

1 Introduction

Theories of control have been continually challenged by the vexed relationship between complement control and adjunct control. Strategic responses widely differ, from full assimilation of the two types to total separation. These responses reflect different empirical descriptions. On certain theories, adjuncts display obligatory control (OC) just like complements (Williams 1980, Mohanan 1983, Clark 1990, Hornstein 1999, 2003, Pires 2007, Witkoś and Żychliński 2014, McFadden and Sundaresan 2018), drawing on a single underlying grammatical mechanism: functional control, predication, movement, or Agree. At the other extreme there are theories explicitly restricted to complement control, positing mechanisms that cannot extend to adjuncts (Chierchia 1984, Landau 2000, Jackendoff and Culicover 2003) and thus leaving the relationship between the two types unclear. Finally, some theories acknowledge that adjunct control may display either OC or nonobligatory control (NOC), yet attempt to unify NOC with OC in complement control at the theoretical level (Williams 1992, Español-Echevarría 2000, Landau 2013, 2015, 2017, Green 2018, 2019). The present study is a further step in the latter direction.

It seems to me that the time is ripe for a genuine theory of adjunct control. Recent years have seen considerable advances on two fronts. First, the theory of control itself has come to maturity, integrating syntactic and semantic insights too long unrelated. It now enables informed inferences from the better-understood area of complement control to the area of adjunct control. Second, the complex empirical terrain of adjunct control is gradually taking precise shape, setting clear empirical boundary conditions on potential theories in this area. These two strands will also be reflected in the present work: the theoretical proposal will be based on finer-grained descriptions of the patterns of control attested in English adjuncts.

1.1 Why Do We Need a Theory of Adjunct Control?

There can be little doubt that a theory of adjunct control is badly needed. Here are a number of reasons why.

At a very basic descriptive level, there are many misconceptions about control into adjuncts. Possibly the most common one, and the one most harmful to ongoing research, is the belief that all or most adjuncts fall under OC.¹ This is plainly false.

It is an old observation that at least absolutive adjuncts (sometimes called “free adjuncts”) allow NOC in a variety of circumstances. Most often, NOC is observed when the matrix subject is an expletive (1a) or an inanimate DP (1b–c), but crucially, this is not required (1d). Note that the controller is some previously mentioned individual in (1a,c), arbitrary in (1b), and the speaker in (1d). (Examples (1a–d) are from Jespersen 1954:409, Friedrich 1978:240, Williams 1992:300, and Jespersen 1954:408, respectively.)

- (1) a. Looking out of the window, there were the flower beds in the front garden.
- b. Motoring down the road to New York, numerous signs read “Visit Our Snake Farm.”
- c. Having just arrived in town, the main hotel was a vision indeed.
- d. Having communicated my wishes to my wife, the next morning the poor girl entered my apartment.

It is true that subject control is the default reading, when possible, although how strong a default it is, is not yet settled. Kortmann’s (1991) corpus study revealed only 8.5% nonsubject-control readings out of more than 1,400 sentences with “free adjuncts.” However, Duffley and Dion-Girardeau’s (2015) corpus study, encompassing 3,161 sentences with free adjuncts, revealed a significantly higher 29% nonsubject control for gerundive free adjuncts and 24% for infinitival ones. Finally, in Herbeck’s (2020) study of the distribution and interpretation of five different nonfinite adjuncts in two corpora of spoken Spanish, out of 2,215 sentences with null-subject adjuncts 28% displayed nonsubject control (20% extrasentential and 8% object control).

The factors behind the preference for local subject control have been discussed fairly extensively in the literature on NOC, and I address some of them in chapters 3, 11, and 13.² One point that deserves emphasis (see Green 2018, 2019) emerges from examples like (1d). Strictly speaking, *OC never blocks NOC*. At most, OC masks NOC. Hence, “competition”-based theories of the interplay between OC and NOC should be properly understood as theories of performance, not competence. The grammar always makes the two derivations available for those adjuncts that support them; however, an array of other factors—parsing preferences (proximity, linear order), pragmatic notions (logophoricity and topicality), and s(ematic)-selectional requirements (\pm animate) of the main and embedded predicates—conspire to either increase or decrease the accessibility of each reading.

Two types of examples show this most vividly. First, in the right circumstances a local human subject need not be the controller. This is visible not only in absolutive adjuncts like (1d) but elsewhere as well. (Examples are from Español-Echevarría 2000:101 and Green 2018:36, respectively.)

- (2) a. Bill_i will introduce the ambassador to the president [in order PRO to give him_i the opportunity to observe their reactions].
 b. Strangely, the candidates talked avidly when we_i asked them where they were from, but they hesitated [after PRO_i asking them about their work].³

Similar facts obtain outside English. ((3a) is from Witkoś and Żychliński 2014: ex. (40)); (3b) is from Georgieva 2018:180, a spontaneous example.)

- (3) a. *Polish*

Chłpcy_i wiedzą, że Jan_j modli się
 boys know that Jan prays REFL
 [żeby PRO_{i/arb/*j} nie robić mu_j krzywdy].
 so.that not do.INF him harm

‘The boys know that Jan prays not to be harmed.’

- b. *Umdurk* (Uralic; Permic) (SIM = simultaneous temporal adjunct)
 [Granica-jez ortči-ku] pasport-e pećat’ ug pukto.
 border-ACC cross-CVB.SIM passport-ILL stamp NEG put.PRS.3PL
 ‘[PRO_i when crossing the border], they_j don’t put a stamp in the passport.’

I believe that such examples are in principle available with all NOC adjuncts, although they are quite uncommon (for reasons to be discussed in section 14.2). Out of the blue, they are normally judged anomalous (leading to the false impression that OC is the only option), but spontaneous speech attests them. They support the general point that this study shares with Green 2018: OC and NOC are not in complementary distribution, and furthermore, NOC may obtain even if OC does not lead to semantic anomaly.

The second type of example that makes this point very clearly involves adjuncts that *simultaneously* alternate between the local (OC) and nonlocal (NOC) readings (example from Green 2018:40).

- (4) The pool_i was the perfect temperature [after PRO_{i/arb} being in the hot sun all day].

This point has broader implications for studies of child language that focus on the development of adjunct control. These studies have consistently assumed that examples like those in (2)–(4) are impossible in the adult language. Here is a representative quote: “In the adult grammar an arbitrary reading can be assigned to the subject of a temporal where there is no suitable controller in

the main clauses (as in *After skiing quickly, hot chocolate tastes good*). However, where the surface subject is a suitable controller, control by the subject has the force of a rule, not simply a preference” (Goodluck and Behne 1992:167n10). In fact, it *is* a (strong) preference, not a rule, in the adult grammar; nonlocal control is allowed in (2)–(4) despite the presence of a suitable local subject controller. This understanding of the true scope of NOC throws an entirely new light on so-called errors by children, specifically on nonsubject-control interpretations that they assign to temporal adjuncts, a classic finding in the field. Indeed, it demands that we reinterpret these findings as overgeneralization from, rather than violations of, the target grammar. I undertake this task in chapter 12.

Indeed, if NOC in absolute adjuncts is at least recognized in older studies, NOC in temporal clauses is virtually unknown, if not simply denied, as in Culicover and Jackendoff 2005:426 (although see Jones 1992 for an early classification of temporal adjuncts under NOC). Yet Landau 2013, 2017 and Green 2018 document many such examples.

- (5) a. The meeting was canceled without knowing the reasons.
 b. The night sky can be an unforgettable spectacle while/when camping in the desert.
 c. Potatoes are tastier after boiling them.
 d. This happens especially frequently when trying to reach numbers in New York.⁴

Contrary to standard descriptions, object control into temporal adjuncts is sometimes acceptable, as in this example from the internet (via Paz 2019:7).

- (6) Woman’s_i family beats abusive husband_j with sticks [after PRO_j leaving her_i with black eye].

A recent experimental study with 70 native speakers of English revealed that contextual priming significantly shifts speakers away from local subject control to object control with temporal adjuncts (Janke and Bailey 2017). While sentences of type (7a) elicited on average only 4% object control judgments, the rate increased to 11% in weakly primed examples like (7b) and to 51% in strongly primed examples like (7c). (Examples are from Janke and Bailey 2017:545.)

- (7) a. Ron tapped Hermione while feeding the owl.
 b. I’m going to tell you something about Hermione. Ron tapped Hermione while feeding the owl.
 c. Hermione is looking after the birds. Hermione takes out the food. Ron tapped Hermione while feeding the owl.

This sensitivity to the topic-salience of antecedents is a hallmark of NOC. Janke and Bailey explain object control into these adjuncts as arising from ambiguous attachment possibilities, essentially reducing it to OC. This is incorrect, I believe, for the construction shows great susceptibility to extrasentential control in any event; see sections 5.3 and 11.3 for further discussion of these matters.

Quite generally, alongside OC, NOC is attested in *most* types of adjuncts, once the proper conditions are attended to; this is documented extensively for English in chapter 5. Moreover, there is reason to believe that the actual scope of NOC has been seriously underestimated in other languages as well (see section 11.1). Correcting the false impression that adjuncts fall under OC *as a matter of grammatical necessity* is another important goal of this study. Instead, I will describe many adjuncts as alternating between OC and NOC.

Why assume an “alternation”? Why can OC readings not be simply subsumed under NOC, harboring a single mechanism? The [\pm human] effect already suggests this is not feasible ([–human] OC readings cannot be subsumed under NOC). In fact, arguments in favor of the fundamental OC-NOC distinction will recur throughout this work. Here, I will briefly mention two novel observations (see sections 5.1, 5.3, 14.2, and 14.5 for the full discussion).

Consider rationale clauses and their paraphrases as “remote control” (a term coined in Williams 2015).

- (8) a. Martha wrote this book in order to get rich.
 b. Martha wrote this book for a reason. The reason was to get rich.
 c. This book was written in order to be sold to Hollywood.
 d. *This book was written for a reason. The reason was to be sold to Hollywood.

While remote control proceeds unhindered with a human controller (8b), it breaks down with an inanimate controller (8d). This points to a duality of mechanism, masked in the pair (8a–b) but nonetheless real.

Next, consider the familiar ellipsis test, where OC requires a sloppy reading and NOC allows a strict reading. Contrary to the common view, temporal adjuncts do allow a strict reading of PRO, but crucially, only when it is human.

- (9) a. Bill felt much better after quitting his heavy drinking. His family did too.
 [*His family felt much better after he quit his heavy drinking.*]
 b. The storm was over. Water was cut off for 16 hours, but returned after electricity had been cut off for 11 hours.
 c. The storm was over. Electricity returned after being cut off for 11 hours. Water did too.
 [*Water returned after being cut off for 11 hours.*]

The subject of the antecedent clause in (9a), *Bill*, can control the PRO subject of the elided adjunct, producing the strict reading. The subject of the antecedent clause in (9c), *electricity*, cannot control the PRO subject of the elided adjunct; thus, *Water did too* entails that water, not electricity, had also been cut off for 11 hours.⁵ The intended strict reading, shown in (9b) to be perfectly sensible, is not available in (9c). The difference has to do with the [\pm human] feature, again pointing to two distinct grammatical mechanisms, which stand in an overlap rather than inclusion relation.

So far, I have focused on adjuncts displaying an OC/NOC alternation. Yet this is only part of the picture. The central observation addressed in this work is different and little-known (Green 2018, 2019, which directly tackles it, is an exception). It is the fact that controlled adjuncts fall into two basic categories. In the *strict OC* category we find adjuncts that always display OC, regardless of context. In the *alternating OC/NOC* category we find adjuncts that display either OC or NOC, depending on context (such as the temporal and absolutive adjuncts illustrated above). The very distinction is rarely noticed. Most accounts of adjunct control either assume that all adjuncts fall under OC or assume that they all allow NOC. Indeed, the very idea of an *alternation* between OC and NOC would strike some authors as bizarre, assuming as they do that the OC reading is just a special case of the NOC reading, demanding no duality of analysis. For others, the idea is incoherent, as NOC can only emerge when OC cannot.

However, by now there is extensive evidence that adjuncts, sometimes the very same adjunct, may display either OC or NOC (as in (4)). The following examples involve rationale clauses, but the point holds true for a number of other adjuncts.

- (10) a. Flowers_i produce pollen [(in order) PRO_i to reproduce].
 b. The door is open [(in order) PRO to greet passing neighbors].

The control relation in (10a) must be OC because NOC is restricted to human antecedents. The control relation in (10b) must be NOC because OC is restricted to local, sentence-internal antecedents. These characteristic properties are established in Landau 2013, 2017 and reviewed here in chapter 3. As I will show in chapter 5, there are at least six types of adjuncts in English that display a similar OC/NOC alternation. At the same time, at least four different types of adjuncts display strict OC, as in the result clause in (11).

- (11) a. [Meghan Markle's accent]_i has changed [PRO_i to become more British].
 b. *Meghan Markle_i regretted that her accent had changed [PRO_i to become less sure of herself].

Even though in (11b), just as in (10b), the local subject (*her accent*) is inanimate, and even though the attempted human controller, *Meghan Markle*, is both explicitly referenced in the main clause (as a possessive pronoun) and highlighted as a discourse topic in the preceding text, that human antecedent cannot control PRO in the adjunct clause. In other words, even the conditions most favorable to NOC cannot overrule OC when the latter is forced. This situation is, of course, familiar from complement control. Yet the fact that adjuncts split into two categories along these lines is barely known. In Landau 2013:chaps. 6–7, I tacitly acknowledged this split in choosing to discuss certain types of adjuncts under adjunct control and others under NOC. Green (2018, 2019) upholds this split and attempts to derive it under the movement theory of control. A further major empirical goal of this study, therefore, is to firmly establish the empirical distinction between strict OC and OC/NOC adjuncts. As we will see, the line can be elusive at times.

Two immediate questions arise: (i) why do complements not display a similar alternation? and (ii) how can we account for this alternation? Question (i) is, in fact, a misconception. Some complements *do* display NOC, specifically with verbs of communication (Landau 2020). Yet it is true that by and large, complement control is obligatory. The reason is ultimately selectional (Williams 1994, Jackendoff and Culicover 2003). In the two-tiered theory of control (TTC), selection is reflected in the contextual coordinates made available on the C head of the controlled clause: if these coordinates are locked to the participants of the reported speech/thought act, OC will ensue.

Question (ii) is the focus of the present study, offering a specific incarnation of a classical question: what determines the distribution of OC? The rich history of research on this topic has really produced only two candidate answers: (i) the internal makeup of the controlled clause, and/or (ii) the structural position (attachment site) of the controlled clause. Answer (i) has been extremely fruitful in exploring how finiteness and nominalization interact with control across different languages (see the survey in Landau 2013:secs. 4.1, 5.6). It also informs a long research tradition that distinguishes between “small” and “big” infinitives, each with its own distribution and interpretation, going back to the founding work by Rosenbaum (1967) (see Bouchard 1984, Koster 1984, Rochette 1988, Wurmbrand 2003, 2004, Grano 2015, Landau 2015, 2017, Wurmbrand and Lohninger to appear). Answer (ii) has usually taken the form of linking OC to VP-internal position (of the controlled clause) and NOC to VP-external position (Manzini 1983, Landau 2001, Fischer 2018, Green 2018, 2019).

The present study develops an account that combines the insights of both traditions, applying them to adjuncts, while grounding them semantically in

the basic toolkit of the TTC. In the TTC, the fundamental distinction between predicative and logophoric control in complements turns on the semantic type of the complement: property or proposition. The semantic type correlates with syntactic size, the smaller clause (FinP) denoting a predicate and the larger one (CP) a proposition. Nonfinite adjuncts too, I argue, come in these two formats. They may denote either properties or propositions. The choice is dictated by the prepositional (P) head of the adjunct, which introduces the nonfinite clause. Heads that strictly s-select predicative clauses produce strict OC; heads that s-select predicative or propositional clauses produce alternating OC/NOC adjuncts.⁶ These semantic types constrain, in part, the adjunction possibilities open to the two categories of adjuncts. A fully compositional analysis of the two categories of adjuncts, and their integration with the main clause, is developed in chapter 6.

The empirical content of the proposal derives from a novel correlation between the type of adjunct (OC/NOC or OC) and whether or not it has a variant with a lexical subject, that is, an overtly propositional variant. Concerning the examples above, we find a propositional variant for rationale clauses but not for result clauses (see section 2.2 for further nuances, such as the possibility of shifting finiteness between the two variants).

- (12) a. The door is open (in order) for us to greet passing neighbors.
 b. *Meghan Markle's accent has changed for her to become less sure of herself.

This correlation—which I call the *Propositional Variant Criterion*—provides, for the first time, a solid distributional diagnostic for *any* theory of control to work with. It is also bolstered by typological evidence, and raises fundamental questions about default settings in grammar construction (see chapter 13).

The compositional analysis introduces strict OC and OC/NOC adjuncts at different attachment sites in the clause. It thus generates a number of syntactic predictions—for example, whether the adjunct will *necessarily* or *optionally* be included in VP-targeting operations. These predictions are all tested in chapter 7. Importantly, they contrast with the predictions of the common approaches to adjunct control, which attempt to *deduce* the type of control from the attachment site. “Binary configurational” theories derive entailments like “Position X → OC” or “Position Y → NOC.” But these entailments are systematically falsified. For example, a popular idea is that whenever the matrix subject c-commands the adjunct, OC is forced and NOC excluded. But it is not difficult to find examples of low NOC adjuncts. In (13a), the embedded negative polarity item (NPI) is licensed by the matrix negation under c-command, yet NOC is possible. In (13b), the matrix subject must c-command

the embedded pronoun for variable binding to be possible, and still NOC is allowed.

- (13) a. The door isn't open in order to greet anyone, I just needed some fresh air.
 b. Every road_i in this area is dangerous when driving on it_i during the rainy season.

In fact, as chapter 10 shows, VP-targeting tests are not refined enough to differentiate the attachment sites of OC and NOC variants of alternating adjuncts. The OC-NOC distinction does interact with syntactic hierarchy, but in a more intricate way. Therefore, yet another major goal of this study is to sort out the syntax-semantics correlations in the realm of adjunct control: which syntactic consequences follow from which modification relation, and how semantic and syntactic aspects of adjunct control may converge to support a unified analysis.

The last chapters of this work take a closer look at NOC. Rather than dismissing it as the dull “elsewhere” case, I investigate NOC in its full internal richness. Previous research has left many questions unsettled: Is NOC conditioned by logophoricity, topicality, or both? Are NOC interpretations disjoint from OC interpretations or do they subsume them as a special case? Precisely where in the grammar do OC and NOC compete? Is the choice between them resolved in the syntax or in the pragmatics, or is it a processing matter altogether? We will see that there is, in fact, much evidence bearing on these questions. The evidence has been accumulated in several subfields (occasionally unaware of each other): theoretical syntax, acquisition studies, and processing studies. Synthesizing the results of these different research strands under a unified explanatory model is one last goal of this work.

In short, then, there are six answers to the question “Why do we need a theory of adjunct control?”:

1. To establish the true (and wider) range of NOC possibilities with adjuncts;
2. To establish the fundamental distinction between strict OC adjuncts and alternating OC/NOC adjuncts;
3. To understand this distinction in terms of a general theory of control and the property-proposition divide that lies at its core;
4. To provide an explicit compositional analysis (so far lacking) of clausal adjunction, from which control behavior will naturally follow;
5. To tie together the syntax and semantics of controlled adjuncts by showing their predictions to be aligned; and
6. To flesh out the analysis of NOC and demonstrate its consequences for processing and child data.

These are the goals. They may well be too ambitious, but at least they strike me as the right ones to pursue.

1.2 Controlled Adjuncts: Basic Properties

The fundamental cut between strict OC adjuncts and OC/NOC adjuncts produces two main categories; the former category is further divided into strict subject OC and strict object OC. Table (14) specifies the members of these categories in English. It is important to bear in mind that the inventory of adjuncts, as well as their specific semantic nuances, varies from one language to another. The universal claim embodied in table (14) is that the categories themselves are invariant, although *which* adjuncts populate them in particular languages is subject to variation.

(14) *Controlled adjuncts in English*

Strict OC		Alternating OC/NOC
Subject control	Object control	
Goal clause	Result clause	Rationale clause
Stimulus clause	Subject purpose clause	Object purpose clause
		Justification clause
		Temporal clause
		Absolutive clause
		Telic clause

Two clarifications are in order. First, result clauses modify unaccusative verbs; they are controlled by the *deep* object, hence classified under object control. Independently in English, the object must raise to become a subject, but this is not necessary in all languages. Second, my focus on English is largely dictated by the rich and fine-grained level of descriptive and analytic accounts of adjunct control in English, compared with the scarcity of such accounts for other languages. Ultimately, the theory to be developed here should generalize to adjunct control in any possible language. As it happens, the choice of English in this particular case seems relatively harmless because the language harbors a fairly extensive system of nonfinite, controlled adjuncts, with each of the three universal categories in (14) represented by *some* members. Still, I will occasionally refer to other languages when the relevant evidence exists.

The ten types of adjuncts in table (14) are illustrated in (15). More varieties and options are provided in the specific sections dedicated to each type, in chapters 4 and 5.

- (15) a. *Goal clause*
We traveled to visit family relatives in Ireland.
- b. *Stimulus clause*
He shuddered to remember the boy he'd been back then.
- c. *Result clause*
Groundwater has seeped in to create a small labyrinth of canals.
- d. *Subject purpose clause*
Jane bought this nightstand to fit between the bed and the cupboard.
- e. *Rationale clause*
They only started dating (in order) to prove me wrong.
- f. *Object purpose clause*
Mozart wrote this sonata to play with a flute.
- g. *Justification clause*
She dumped him for cheating on her.
- h. *Temporal clause*
The kids started fighting after getting along nicely for two hours.
- i. *Absolutive clause*
Looking outside the window, Bill sighed in despair.
- j. *Telic clause*
This masterpiece was rediscovered in the Renaissance, only to be forgotten again.

I assume that adjunct clauses are always introduced by some subordinating head, distinct from their own C head. Often, the adjunct's head is overt and mandatory: *before*, *after*, *despite*, *without*, *for*, *only*, and so on. At other times, it is optional, like *in order* in rationale clauses or *with* in absolutive clauses. The null hypothesis is that the head is syntactically and semantically present, but simply not parsed at PF. Finally, some adjuncts never occur with an overt head, yet clearly their semantic relation to the main clause is not arbitrary, and often it is very specific (e.g., result or stimulus clauses).⁷ Again, it would not seem reasonable to locate that meaning in the complementizer of such adjuncts (itself usually null). Uniformity and standard compositionality require that we assume a distinct null head that mediates the modification relation between the two clauses and contributes its specific flavor. Since most overt adjunct heads are prepositions, I assume that the null ones are too, but this assumption is not crucial (e.g., there may be null Adv heads). In short, the adjuncts discussed in this work all have the form [_{pp} P CP].⁸

Following Haider (2000, 2004), Ernst (2002, 2007, 2014), and Nilsen (2004), in this study I accept the idea that the hierarchical distribution of adjuncts is largely derivable from their meaning. This is particularly natural

for adjunction within the extended VP (which does not involve Cinque's (1999) adverb hierarchy). Outside VP, as we will see, more variability is found, in that the same adjunct (e.g., a temporal clause) can attach at any point between VP and TP. Actual linearization will depend on prosodic factors; clausal adjuncts are typically sentence-initial or sentence-final, and can occur sentence-medially only if set off by prosodic pauses (commas).

Studies of adverbial syntax typically focus on nonclausal adverbials. Thus, one finds elaborate classifications of adverbs into categories such as *speaker-oriented*, *evaluative*, *epistemic*, *subject-oriented*, *quantity*, *manner*, and so on. At a deeper level, the fine-grained multitude of adverbials cluster in a few supercategories: modification of process, event, proposition, or speech act. These types correspond to hierarchical organization, the first being projected the lowest and the last the highest. The clausal adjuncts in (15) do not easily fit the fine-grained classes. The supercategories are slightly more relevant: strict OC adjuncts are all process modifiers, while alternating OC/NOC adjuncts instantiate event and proposition modification.

These labels, however, do not translate into any substantive theory of adjunct *control*. To this end, in chapter 6 I will construct general semantic templates for the three categories of adjuncts in (14); these templates will entail specific compositional results for syntactic organization, which I will then explore in chapter 7. In its general spirit, then, the present study harmonizes with the ultimate goal of selectional/scopal theories of adverbial syntax. In its details, however, it goes far beyond what they have to offer.

The intrinsic semantics of each clausal adjunct, its specific flavor and conditions of verification, will be of little concern in this study. I will typically use intuitive concepts like *result* or *goal* to talk about the meaning of result or goal clauses, not mistaking this quasi-circular talk for true explication. This strategy will be seen to be harmless insofar as one focuses on *compositional* properties of the adjuncts (i.e., how they are integrated with the main clause) rather than on their *denotational* properties. Although much can and should be said about the subtle distinctions between, for example, stimulus clauses and clauses specifying just any general cause, or between goal clauses and rationale clauses, those discussions have little bearing on how the three *categories* of adjuncts represented in table (14), abstracted away from specific tokens, are semantically integrated, and how their control profile is determined. Any semantic distinctions among the ten types of adjuncts that do not bear on their attachment site will have no consequences for the OC/NOC distribution, and so will not concern us here.

One striking distinction between strict OC and OC/NOC adjuncts that *is* of key significance is the semantic selectivity of the former. Each of the strict

OC adjuncts places heavy semantic restrictions on the range of predicates it may combine with (see chapter 4 for data and discussion). Goal clauses are only compatible with goal-oriented unergative verbs; result clauses are only compatible with unaccusative verbs; stimulus clauses are only compatible with unergative verbs that convey an emotional response; and subject purpose clauses are only compatible with a small class of verbs whose theme object “becomes available” for further manipulation. In fact, as we will see, strict OC adjuncts occasionally “blend into” selected complement clauses, in the sense that their semantic contribution is remarkably close to that of such complements. This close similarity is naturally explained if, like complements, these adjuncts merge with the verbal root and “augment” its core meaning.

In contrast, alternating OC/NOC adjuncts are rarely selective. Rationale, temporal absolutive, and justification clauses can modify pretty much any type of matrix predicate: stative or eventive, telic or atelic, unaccusative or unergative, and so on. Object purpose clauses do exhibit high selectivity for the matrix theme, of the same nature seen with subject purpose clauses, but this is only because of their *object gap*—an operator trace—and not because of any requirement imposed by the control relation itself (which, in fact, admits NOC). Finally, telic clauses select eventive (nonstative) matrix predicates, but this requirement is structurally neutral and may operate at any level of the clausal spine in which the event argument is still accessible.

The high semantic selectivity of strict OC adjuncts, as opposed to the non-selectivity of OC/NOC adjuncts, ought to be reflected in their attachment sites. Indeed, the proposal to be developed places strict OC adjuncts as adjuncts to the lowest projection in the VP, namely, the root (see section 6.3.1). At that level, they are in a proper position to s-select the right kind of root, and possibly to c-select the right kind of light *v* that combines with the root’s projection. This low position also accounts for the peculiar immobility of these adjuncts and their inseparability from the VP. This is the first sense in which the present theory is *selectional*: the adjunct PP selects the kinds of roots and light *v* heads that it modifies.⁹ The second sense in which selection plays a key role is in pairing the P head of the adjunct either with a property-denoting clausal complement or with a proposition-denoting one (see section 2.1).

This way of ensuring OC indicates that the “limitations” of the TTC, discussed in Green 2019, are not real. Green’s point is that the TTC (as formulated in Landau 2015) has no natural account for OC adjuncts. Because adjuncts are not selected, they should always be able to project the full logophoric structure that produces NOC. The point missed here is that while adjuncts are unselected, they are *selectors* themselves. Furthermore, P heads of adjuncts are also selectors. By taking into account what semantic type is

selected as the nonfinite complement of the P head, and what type of matrix eventuality is selected by the entire adjunct, we can naturally account for strict OC adjuncts within the TTC.

In contrast to strict OC adjuncts, OC/NOC adjuncts are attached at the highest projection within the VP, namely, at VoiceP. Specifically, in their OC guise they combine with the predicative node Voice', and in their propositional guise they combine with VoiceP (see section 6.3.2). This high position does not let them select for any particular root or light *v*, and simultaneously accounts for their syntactic independence from the main VP.