thematically determined control, using situations in which the controller varies its syntactic position but retains its thematic role.

(59) a. the plea by John, to Athena, to j,*take care of herself/*himself
    b. Athena, received a plea from John, to j,*take care of herself/*himself
    c. John, made a plea, to Athena, to j,*take care of herself/*himself
    d. A: John made a plea to Athena for something.
       B: What was it?
       A: I think it was to take care of herself/*himself.

[also request, prayer]

In addition to switching control with an implicit addressee, these verbs are also capable of shifting control even when the addressee is explicit – if the VP complement is of a certain sort (60a); the same complements are simply ungrammatical with the shout class (60b) – unless the verb is construed pragmatically as conveying a request.14

(60) a. John, asked/begged/beseeched Sally, to j,*be allowed to defend himself/*herself.
    b. * John shouted/said/yelled/signaled to Sally to be allowed to defend himself/herself.
A parallel contrast appears in the corresponding nominals.

(61) Indirect requests
   a. John's request to Sally to defend herself/himself
   b. John's request to Sally to be allowed to defend herself/himself
   Indirect orders or advice
   c. John's shout to Sally to defend herself/himself
   d. * John's shout to Sally to be allowed to defend herself/himself

Strikingly, the complements that permit this shift of control are the same ones that allow shift of control in the promise class:

(62) a. John asked Sally to be allowed/able/encouraged/helped/enabled to leave.
   b. He begged me to be able to stop taking German. [recorded in conversation]

The usual tests show that the shift of controller is thematic, that is, to Source, not to subject:

(63) a. a plea to Sally from John to be allowed to defend himself/herself
   b. John offered a prayer to Athena to be able to defend himself/herself
   c. Athena received a request from John to be able to defend himself/herself.
   d. A: John offered a prayer to Athena for something.
      B: What was it?
      A: I think it was to be able to defend himself/herself.

Sag and Pollard 1991, as part of their thematically based theory of control, propose a solution to the controller shift in passive permission complements of ask and promise verbs. We agree with the spirit of their solution but find it needs some revision. We return to this problem in section 6.

For a final case of unique control, consider a class of adjectives that select voluntary actions as subject complements. These clearly fall into a couple of relatively delimited semantic classes.

(64) a. Calling Ernie/growing taller was rude/thoughtful of Bert.
   b. It was rude/thoughtful of Bert to call Ernie/grow taller.
   [also polite, considerate, helpful, boorish, stupid, wise, smart, clever]

Our hypothesis 21 predicts that these selected actional complements should have unique control, and in fact they do. (Note that this observation is fatal to the second half of Manzini's (1983) putative generalization: that, in our terms, control in a subject complement is always free control.)

(65) Amy thinks that calling attention to himself/herself/themselves/oneself/myself was rude of Bert.

Control is semantically parallel in an alternate syntactic form with an object complement (66a), as
well as in the nominal form 66b.

(66) a. Amy \textsubscript{j} thinks that Bert \textsubscript{i} was rude to call attention to himself/*herself/*themselves/*oneself/*myself.
    b. Amy \textsubscript{j} ignored Bert\textsubscript{i}'s rudeness in calling attention to himself/*herself/*themselves/*oneself/*myself.

Thus unique control again appears to be correlated with the semantic type of the predicate, and not with the syntactic position of the complement and controller; here control goes with the actor of the clause or NP dominating the complement.

The semantic nature of control here is further confirmed by situations in which the actor is implicit in the clause dominating the complement.

(67) a. Bert \textsubscript{i} doesn't realize that calling attention to himself/oneself is rude.
    b. Amy \textsubscript{j} is in big trouble: Bert, feels that talking to him, that way was rude.
    c. Amy \textsubscript{j} is in big trouble: Bert, can't stand such rudeness in talking to him, that way.

This looks superficially like free control. However, notice that in every case the controller is the person who is being rude – that is, the controller is still the actor, a character explicit in conceptual structure but implicit in syntax.\textsuperscript{15} In short, the apparent free control in 67a is actually due to freedom in assigning the implicit actor role. This precisely parallels the account of implicit addressee controllers with the verbs of communication such as shout.

5. Toward a semantically-based theory of unique control. The previous section has established two descriptive generalizations. First, heads (verbs, nouns, and adjectives) that select actional complements govern unique control; second, unique control is determined in terms of thematic roles that the head assigns to its arguments – though the thematic role that serves as controller differs from one semantic class of heads to the next. We now work out a somewhat deeper account of these generalizations.

First consider the conceptual structure associated with a controlled VP. Because all the arguments of the verb are saturated except the subject, the overall form of the conceptual structure is a function of one variable. A subset of such VPs denote actions. For present purposes it is not critical how this subset is formalized; let us use the notation \( x \text{ACT} \) for action VPs.\textsuperscript{16} Then a predicate that selects for an actional complement will designate the semantic argument in question as of the type \[ x \text{ACT} \].

What semantic predicates select for actional complements? One of the insights of Pollard and Sag 1994 and of Van Valin and LaPolla 1997 is that the lexical items that govern unique control fall into a delimited number of semantic classes, and that each class determines a particular thematic role that serves as controller. We attribute this fact to the existence of a limited number of basic predicates that select actions as arguments; each of these can serve as a component of the meaning of verbs, nouns, and/or adjectives. Crucially for our purposes, each basic predicate establishes a control relation – a type of semantic binding – between its action argument and one of its other arguments. The syntactic control behavior exhibited by a particular word containing one
of these basic predicates is then a consequence of how the arguments of the basic control predicate are mapped into syntax.\textsuperscript{17}

Let us enumerate some of the more prominent cases of basic semantic predicates that select actional complements. Perhaps the simplest to explicate is intention. Contrast your believing you will do X (a situational complement) with your intending to do X (an actional complement). The difference is that in the case of an intention you are committed to playing an active role in making X take place – to executing the intention. Now, although someone else can believe you will do X, no one else can execute your intention to do X. That is, someone who holds an intention is necessarily identical with the individual who executes the intended action. (An apparent counterexample is A intends for B to do X. But in fact this sentence implicitly conveys an intended action on the part of A to bring it about that B does X. We deal with this case in section 6.)

The predicate \textit{INTEND} is thus a two-place function, one of whose arguments is an animate entity, the intender, and the other of which is an action. The point of the above observation is that the Actor of the action argument of \textit{INTEND} is necessarily bound to the intender. Hence the structure of the predicate has to be notated something like 68. In 68, we notate argument positions and the semantic restrictions on them (selectional restrictions) in italics. A bound position is notated by a Greek variable, which corresponds to a superscript on the binder. (See Jackendoff 1996 for a more detailed analysis of intending and its relation to believing.)

\begin{equation}
X^n \text{ INTEND } [\alpha \text{ ACT}]
\end{equation}

As a consequence, any verb that contains the predicate \textit{INTEND} as part of its meaning will have a control equation in which the intender uniquely controls the actional complement. Besides the verb \textit{intend} itself, this class includes \textit{decide} ‘come to intend’, and \textit{persuade} ‘cause to come to intend’. In the latter case, the intender appears in object position and therefore the verb exhibits object control.

Another predicate that selects an actional argument is obligation. This is a function of three arguments: person A is obligated to person B to perform some action. One cannot be obligated to perform someone else’s action; that is, the action is necessarily bound to the person under obligation. Person B is the person who benefits from the obligation being performed; this may or may not be the same person who has imposed the obligation on A (Jackendoff 1999). Note that obligation is not a special case of intention: one can have an obligation with no intention of carrying it out, and one can intend some action without being obliged to do it.

More formally, the basic semantic structure of obligation is therefore something like 69a; if we break out the beneficiary role with a special notation we get something like 69b.\textsuperscript{18}

\begin{equation}
a. \quad X^n \text{ OBLIGATED } [\alpha \text{ ACT} ] \text{ TO } Y \\
b. \quad \left[ X^n \text{ OBLIGATED } [\alpha \text{ ACT} ]^\beta \right] \\
\quad \left[ \beta \text{ BENEF } Y \right]
\end{equation}

The notion of obligation plays a rich role in control verbs. Ordering involves an individual in authority imposing an obligation on someone to perform an action. The person under obligation falls in object position, so the verb \textit{order} is an object control verb. Instructing someone to do
something conveys a similar sense (though instructing someone how to do something is different).

For a different configuration, promising is undertaking an obligation to the promissee. Since in this case the person under obligation falls in subject position, this is a subject control verb. Most of the subject control predicates of section 4.1 are of this type: pledging, vowing, taking an oath, guaranteeing, and so on. Verbs like contract with, hire, and hire oneself out describe a transfer of money in exchange for an obligation to perform an action; the character that receives the money undertakes the obligation, and is therefore the controller.

Another basic semantic predicate that selects an actional argument is ability – a relation between an entity and an action. One cannot have an ability with respect to someone else’s performance of an action; that is, the person with the ability must be bound to the actor position in the action:

\[(70) \quad X^a \text{ ABLE } [\alpha \text{ ACT}]\]

This predicate is a component of the adjective able, the noun ability, and the root modal can. It is also a component of one sense of learn to VP, roughly ‘come to be able to VP’ and teach NP to VP, roughly ‘cause to come to be able to VP’. Thus learn is a subject control verb and teach is an object control verb.

Another sense of learn to VP involves normativity, as in Elmer learned not to wear sneakers to work. This implies both that Elmer learned that it is a norm not to wear sneakers to work, and also that he came to comply with that norm. Another sort of normativity appears in remind NP to VP, which carries the sense that NP is supposed to VP (because of either obligation or social norm); similarly, remember to VP and forget to VP carry the presupposition that the subject is supposed to VP. The basic predicate for normativity appears to range over the various senses of the root modal should. Again there is an inherent control equation: one cannot, by performing some action, comply with the norm that someone else is supposed to perform that action. So the predicate looks something like 71.

\[(71) \quad X^a \text{ SHOULD}_\text{root } [\alpha \text{ ACT}]\]

The consequence is that learn, is supposed to, remember, and forget are subject control predicates and remind is an object control predicate.

A slightly more complicated case involves the class of force-dynamic predicates (Talmy 1985, Jackendoff 1990). These include predicates of causing, preventing, enabling, and helping; they also include variants in which the outcome is uncertain, such as pressuring and hindering; they include predicates both in the physical domain such as pushing and in the social domain such as encouraging. Talmy and Jackendoff analyze all of these as featural variants of a basic configuration: one character, the Antagonist or Agent, is involved in influencing the execution of an action by another character, the Agonist. The features include:

\[(72) \quad \text{a. Agent is working toward the execution of the action (e.g. causing, forcing)}\]
\[\quad \text{vs. Agent is working against the execution of the action (e.g. preventing)}\]
\[\quad \text{b. Action is completed (causing, forcing) vs. not completed (pressuring, hindering)}\]
c. Agonist, in absence of Agent’s influence, would not (attempt to) execute action (e.g. forcing),

vs. Agonist would naturally (attempt to) execute action (e.g. forcing),

vs. Agonist would be unable to execute action (e.g. enabling, permitting)

The basic configuration looks like 73, where $CS$ is the basic predicate to which the feature distinctions in 72 are applied.

$\text{(73) } X CS Y \text{ [} \alpha \text{ ACT}]$

This is of course the control configuration in all the causative verbs like force, help, assist, enable, prevent, hinder, pressure, encourage, discourage, permit, allow, and so on. Because the Agent always maps into subject position, these are all object control verbs. \(^{19}\)

What more conventional thematic role is assigned to the Agonist? When the Agent is working against the Agonist’s natural tendencies (the first option in 72c), the Agonist passes the standard test for Patients (74a). When the Agent is working with the Agonist’s natural tendencies (the second and third options in 72c), the Agonist behaves like a Beneficiary (74b).

$\text{(74) } a. \text{ What Pat did to/*for Stan was force him to leave/pressure him to quit/prevent him from talking.}$

$\text{b. What Pat did for/*to Stan was help him leave/enable him to quit/allow him not to talk.}$

This observation will play a role in the next section.

The communication predicates like shout and signal now fall under our analysis. The meanings of these verbs appear to have two parts. First, the speaker is trying to influence the addressee to perform the action denoted by the complement – that is, these verbs are in part force-dynamic verbs. The addressee, being Agonist, is controller. Second, the speaker’s means of exerting influence is by communicating either an order or advice described by the VP complement. An order is the imposition of an obligation on the addressee; by 69, the person under obligation is controller of the action. Therefore the addressee of the order has to be controller. Advice is normative: you should do such-and-such. So conveying advice invokes schema 71, and again the addressee is controller.

Requesting is also attempting to influence the addressee to perform some action, so once again the addressee is the controller. However, asking someone to do something is neither conveying an order nor giving advice. What seems to make requesting different is that the requester is saying ‘do such-and-such for me’: the addressee of a request is the Actor of the action as usual, but in addition the speaker is explicit or implicit Beneficiary of the action. Using the notation for Beneficiary in 69b, we arrive at the rather complex schema in 75.

$\text{(75) } X^\alpha \text{ REQUEST } Y^\beta \left[ \begin{array}{c} [\beta \text{ ACT}] \backslash \\ \gamma \text{ BENEF } \alpha \end{array} \right]$
seems inescapable in a description of what it means to request.

Finally, the adjectives with unique control have the curious characteristic of ascribing the same property to an actor as to his or her action. Spitting in public is a rude action; so someone who spits in public is a rude person. It is not clear how to formalize this, but the control equation is intuitively obvious: one cannot have such a property on the basis of someone else’s action. So control follows from the semantics again.

Let us contrast the basic predicates in 68-75, which select actional complements, with the nearly free control predicates. As observed in section 2, nearly free control occurs in gerundive complements of verbs of communication and thought and in complements of nouns that denote information-bearing objects such as book and hypothesis, usually but not always with the preposition about. The controlled complement always denotes a proposition being communicated, considered, or contained in an information-bearing object (as in a book about defending oneself). Crucially, the characters transmitting and receiving information need bear no relation to the content of the information being transmitted. Thus there is no necessary semantic constraint on control as there is in the predicates in 68-75.

Let us also reexamine the situations with true free control presented in section 2.3. Complements with free control occur both in object complements (76a-c) and in subject complements (76d-e).

(76) a. Jeff thinks that this outcome beats undressing himself/oneself/myself/yourself/ourselves [=you and me, Jeff and me] in public.  
[also outranks, is as good as, feels like]

b. Jeff thinks that this outcome entails undressing himself/oneself/myself/yourself/ourselves [=you and me, Jeff and me] in public.  
[also requires]

c. Jeff makes undressing himself/oneself/myself/yourself/ourselves [=you and me, Jeff and me] in public almost attractive.

d. Undressing himself/oneself/myself/yourself in public wouldn't help Jeff, Jeff is in big trouble. Undressing himself in public has caused a big scandal.

e. It wouldn't help Jeff to undress himself/oneself/myself/yourself in public. Jeff is in big trouble. It's caused a scandal to undress himself in public.

These predicates select situational complements: examples like Being taller wouldn’t help Jeff and Jeff’s being fat caused a scandal are grammatical. Thus our generalization correctly predicts that they do not have unique control. These complements are also not understood in the way characteristic of nearly free control: as information being conveyed or understood by one of the characters in the sentence.

The predicates in 76a compare one situation to another; those in 76b describe contingencies between two situations. Now notice that the remaining three verbs in 76 are force-dynamic verbs: cause, help, and make. However, here the complement clauses do not correspond to the Effect argument, as they do in the standard cases such as X forced Y to VP. Rather, the subject complements in 76d,e are the Agent/Causer argument—a situation is causing or helping something to happen; and the object complement in 76c is the Agonist/Patient argument—Jeff is making this
situation become attractive. The basic schema for force-dynamic verbs (73) says nothing to restrict control in these arguments, so they govern free control. The contrast between these cases and the standard cases shows that control cannot be determined by simply marking a verb ‘object control’: it is a particular argument of the verb over which the control equation is defined.

To sum up this section, we have shown how unique control is determined by the meanings of the predicates that govern it. For example, promise means ‘undertake an obligation’, and its control behavior follows from the inherent control equations of the constituent basic predicates. The verb could not mean the same thing and display different control. In particular, controller position is determined by semantic argument structure and not syntactic position. Moreover, we have seen the connection between unique control and actional complements: a variety of basic predicates that select actional complements have inherent control equations. We have not by any means dealt with the whole range of control predicates, but we have shown the plausibility of our approach in a significant range of cases.

6. Coercion that shifts control. According to the story of unique control so far, a basic predicate that selects an actional argument inherently assigns control of this argument to a particular one of its other arguments. We now deal with two cases in which the designated character does not end up as controller. The second of these cases includes the exceptions with promise and the control shifts with ask. Following the approach of Sag and Pollard 1991, Pollard and Sag 1994, we argue that each of these cases is indicative not of defects in the basic theory, but rather of further complications going on in the syntax-semantics interface that fall under the class of specialized coercions.

6.1. The bring about coercion. According to the description of intention in the previous section, a verb of intending should not permit a local subject: the intender should not be able to intend some else's action. However, this prediction is immediately counterexemplified by the most basic verbs of intending, intend and plan. Both allow an InfC (77a); intend also allows a that-subjunctive (77b) and plan a that-indicative complement (77c). What's worse, such complements can describe non-voluntary situations as well as actions (77d-f).

(77) a. Hilary intends/plans for Ben to come along to the party.
   b. Hilary intends that Ben come along to the party.
   c. Hilary plans that Ben will come along to the party.
   d. Hilary plans for Ben to understand physics. (*Ben voluntarily understands physics.)
   e. Hilary plans for the cat to be fed. (*The cat is voluntarily fed.)
   f. Hilary plans for there to be more light in here. (*There is voluntarily more light in here.)

The resolution to this apparent anomaly comes from observing that these sentences can be paraphrased approximately by 78.

(78) a. Hilary intends/plans to bring it about that Ben comes along to the party/understands physics.
   b. Hilary plans to bring it about that the cat be fed.
c. Hilary plans to bring it about that there is more light in here.

Hilary's intended action in 77, then, is understood to be a bringing about of the situation expressed in the complement. These are actions that Hilary can execute, restoring the generalization that one's intentions can be executed only by oneself.

We can verify this analysis by noting that the InfC and that complements of intend and plan have to be situations that can be brought about by voluntary actions. So, for instance, in 77, Ben understands physics and the cat is fed are not voluntary actions, but they can be voluntarily brought about (by someone other than Ben and the cat respectively). By contrast, a situation that cannot be voluntarily brought about by anyone is still unacceptable in these complements (except under a construal where, say, Nancy is a calendar reformer and Louise is casting a movie):

(79) a. *Nancy intends for next year to be 1636.
   b. *Louise asked Ben for Fred to be six years younger.

This contrasts with true situational complements, in which such situations are still normally acceptable:

(80) a. For next year to be 1636 would be astounding.
   b. Louise wished for Fred to be six years younger.

This notion of bringing about is not explicitly present in any of the sentence’s lexical items. Where does it come from? Any time we find a paraphrase relation like that between 77 and 78, where the paraphrases differ only in the presence of some extra material, we have the marks of a coercion -- a conventionalized omission of semantic material in syntactic expression. The mechanisms for licensing such extra material in the interpretation are now beginning to be fairly well understood (Briscoe et al. 1990, Pollard and Sag 1994, Pustejovsky 1995, Jackendoff 1997, for instance): the extra material is introduced by a conventionalized principle of interpretation that inserts extra semantic operators when necessary for semantic/pragmatic well-formedness. Two well-studied cases are illustrated in the single sentence 81. Note how the paraphrase differs just in containing the italicized material.

(81) [One waitress says to another:]
The ham sandwich over in the corner wants another coffee.
[= The person contextually associated with a ham sandwich wants another cup of coffee]

It is clear that ham sandwich does not lexically denote a person, and that coffee is lexically a mass rather than a count noun. The consensus in the literature (see Jackendoff 1997 and references therein) is that the parts of interpretation shown in italics are the product of auxiliary principles of interpretation. These are often termed principles of pragmatics and hence outside of grammar; yet they contribute material that makes the sentence semantically well-formed and that plays a role in the sentence's truth-conditions (and Jackendoff 1992 demonstrates that they also play a role in anaphoric binding). However, the operators expressed by italicized material in the paraphrase are
present only in semantics, not in syntax; this, if anything, is the sense in which they are pragmatic.

Such a change in meaning for the sake of well-formedness is called a coercion; we can regard it either as the insertion of extra semantic material in the course of converting syntax into semantics, or the omission of this material in the course of expressing the meaning. In short, the coercion is an abbreviation in the syntax-semantics interface.\(^\text{25}\)

It is crucial to recognize that such coercions are conventionalized -- it is not as if anything goes. For instance, the coercion responsible for the interpretation of coffee in 81 is sometimes called the ‘universal packager’; but it is far from universal. It is truly productive only when applied to edible portions of liquid or semiliquid food (water, pudding, etc.). It is far less appropriate applied to, say, the portion of water necessary to fill a sprinkling can or to a truckload-sized portion of cement (in such a context, *I'll bring you a water/cement is out). That is, generally a coercion is restricted to certain (conventionalized) contexts, within which it is fully productive.

82 shows how a coercion might work formally. We can think of the normal composition of a sentence meaning as insertion of the meanings of the arguments into the argument positions of the verb, as in 82a for John wants coffee. However, sandwich cannot be integrated into the \(X\) argument of want (82b). Therefore the coercion (shown in boldface) is interposed as an ‘adapter’ that fits into the socket above and into which in turn the errant argument is plugged (82c).

\[(82)\]

a. \[
\begin{array}{c}
X \\
\end{array}
\begin{array}{c}
\text{WANT}
\end{array}
\begin{array}{c}
Y
\end{array}
\Rightarrow
\begin{array}{c}
\text{JOHN}
\end{array}
\begin{array}{c}
\text{WANT}
\end{array}
\begin{array}{c}
\text{COFFEE}
\end{array}
\]

b. \[
\begin{array}{c}
X \\
\end{array}
\begin{array}{c}
\text{WANT}
\end{array}
\begin{array}{c}
Y
\end{array}
\Rightarrow
\begin{array}{c}
\text{SANDWICH}
\end{array}
\begin{array}{c}
\text{COFFEE}
\end{array}
\]

\[\uparrow
\]

\[\uparrow
\]

\[\text{JOHN} \quad \text{COFFEE}
\]

\[\text{SANDWICH} \quad \text{COFFEE}
\]

\[\text{SANDWICH}
\]

Returning to the intend/plan cases, intend and plan select semantically for a controlled actional complement, but they select syntactically for the marked complements illustrated in 77, which denote noncontrolled situations. This creates a conflict in composing the meaning, shown in 83a. Thus the principle of coercion must step in, reinterpreting the complement as the action ‘bring about Situation’. Formally the content of the coercion is our old friend \(\text{CAUSE}\) (probably in the two-argument version of note 20). And now the control equation of intend can be imposed on this action, as shown in 83b. Thus control of the VP diverges from the intender just in case there is a coercion.
This solution comes with an interesting price. *Intend* and *plan* both select semantically for actional complements. But they select syntactically for a broader range of complements, some of which cannot serve as appropriate semantic arguments of the verb except through the use of coercion. The effect is that the relatively narrow selectional restrictions of these verbs are masked by the broader range of coerced complements -- situations that can be voluntarily brought about. In other words, we are forced to accept a more severe mismatch between syntactic and semantic argument structure than is generally admitted.

6.2. The *someone allow* coercion. Consider now 84, a case from section 4.2.

(84) John asked/begged/pleaded to take care of himself.

Section 4.2 and 5 argued that the predicates of requesting take an actional complement whose controller is normally the addressee. However, we noted that this class has an unusual shift of control – for instance in 84 the speaker is controller. We now attempt to explain this shift.

One might suggest applying the *bring about* coercion to this case, so that 84 is interpreted as 85 (implicit material in italics).

(85) John asked *someone to bring it about that he* take care of himself.

In 85 the implicit addressee controls the action, as it should. Since the control equation is discharged by the implicit addressee, the subject of the complement is therefore free to bind to John.

However, under this solution, we should also predict that the coercion also applies to the verbs of communication such as *shout*. That is, *John shouted to go* should have the possible (and plausible) meaning ‘John, shouted to someone to bring it about that he, go.’ But it doesn't: it can only mean ‘John shouted to someone, that he, should go.’ What is responsible for the difference?

We believe that the difference arises from the difference between requests on one hand and orders or advice on the other. *John asked to go* is a report of a request for permission: ‘May I go?’; by contrast, *John shouted to go* is a report of an imperative: ‘Go!’ Thus a better paraphrase of 84 is 86. 86b spells out the addressee implicit in 86a, and, as we would expect, the addressee controls the action.
(86) a. John asked *to be allowed* to go.
    b. John asked *someone* to *allow* him to go.

This suggests that the coercion with *ask* abbreviates not the semantic material '...bring it about that ...
but rather a different force-dynamic relation: '... allow/enable X to...', where X is bound to the asker in conceptual structure.24

Why should such a coercion be more plausible with asking than with shouting? The difference might be that an asker, unlike a shouter, is a beneficiary of the addressee’s action, and the character to whom permission is granted is also a beneficiary. An attempt at formalizing this coercion appears in 87. 87a shows the individual pieces and where they are plugged into each other, with the coercion in boldface; 87b shows the composed semantic structure (in which coinciding binding indices are resolved into a single index).

(87) John asked to take care of himself

| a. Xα REQUEST Yβ [\[β ACT]γ
γ BENEF α] |
|--------------------------------------------------|
| JOHN [Z ENABLE Wδ [δ ACT]] ε
ε BENEF δ ] |
| [ζ TAKE CARE OF SELF] |
| b. JOHNα REQUEST Yβ [\[β ENABLE α [α TAKE CARE OF SELF]] γ
γ BENEF α] |

Thus the standard semantics of *ask* assigns control for the action to its addressee (index β in 85a), and binds the asker to the beneficiary of the action (index α). When the coercion is plugged into the requested action, the addressee becomes the enabler and the asker becomes the enablee. In turn, the coercion imposes its own binding conditions: the enablee performs the action enabled (index δ). Thus through this chain of binding, the asker comes to control the complement.

The crucial piece that establishes connection between the asker and the complement is the beneficiary role. It is the fact that this role is connected both to the asker and the enablee that permits the asker to be connected to the enablee and therefore to control the complement. This piece is missing with the *shout* verbs, which is why such a coercion does not work with these verbs.

This solution suggests a direct connection to the other problematic case with the *ask* verbs:

(88) John asked Susan to be allowed to take care of himself.

Sag and Pollard 1991 observe that *to be allowed to take care of himself* is not a voluntary action, and therefore that it does not satisfy the semantic selection of *ask*. They propose to invoke the *bring about* coercion, claiming that the coerced form of 88 is the interpretation 89.
(89) John asked Susan to bring about that he be allowed to take care of himself.

While we agree that the interpretation of 88 involves a coercion, we disagree with Sag and Pollard's invocation of the bring about coercion, for the same reasons we argued against it in 85: it is too broadly applicable. It predicts incorrectly that 90 should be acceptable, under the interpretation shown.

(90) *John asked Susan to be forced to leave.

(= ‘John asked Susan to bring it about that he be forced to leave’)

*John asked Susan to understand physics.

(= ‘John asked Susan to bring it about that he understand physics’)

Our proposal is that in this case the complement is unified with (or overlaid on) the allow/enable coercion, instead of being plugged into its variable. The pieces of the interpretation are shown in 91a, and the composed structure appears in 91b.

(91) John asked Susan to be allowed to take care of himself.

\[
\begin{align*}
\text{a. } & \text{X request } Y^\delta \left[ [\beta \text{ act}]^\epsilon \right] \gamma \text{ benef } \alpha \\
& \uparrow \quad \uparrow \quad \uparrow \\
& \text{John} \quad \text{Susan} \\
& \quad [Z \text{ enable } W^\delta [\delta \text{ act}]^\epsilon] \quad [\text{coercion: } Z \text{ enable } W \text{ to act}] \\
& \quad \uparrow \\
& \quad \left[ [U \text{ enable } V^\zeta [\zeta \text{ act}]^\eta] \right] \quad [V \text{ be allowed by } U \text{ to act}] \\
& \quad \uparrow \\
& \quad [T \text{ take care of self}] \\
\text{b. } & \text{John request Susan}^\beta \left[ [\beta \text{ enable } \alpha [\alpha \text{ take care of self}]^\gamma] \right] \\
& \gamma \text{ benef } \alpha
\end{align*}
\]

This solution helps explain why the coercion is restricted to a delimited class of complements. As mentioned earlier, the only complements that we find really acceptable in this context are listed in 92:

(92) John asked Susan to be allowed/encouraged/helped/enabled to take care of himself.

What encourage, help, and enable have in common with allow is that they are force-dynamic verbs whose Agonist is a beneficiary rather than a patient, as shown in 74 above. The fact that just these verbs are permitted in 92 gives us an idea of the tolerances of the coercion – how closely an overlaid complement has to match the coerced material. Sag and Pollard's examples 93 are
variations on this theme; they are less acceptable, we believe, because they fit the template less rigorously.

(93) a. ? The children asked Grandma to be able to stay up for the late show.  

[...]

b. ?? Montana asked the doctor to be healthy by game time on Sunday.

[=Sag and Pollard 1991, 42e,f]

A remaining puzzle is precisely how the application of the coercion is regulated. For instance, John asked Susan to leave the room could potentially undergo the coercion and mean ‘John asked Susan to allow him to leave the room.’ In our dialect it cannot, but Farkas 1988 and Landau 2000 report that some speakers accept this reading (especially if there is an implied authority relation, as in The student asked the teacher to leave the room or The goalkeeper asked the coach to be replaced). Also, there seems no reason why John asked to go could not also have a reading that did not undergo the coercion, and therefore meant ‘John asked [discourse addressee] to go.’ We do not understand the mechanics of coercion well enough yet to predict these exact results.25

Next consider the promise class, where control can shift to the recipient of the promise just in case the complement involves permission or enabling. We repeat the relevant examples from section 4.1:

(94) Susan was promised (by John) to be allowed to take care of herself/*himself.

(95) to permit John to leave

to get permission to leave

a. * Susan was promised to leave the room

to be hit on the head

b. the promise to Susan to be allowed to take care of herself

c. It was promised to Susan to be allowed to take care of herself.

d. ? Grandma promised the children to be able to stay up for the late show.

e. ? Montana was promised (by the doctor) to be healthy by game time on Sunday.

f. Susan was promised to be helped/encouraged/enabled to take care of herself.

The arguments against a bring about coercion apply here just as they did with the ask verbs: the possibilities are too broad. However, the fact that the same complements appear in the problematic cases with promise and in the ask coercion suggests that the specialized allow to coercion can be generalized to the promise class. To argue that this is plausible, it is necessary to show that ask and promise have some relevant semantic factor in common.

The relevant factor appears to be the presence of a beneficiary. The asker is beneficiary of the requested action; the recipient of a promise is the beneficiary of the promised action. Thus, just as the beneficial granting of permission goes to the asker in 91, it should go to the recipient of the promise -- as it in fact does in 94 and 95b-f. In short, we think the generalization is that control of the be allowed to coercion is determined by the beneficiary role in both cases.
Significantly, this role is missing in the *shout* and *persuade* classes, and they do not undergo this coercion.

This still leaves the puzzle of why the *promise* coercion is so severely restricted — much more so than the *ask* coercion (see note 11 for the parallel but more severe problems with *threaten*). Whatever accounts for these further restrictions, we believe that the *promise* class too is subject to a semantically specialized coercion. But we are not prepared at this point to go any further.

To sum up this section: Three important exceptions to thematically based control prove to be constrained by very precise semantic conditions. We have proposed accounting for them in terms of two specialized coercions that license extra semantic material in the interpretation that is not present in syntactic structure. Once we recognize the presence of this material, we see that the semantic conditions on control are preserved — it is just that the relevant elements are not visible in syntax.

7. Partial control and the joint intention coercion. We now turn to another dimension in the control problem, developed in detail by Landau 2000. This dimension cuts across the distinction among free, nearly free, and unique control. It is detectable when the complement contains a verb such as *meet*, which, when used intransitively, requires a collective subject: *John and Bill/the group met at 6, but *John met at 6*. Naturally, when such verbs appear in a controlled complement, one expects that the controller should be collective, and so it must be — at least sometimes, as in 96a. Surprisingly, though, many predicates, such as those in 96b, do permit non-collective controllers of a collective complement.

(96) a. John and Bill/*John managed to meet at 6.  
   The committee/*the chair dared to gather during the strike.  
  b. John wanted to meet at 6.  
   The chair was afraid to gather during the strike.

The interpretation of 96b is that the controller performs the action *in association with others*. These others may be determined pragmatically from context or may be present as discourse antecedents. Landau calls this situation ‘partial control’, contrasting it with the ‘exhaustive control’ shown in 96a.

It is important to distinguish partial control from split antecedent control. Split antecedent control permits a plural reflexive in the infinitive complement; but partial control does not. (Following Landau, we notate partial control with the subscript \(j^+\).)

(97) Split antecedent control
   a. John, talked to Sarah, about \(i,j\) meeting each other \(i,j\) at 6.  
   b. Amy, figured that John, would discuss \(i,j\) protecting themselves \(i,j\) during the strike.  

(98) Partial control
   a. * John, knows that Sarah, wanted to, \(j^+\) meet each other at 6.  
   b. * Amy, figured that John, was afraid to, \(j^+\) protect themselves during the strike.
The problem is to figure out exactly what partial control means, and why it is available only with certain matrix predicates.26

The key to understanding partial control, we believe, comes from the idea of ‘collective intention’ first proposed (to our knowledge) by Searle 1995; a similar idea is Clark’s (1996) notion of a ‘joint activity’. Consider Amy and Beth together carrying a long table, one at each end. Amy does not simply intend to carry one end of the table, although that is all she is doing. Rather, according to Searle, her intention should be characterized as ‘We intend to carry the table, in which my role is to carry this end’. Similarly, a member of a team has the joint intention ‘We intend to win the game, and my role in this activity is to do such-and-such’. Note that although one can hold a joint intention, one cannot execute it; one can only execute one’s own role in the joint activity.

A presupposition of the joint intention ‘we intend’ is that the other participants share it. Of course this presupposition may be false, leading to various possibilities for misunderstanding, defection, and deception. Clark shows how these possibilities play out in the context of conversation, which he describes as a particular sort of joint activity.

Establishing a joint intention requires some overt signal on the part of each partner; Clark calls these signals ‘offer’ and ‘uptake’. They may be as elaborate as a contract or as simple as shaking hands, saying ‘okay’, or giving a head nod. Consider the situation in 99 (based on an example of Landau’s).

(99) John and Mary have agreed to learn the same language, but they haven’t decided which one yet.

Each participant must internally describe the plan as ‘We agree to learn the same language’. But the choice of language cannot be established unilaterally; it must be established by offer and uptake: ‘How about Romanian?’ ‘OK.’

Our hypothesis is that partial control occurs in contexts where the controller holds a joint intention with respect to the activity described by the complement. This hypothesis makes a number of predictions. First, complements exhibiting partial control should be voluntary collective activities. This is clearly true of meet and gather in 96b, and appears to be true in all the many examples cited by Landau. By contrast, collective states and collective non-voluntary events do not appear to be felicitous as complements of partial control. Consider 100-102.

(100) a. Hildy and I formed/constitute an alliance.
   b. Hildy told me that she wanted to form/constitute an alliance.
(101) a. ? George told Dick that he looked forward to being jointly examined by the doctor.
   b. ?? George told Dick that he looked forward to being jointly elected by the voters.
(102) a. The chair hopes to disband soon after calling a vote.
   b. ?? The chair hopes to disband soon in reaction to a bomb threat.

In 100, forming an alliance can be understood as an activity, but constituting an alliance is only a state; the latter is decidedly worse as a complement with partial control. Likewise, in 101, one can voluntarily be jointly examined by the doctor, but one cannot voluntarily be jointly elected by the
voters; hence the latter is worse with partial control. Finally, in 102, disbanding after a vote is more of a preplanned voluntary action than disbanding in reaction to a bomb threat; hence the latter is worse with partial control.

A second prediction concerns Landau’s observation about the temporal properties of complements that exhibit partial control. Verbs that prohibit partial control in their complements time-lock the complement to the main clause (103), whereas the complements of verbs that allow partial control are nonpast-oriented with respect to their main clause (104).

(103) a. No partial control:
   * Dan managed/dared/was unwise/was rude to meet at 6.
   b. Time-locked:
      This morning, Dan managed/dared/was unwise/was rude to run the race (right then/*tomorrow/*yesterday).

(104) a. Partial control:
   Dan intended/planned/agreed to meet at 6.
   b. Nonpast-oriented:
      This morning, Dan intended/planned/agreed to run the race right then/tomorrow/*yesterday.

Landau suggests that the complements exhibiting partial control have a tense in their syntax, and he attempts to derive the phenomena of partial control from this stipulation. We take a different tack. Syntactically, partial control infinitives look exactly like non-partial control infinitives. However, since (on our account) partial control involves a joint intention, and since intention is by its nature non-past directed, the temporal properties of partial control follow directly from the semantics. No distinction whatsoever need be made in the syntax.

The account can be made somewhat more precise and general. Recall that although one can hold a joint intention, one cannot execute it. Now consider two senses of dare. Intransitive dare, shown in 103, has a time-locked complement and entails that the complement is executed – daringly. Thus it cannot involve holding a joint intention – only execution of an intention – and hence partial control is impossible. By contrast, transitive dare concerns the formation of an intention to act in the future – which can be a joint intention; thus this use of the verb permits partial control (but not split antecedents):

(105) Frankie dared Pat, to kiss (*each other) in the alley.

Similarly, rude and unwise in 103 characterize the execution – not the intention – of a voluntary action, and therefore prohibit partial control. By contrast, eager characterizes an attitude toward a future action or situation and can therefore tolerate partial control when the complement is a volitional action.

(106) Frankie thinks Johnnie, is eager to kiss (*each other) in the alley.

It remains to figure out exactly what semantic structure to attribute to joint intention, such
that it makes partial control possible. Joint intention is certainly an aspect of meaning that is not expressed directly in syntax – we can see it only indirectly through its effects on control and so forth. This suggests that it is introduced by another coercion. Without a formal account of joint intention and of the exact place of intention in actional complements, it is difficult to determine exactly what material this coercion would introduce. However an informal guess would be 107, in which the coerced material is in boldface.

(107) JOHNNIE\* \[INTEND \[GROUP INCLUDING α\]\[β KISS]]

The crucial part of this is *GROUP*: Johnnie’s intention is directed toward the action of the group rather than just his own.

Landau points out that the subject of partial control, despite being semantically plural, is syntactically singular; *GROUP* has the requisite property. Note that, like partial control complements, *group* permits collective predicates (108a) but not plural pronouns or reflexives (108b): 27

(108) a. The group gathered/met/disbanded at 6.
    The group formed an alliance.
    The group has ten children altogether.
    The group was jointly elected by the voters.

b. *The group met/kissed each other at 6.
   *The group has ten children between them.

The composition of the group introduced in 107 would have to be determined pragmatically, as partial control indeed requires. A discourse antecedent is a prime candidate for another member of the group, as observed in partial control. Furthermore, the application of this coercion would be automatically constrained by the semantics of joint intention; the introduction of a group into a control equation would be illformed except in the very special cases described above.

8. Further problems. Many questions about control still remain. This section enumerates a few.

8.1. Four more cases of control. First, we have said nothing here about control in adjunct complements such as purpose and absolutive clauses (where, unlike the cases discussed here, identification of the controller indubitably has some syntactic dimension – see Culicover and Jackendoff 2001), nor about control in infinitival relative clauses.

Second, we have given no reason why information complements have a slightly more restricted distribution of controllers than free control complements – in particular, disallowing just the case of speaker/hearer control.

Third, selected actional complements are not the only instances of unique control. Verbs like *hope* and *wish* take situational infinitival complements, but they exclude generic, long-distance, and speaker-hearer control. And *remind* and *strike* present two possible controllers in the clause, of which only one is actual controller.
(109) a. Judy thinks that Henry, hopes/wishes to redeem himself/herself/oneself/myself.
b. Judy reminds Henry of being much younger.
c. Judy strikes Henry, as being much younger.

Thus there are sources of unique control other than being a selected actional complement. We suggest that these reasons too be sought in the semantics of the verbs in question – in these cases, perhaps because they are experiencer verbs.

Fourth, infinitival indirect questions all express voluntary actions.

(110)  
Fred asked  
Sally told Fred  

a. how to win the race/how to grow taller  
b. what to talk about/what to resemble  
c. when to leave/when to understand physics

Our account of volitional action suggests therefore that they should have unique control, tied to the recipient of the answer (Fred in both cases of 110). Yet there is also the possibility of generic control:

(111) Fred asked/Sally told Fred

a. how to defend oneself  
b. what to promise oneself under these conditions  
c. when to excuse oneself

It is not clear to us where this possibility comes from.

8.2. Obviative vs. nonobviative control. A further distinction in control has not to our knowledge been noted in the literature. Consider the predicates that that permit a local subject (i.e. that select InfC/GerC). Suppose that when the complement is to VP, its normal controller is NP. Then the question is, when the complement is for NP to VP, can the NP be a pronoun bound to NP? In the context in 112a,b it can; in 112c,d it cannot.

(112) a. Nelda, discussed leaving early. [controller is Nelda]  
b. Nelda, discussed her, leaving early. [her can corefer with Nelda]  
c. Beth, hopes to leave early. [controller is Beth]  
d. Beth, hopes for her, to leave early. [her cannot corefer with Beth]

The ungrammaticality of her=Beth in 112d has the flavor of a Condition B violation (the inability of a nonreflexive object pronoun to corefer with the subject, as in Beth, saw her.). We might call the situation in 112c,d ‘obviative control’, and that in 112a,b ‘non-obviative control’. 113-114 offer further examples, in a variety of syntactic configurations. (These represent our judgments; apparently speakers differ.)
(113) Non-obviative control
   a. (For her,) to have to leave early wouldn’t bother Susan.
   b. Amy, thinks it’s possible (for her,) to leave early.
   c. Amy, mentioned the possibility of (her,) leaving early.

(114) Obviative control
   a. Diane begged Daniel, to leave early.
   b. Fred, is eager to leave early.
   c. Amy, mentioned the possibility of (her,) leaving early.

Curiously, obviative control contexts still permit a bound pronoun if it is conjoined with something else (a fact pointed out to us by Joan Maling):

(115) a. Beth, hopes for Amy and her, to leave early.
   b. Diane begged Daniel, for him, and his friends to come home early.
   c. Louise, thinks Fred, is eager for the two of them, to leave early.

This differs from standard Condition B contexts such as 116a,b, which shows that obviative control should not be assimilated to Condition B. However, a reader has pointed out that certain verbs do permit such conjoined configurations (116c).

(116) a. Beth, likes Amy and her,.
   b. Louise, thinks Fred, likes the two of them,.
   c. Bill, differentiated between Mary and him,.

It is not clear to us whether the distinction between obviative and non-obviative control is determined by syntax or semantics. However, given our prejudices stated in section 1 and our previous work on semantic factors in binding (Jackendoff 1992, Culicover and Jackendoff 1995, 1997), we would be most inclined to seek semantic factors.

8.3. Control of nominals. The control problem should ultimately be embedded in a larger inquiry, that of determining the arguments of any head that lacks local syntactic arguments. Well-known cases include long-distance depictive predicates such as 117a, adjunct predicates such as 117b, and light verb constructions such as 117c,d. (We notate argument assignment again by co-subscripting; the subscript before the nominal in 117c,d indicates the agent, and those after the nominal crudely indicate the other arguments.)

(117) a. Susan, appreciates Bill, (only)(when), drunk.
   b. Bill, examined Susan, without glasses on,.
   c. Harry, put [the blame,] on Sam, for the disaster,.
   d. Sam, got/received/assigned [the blame,] for the disaster,.

117a is ambiguous as to who is drunk during Susan’s appreciation of Bill, although there seems to us
to be a preferences for Susan; 117b is ambiguous as to who was not wearing glasses. In 117c it is clear that Harry is doing the blaming, Sam is being blamed, and the blame concerns the disaster; in 117d, despite the difference in syntactic configuration, Sam is still being blamed.

The case of nominals differs importantly from control in that all arguments of a nominal, not just the subject, can be satisfied non-locally. A good contrast is 118.

(118) a. Nominal: Kathy promised Ted to hug.
    b. Control: Kathy promised Ted to hug *(him).

But there are other differences as well. 119 and 120 offer some cases where a controlled complement alternates with a nominal or adjunct predicate, with what would seem to be similar interpretations. Yet thematic role assignment is quite different.

(119) a. Nominal:
    Bill avoided/resisted attempts to shoot him.
    Bill, expected an attempt to shoot him.
    Bill, anticipated an attempt to shoot him.
    b. Control:
    Bill avoided/resisted attempting to shoot himself.
    Bill, expected to attempting to shoot himself.
    Bill, anticipated attempting to shoot himself.

(120) a. Adjunct predicate:
    Bill examined Susan without glasses on.
    b. Control:
    Bill examined Susan without having glasses on.

We do not have an account of this difference, but we are sure that such an account must be a part of a complete treatment of control.

9. Conclusions. Our goal here has been to show that most of the factors involved in solving the control problem are semantic rather than syntactic. One factor has proven clearly syntactic: the choice of selection between InfC, InfP, GerC, and GerP. On the other hand, this does not correlate precisely with semantic selection, and it is semantic selection, not syntactic position, that determines whether a predicate governs free, nearly free, or unique control.

In all the cases of unique control we examined in section 4, the controller is determined by thematic role, not by syntactic position. Moreover, the choice of thematic role is not an arbitrary diacritic. In the cases we were able to analyze in section 5, the meaning of the matrix predicate determines which thematic role serves as controller, through the inherent control equation of the basic predicate(s) embedded in its lexical decomposition. Thus the theory of unique control reduces to the theory of the content of basic predicates that select actional arguments.

The systematic exceptions to thematically determined control are the outcome of a number of coercions – pieces of semantic structure that are not expressed syntactically. In every case we have treated in terms of implicit arguments and coercion, a syntactic account of control must make heavy
use of idiosyncratic covert elements that violate the natural texture of syntactic distribution.

Our conclusion can be put a bit more dramatically. In the cases we have examined here, the only thing syntax can ‘see’ that pertains to control is that there is some infinitival or gerund lacking a local subject. It cannot see what kind of control is possible, nor, if there is unique control, what the controller should be. All these factors are determined by conceptual structure, in particular the verb meaning interacting with the meaning of the complement.

More generally, we take these results to be confirmation of our overall approach to syntax, where we take it that syntax is the minimal structure necessary to mediate between semantics and phonology. Although for a first approximation syntax mirrors semantic structure, on closer examination it has its own semi-autonomous patterns of distribution. As a consequence, the syntax-semantics interface is somewhat dirty. As argued in Jackendoff (2002), this is what is to be expected in a mentalistic theory of language: it is characteristic of the way the brain connects its disparate functions to each other.
References

Cambridge, MA: MIT.
Rinehart & Winston.
Notes

1. We use this notation rather than the conventional null pronoun PRO so as not to prejudice whether the infinitive has a genuine syntactic subject. Some theories of control, notably those in the Chomskyan tradition, assume the presence of PRO and an S or IP node above the VP; others such as Lexical-Functional Grammar and some formal semantics approaches (e.g. Dowty 1985) assume the infinitival is simply a subjectless VP in phrase structure. While we are generally more sympathetic to the latter approach (see e.g. Culicover and Wilkins 1986 Jackendoff 1990), the work presented here is largely neutral on this issue.

2. As stressed by Culicover and Jackendoff 2001, these situations where an NP controller is absent are especially problematic for an alternative syntactic account of control offered by Bowers 1981 and Hornstein 1999, among others, in which the controlled NP moves to the position of the controller.

3. Richard Oehrle has pointed out to us that the difference in 6 correlates with some difference in syntax and semantics of the verbs’ nonclausal complements: John attempted a somersault vs. John strove for happiness.

4. Richard Oehrle has pointed out to us that this characterization pertains only to plan to VP, as the complement in (i) is clearly a situation. This difference appears to correlate with the difference between (ii) and (iii).
   (i) Hilary planned for there to be 30 people at the meeting.
   (ii) Hilary planned a meeting.
   (iii) Hilary planned for winter.
In 27b and (ii), the complement denotes an action Hilary is planning to perform; in (i) and (iii), the complement denotes a situation whose contingencies are addressed by Hilary’s plans.

5. This class of verbs provides an important piece of evidence for the semantic difference between situational and actional complements. The infinitival complements in 28b have a close paraphrase with a that-clause: Nancy told/persuaded Ben that he should run the race. However, as observed by Searle 1983, Klein and Sag 1985, Jackendoff 1985, and Bratman 1987, among others, the two forms are not entirely equivalent, since we can without contradiction juxtapose each with the negation of the other:
   (i) Nancy persuaded Ben to run the race, but she never persuaded him that he SHOULD run it.
   (ii) Nancy persuaded Ben that he should run the race, but she never actually persuaded him to RUN it.
6. Why has the size of this class not been previously recognized? The reason seems to be that people have not looked at the nominals. Most of the verbal counterparts of the nominals in 38e do not syntactically license the relevant argument structure. They do allow an InfP (i); and they do allow an indirect object plus some other complement (ii-iv). But for some reason they exclude the combination of indirect object plus InfP (v); this is presumably a fact of syntactic selection.

(i)  John offered/pledged to leave.
(ii)  John offered a cookie to Susan; John offered Susan a cookie.
(iii) John guaranteed Susan that Fred would come.
(iv)  John pledged to Susan that Fred would come.
(v)   * John offered/guaranteed/pledged (to) Susan to leave.

7. Note that, as in section 1, we have given order and promise in 40b,c and 41b,c a specifier that precludes a genitive NP (*John's some sort of order, *some sort of John's promise), so it is impossible to treat the controller of the complement as a null NP in the specifier of order. Rather, control has to be passed down via conceptual structure, where the giver of the promise is explicitly represented. (This argument appeared in Jackendoff 1974 and Williams 1985.)

8. This conclusion also has as a consequence that constructional meaning (a la Fillmore, Kay, and O'Connor 1988 and Goldberg 1995) has little to do with the control problem. It is true, as Takagi 2001 observes, that there is a strong bias toward interpreting NP V NP to VP as object control, and this may be a default constructional meaning that makes it hard for some speakers (especially young ones, as in C. Chomsky 1969) to get subject control readings. But in the end the choice of control type is a matter of predicate and complement semantics, as revealed especially by the nominals.

9. The literature recognizes the absence of the passive 43a as ‘Visser’s Generalization’ (Bresnan 1982). Pollard and Sag 1994 offer an explanation in terms of their version of binding theory, but have no explicit solution for why the corresponding nominal 43c is good.

10. Note by the way that the other predicates in this class, vow, guarantee, and be obligated, cannot be substituted into 44, because, having PP rather than NP complements, they do not undergo passive. Some of the nominals, such as offer, can be substituted into 42b with no problem; others, such as obligation, cannot.

Larson 1991 attributes the curious control behavior of the verb promise to its occurring syntactically in the ditransitive construction, as in I promised (you) a rose garden. He compares promise to numerous other verbs that do not occur in the ditransitive construction and do not take subject control. However, there are three important omissions in his account. (1) He does not look at all at the behavior of the nominal promise, in particular at the facts adduced here, which in fact have been in the literature since at least Jackendoff 1974. (2) He does not look at the verb pledge, which, as shown in 38b, does not occur in a ditransitive but still allows subject control. (3) He does not consider the verb tell, which has almost the same syntactic distribution
as *promise*, in particular occurring in a ditransitive with optional indirect object (*tell (Bill) a story*), yet has object control (section 4.2).

The syntactic peculiarities of *promise* are amplified in its evil twin, *threaten*. In particular, fewer combinations are possible; in the passive the complement must be a *with*-GerP instead of an infinitive; in the nominal the complement must be an *of*-GerP; and control can switch to the (underlying) object given the right semantics.

(i)  Susan threatened Bill
(ii)  Susan threatened to punish Bill.
(iii) * Susan threatened Bill to punish him.
(iv)  Susan threatened Bill, with *punishing him/being punished."
(v)   Bill was threatened with being punished/leaving the room.
(vi) * Susan’s threat to Bill of punishing him/being punished
(vii) Susan’s threat to punish Bill
(viii) the threat to Bill of being punished
(ix)  What Susan threatened Bill, with was made fun of/being made fun of him

We have no explanation of this distribution, which so far as we know has not been explored in the literature.

11. The complement in 49b has another reading in which *himself* is acceptable: as a purpose reading, *(In order) to take care of himself, John shouted to Sally.* We are concerned here however with the reading of 49b in which the complement expresses the content of the speech-act.

   We also note the possibility of indirect control, as in *Sherman shouted to Lt. Jones not to fire*, where the order is for the troops to fire, not Lt. Jones himself. However, this case falls under more general phenomena of indirect agency, as in *Sherman/Lt. Jones fired on Atlanta*, so we need not make special provision for it here.

12. As Sag and Pollard 1991 point out, 51 is an immediate counterexample to what they call ‘Bach’s generalization’ (Bach 1979): that object control verbs do not permit omission of their object. We therefore disregard various attempts in the literature to account for this non-fact. One such attempt is Manzini’s (1983), who posits a null NP serving as addressee in such examples, thereby saving both Bach’s generalization and her own claim that object complements must have controllers in the immediately dominating clause; we have addressed this claim above and return to it in a moment.

13. *Ask* is unusual in this class in also permitting a gerundive complement with nearly free control, as in *Bill asked Sue about taking care of herself/himself/themselves/oneself*; the other verbs in this class do not. *Scream* seems ambiguous between this class and the *shout* class, presumably related to the fact that screaming is more readily construed as a request for help than shouting is.
14. There are some examples in the literature where there appears to be controller shift:
   (i) The car signaled to turn left. (Sag and Pollard 1991)
   (ii) The goalkeeper signaled (to the coach) to be replaced. (Růžička 1999)
We find (i) interpretable but a bit strange. In (ii), the goalkeeper is requesting an action, so signal
is being used pragmatically as a verb of the ask class – thereby predicting this behavior.

15. And this character cannot in general be represented in syntax by a null NP: we have chosen
the form of 67c to preclude an NP in the relevant position.

16. ACT can be understood as a general cover term feature for actions, as a feature of action
predicates, or as the name of the category that contains actions, depending on one’s theory of
semantic decomposition. In the notation of Jackendoff 1990, the relevant class of VPs are those
that contain Aff(x, ) on their action tier.

17. Pollard and Sag’s Control Theory (pp. 288 and 302) enumerates three such predicates:
influence (including causation), commitment (including intention and promising) and orientation
(including desire and expectation). We think this approach is on the right track, but that one need
not extract a special principle of grammar called ‘control theory’. Rather, we would like the
control equations of heads to follow insofar as possible directly from their meanings, couched in
terms of conceptual structure.

18. In the notation of Jackendoff 1990, the beneficiary role is indicated by the Y argument in the
function AFF’(Y) on the action tier.

19. At least some force-dynamic predicates display another configuration as well. In The gas
caused an explosion, The gas prevented a fire, and The window lets the light come in, the subject
is not acting on anything, it is just causing or preventing an event pure and simple. In this case
there is no independent Agonist; rather the Agonist and the action are coalesced into a simple
event, the Effect, as in (i).
   (i) X CS [EVENT]
This provides an explanation of cases like (ii).
   (ii) a. Bill prevented there from being an explosion.
       b. The new phone system enabled tabs to be kept on our private calls.
Here the expletive NP and the idiom chunk are obviously not arguments of the main verb; they
play a role only in the interpretation of the subordinate clause. Thus, although these verbs are
usually control verbs, here they look like raising to object or ECM verbs. The explanation is that
the raising/ECM configuration is a mismatch between semantic argument structure, where there is
a single situational argument such as that in (i), and syntactic argument structure, where there is
an NP plus infinitive. The NP has no argument role in the main clause, only in the subordinate
clause. This is the standard HPSG/LFG account.
20. The standard examples of free control are subject complements of experiencer predicates, e.g. *Amy thinks that undressing herself in public would bother Tom*. We have used examples here with non-experiencer predicates, because we suspect that experiencer predicates have special control properties, requiring at least defeasibly that the experiencer control the complement. It is also possible that experiencer predicates fall under what Williams (1992) calls ‘logophoric control’; since logophoricity depends on semantics, such a solution supports our overall argument. But we have not worked through the details and this article is long enough already.

21. Under Talmy’s construal of force-dynamics, *entail* and *require* are also force-dynamic verbs, in the logical rather than the physical or social domain.

22. One might decide that \[ [V_\text{P}V-ing ...] \text{attractive} \] in 76c is a small clause complement of *make*, in which case we have yet another syntactic configuration with free control.

We should also remember a class of examples observed by Postal (1970) in which the predicates come from the classes in 76a,b, and both the subject and object are controlled VPs. Significantly, control in the two must match (ii).

(i) Amy knows that shaving herself/myself/oneself is like torturing herself/myself/oneself.
(ii) * Amy knows that shaving herself is like torturing myself/oneself.

In (iii) the two freely controlled complements are both in the VP and again control must match.

(iv) has yet another combination, not quite the same.

(iii) Fred makes shaving myself like torturing myself/*oneself/*himself.
(iv) Shaving himself reminds Fred of torturing himself/oneself.
    Shaving oneself reminds Fred of torturing oneself/*himself.

We have no explanation for either this need for matching or for the discrepancy in (iv).

23. Pollard and Sag treat the coercion involved in control as a lexical rule that adds the semantic material in question to the head verb before it combines with the rest of the sentence. We do not find such an approach conducive to a general treatment of coercion. For instance, it is odd to think of *ham sandwich* as undergoing a lexical rule to form a new lexical item that means *person with a ham sandwich*. Our preference is to see the coerced material as a conventionalized but freely available piece of semantic structure that is inserted to avoid anomaly. In any event, we concur with Pollard and Sag in emphatically *not* regarding coercion as the deletion of *words* from a syntactic structure, as in old-fashioned transformational grammar, nor as the deletion of empty nodes from syntax. See Jackendoff 1990, chapter 3 for discussion.

24. Růžička 1999 is largely concerned with explaining such shifts with *ask* and *promise*. Lacking the notion of coercion, he resorts to (what we find) complex and unintuitive conditions on theta-grids. Eventually, though, he adverts (p. 61) to ‘silent’ *be allowed*, without any characterization
other than conventionally motivated compression or conceptual-pragmatic ‘reconstruction’, which is essentially our solution here. What is interesting about his account is his claim that (in our terms) languages differ in whether they permit (or have conventionalized) these coercions involved in control. It is also our impression that Farkas’s (1988) treatment of control in terms of responsibility is somewhat loose because the mechanism of coercion was not known at the time of her work.

25. There is some variation among verbs of asking which suggests that the matter may ultimately be a lexical one. For example, (i) and (ii) are ambiguous, while (iii) is not, to our ears.

(i) John pleaded with Mary to go to the football game.
(ii) John begged Mary to go to the football game.
(iii) John asked Mary to go to the football game.

The variable here appears to be the strength of the benefit to the asker.

26. One exception to this generalization is the verb vote, cited by Landau as an example of partial control pointed out as long ago as Lawler 1972. Oddly, it does permit plural reflexives in the complement. The semantically related predicates propose, opt for, and be in favor of have the same property:

(i) I voted to immolate ourselves, but I was overruled.
(ii) I {proposed/opted for/was in favor of} immolating ourselves, but I was overruled.

We have no explanation for these exceptions, but they certain do form a natural class.

27. Although, as Richard Oehrle has pointed out, our analysis might also predict that *The chairman moved to disband itself is acceptable, where the antecedent of itself is the implicit group.