RARE-CLASS ADJECTIVES IN THE TOUGH-CONSTRUCTION

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I examine the behavior of rare and other frequency adjectives in the tough-construction (TC). Due to the effects of a heretofore overlooked semantic selectional restriction, such adjectives have not generally been recognized as grammatical in the TC. I show here that they do occur grammatically in this construction when the relevant selectional restriction is satisfied. Specifically, as it does in non-TC sentences, rare in the TC requires that its subject be kind-denoting, a requirement not imposed on the embedded-clause gap position whose reference the TC matrix subject controls. In this, TCs with rare exemplify a previously unattested selectional and thematic asymmetry in the construction. On their face, the facts appear to argue strongly in favor of treating the rare-TC matrix subject as a thematic argument of the TC matrix predicate, an intriguing and challenging prospect given the fact that such an analysis has been roundly (though not universally) rejected for canonical TCs. Instead, I take the prima facie counterintuitive position that the rare-TC matrix subject is not a thematic argument of the TC matrix predicate; I argue that rare-TCs are thematically and syntactically identical to canonical TCs in this respect. I propose that the kind-denotation requirement for rare-TC matrix subjects is imposed indirectly, through the interaction of a selectional restriction on the infinitival argument of rare and the Agree calculus (Chomsky 2000, 2001) that identifies the TC matrix subject with the embedded gap position whose reference it controls (Rezac 2004, 2006). Beyond its contribution to our theoretical understanding of the perennially thorny TC, the present study constitutes, to the best of my knowledge, the first detailed empirical investigation of the behavior of adjectives like rare in the TC.∗

Keywords: tough-construction, frequency adjectives, kinds, syntax, thematics, Agree

1. INTRODUCTION. Adjectives that denote the frequency or distribution of events, such as rare, common, and unusual (henceforth, rare-class adjectives), are often judged to be ungrammatical in the English tough-construction (TC), as in 1.

(1) *They are {rare, odd} to {find, lose}. (Quirk et al. 1985:1394)

If one casts a wider net, it is in fact easy to find perfectly grammatical attestations of TCs with rare-class adjectives (henceforth, rare-TCs); some examples are shown in 2.1

(2) a. this kind of detuning is rare to hear in chipmusic in general.2
b. Today, in the PC world there are two types of discs that are common to encounter: ISO 9660/Joliet and UDF.
c. Such columns of light are not uncommon to see, and a retrospective of past APODs that have featured picturesque sun pillars can be found here.
d. There are soft woods, hard woods; groups of native grasses grow here that are unusual to find growing in the same vicinity.

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1 All attestations reported here and throughout were found via Google searches. In order to keep the text uncluttered, URLs and dates accessed for each example are given in footnotes.

As detailed below in §§3 and 4, there is a straightforward generalization underlying the contrast between 1 and 2: rare-class adjectives in the TC require their subjects to be kind-denoting. Far from being a quirk of the rare-TC, this same generalization has been observed by Carlson (1977b) to hold for rare-class adjectives outside of the TC. Carlson’s observation notwithstanding, the imposition of this selectional restriction has been overlooked in the TC literature (Carlson himself did not address the TC), and this has fed the misperception that such adjectives do not occur grammatically in the construction.

The existence of this selectional restriction, in turn, appears to have profound consequences for the syntactic analysis of the TC. Selectional restrictions like the kind-denotation requirement seen here are standardly taken to be imposed by predicates on their thematic arguments. With few exceptions (Lasnik & Fiengo 1974, Jones 1991, Kawai 1992, 2002, Huddleston & Pullum 2002:1247ff.), however, the TC matrix subject is generally assumed to be thematically unrelated to the TC matrix predicate: in examples like John is tough to love, the TC matrix subject, John, appears to be thematically related to the embedded verb love but not to the matrix predicate tough, as evidenced inter alia by the effective synonymy of such examples with their impersonal counterparts (here, It is tough to love John). It has traditionally been assumed, however, that the combination of unbounded, successive-cyclic movement (i.e. A′-movement, universally acknowledged to be implicated in the TC infinitival clause since Chomsky 1977) followed by movement to a Case position (A-movement) that would be required in order to connect the TC embedded gap and matrix subject positions is illicit; indeed, this is the well-known ‘improper movement’ configuration (Chomsky 1973, 1981, May 1979). For this reason, most recent work on the TC (e.g. Flickinger & Nerbonne 1992, Rezac 2004, 2006, Hicks 2009, Hendrick 2013) has focused on devising novel ways of connecting the TC matrix subject to the embedded object gap position, seemingly its natural thematic home in canonical TC examples. The rare-TC data are new and potentially disruptive inasmuch as they are the first to show what looks like a clear thematic connection between the TC matrix subject and matrix predicate.

Several types of response are conceivable. Assuming that rare-TCs are phrase-structurally identical to canonical TCs in the relevant respects (an assumption to be defended in §2), we might take the thematic difference between the two constructions as evidence that rare-TC matrix subjects must be base-generated in the matrix clause, notwithstanding the possibility that canonical-TC matrix subjects might be derived via movement from the embedded clause. Alternatively, if we are willing to countenance movement into thematic positions (as on the movement theory of control; see e.g. Boeckx et al. 2010), then we might treat both types of TC as involving movement to matrix subject position, the crucial difference being that rare-TC subjects’ final landing spot is a thematic position. Taking an altogether different tack, we might view the thematicity of rare-TC matrix subjects as an indication that all TC matrix subjects are thematic, generalizing from the rare-TC cases to endorse what has always been a minority view of the canonical TC. In short, the rare-TC data force us to confront anew the central dilemma of the TC, namely the conflict it presents between thematics and syntax.

My own proposal is a far more conservative and prima facie counterintuitive one: I wish to defend the view that the rare-TC matrix subject is not in fact thematically related to the matrix predicate. The kind-denotation requirement observed for rare-TC matrix subjects is, I argue, imposed on them only indirectly, an epiphenomenon of the syntactic operation that connects the TC matrix subject and embedded object positions. Specifically, I follow Rezac (2004, 2006) in proposing that the TC matrix subject is
connected to the embedded object position via Agree (Chomsky 2000, 2001). Rare-class adjectives impose a kind-denotation requirement on their infinitival-clause arguments; the Agree calculus ensures that this requirement is passed on to the rare-TC matrix subject in the course of the derivation. Canonical TC adjectives impose no such requirement on their clausal arguments, and so no such restriction is observed for their matrix subjects. I thus propose that rare-TCs are syntactically and thematically identical to canonical TCs. The sole difference between them is whether the adjective imposes a selectional restriction on its clausal argument, that is, a lexical semantic distinction needed independently of any considerations stemming from the TC itself. Everything else follows from the syntax of Agree. I take it that this is the minimal conceivable difference between the two constructions that one could posit, and that the analysis is thus to be preferred absent evidence that contradicts it.

The presentation proceeds as follows. I first introduce basic data on rare-TCs and show that they cannot be analyzed as instances of similar non-TC constructions (§2), and then examine the selectional restrictions that rare-class adjectives place on their matrix subjects in the TC (§3). Many of the relevant examples contain TCs embedded in relative clauses; I examine these relative clauses in some detail (§4) before turning to the syntactic analysis (§5) and summarizing (§6).

2. Rare as a TC adjective. I begin by showing that adjectives like rare and common occur felicitously in the TC, despite the existence of restrictions on their distribution (not observed with canonical TC adjectives) that might otherwise obscure this fact. The existing literature has not generally recognized the grammaticality of TCs with such adjectives as matrix predicate: rare and odd are deemed ungrammatical in the TC by Quirk and colleagues (1985:1394), unusual by McCawley (1998:110). Huddleston and Pullum (2002:1246) disagree with Quirk and colleagues about odd, though it is possible that their judgment is for the propositional attitude reading of odd (a reading that rare lacks) and not for its frequency/distribution reading. In fact, once the relevant selectional factors (to be discussed in detail in §3) are controlled for, we find that rare-class adjectives are indeed grammatical in the TC.

There are many naturally occurring examples of rare-class adjectives in the TC. Consider those in 3.3

(3) a. That kind of straight-up statement is exceedingly rare for a politician to make.
   b. It became completely illegal to take the Black Sea Bass and they have made a fairly good comeback such that they are not uncommon to encounter these days.
   c. At 33, he had no prior history of cardiovascular disease, but was told that he had high cholesterol, a risk factor for a heart attack that is common to see in periods of high stress.

I argue that structures like those in 3 are indeed TCs, and not instances of non-TC constructions with similar surface syntax. In particular, the examples in 3 are not instances of the heavy to lift construction, in which a non-TC adjective is followed by a TC-like gapped infinitival clause. As is well known (see e.g. Hicks 2009:536), true TC adjectives allow impersonal paraphrases, as in 4, but adjectives (and nominal predicates) like heavy do not, as in 5.

If we consider the *rare*-class adjectives in light of this paradigm, we see that they behave like the true TC adjectives in 4, not like the non-TC adjectives in 5. The *rare*-class adjectives seen in 3 all readily take full infinitival-clause arguments with an expletive subject, as shown in 6.

(6) a. It is rare for a politician to make that kind of straight-up statement.
   b. It is not uncommon to encounter Black Sea Bass these days.
   c. It is common to see high cholesterol in periods of high stress.

Note that 6c is an impersonal corresponding to a slightly altered version of the *rare*-TC in 3c. Replacing the *rare*-TC in 3c with its direct impersonal counterpart yields somewhat awkward results, as shown in 7a. This, however, is an artifact of its being embedded within a relative clause: on the impersonal paraphrase, the relativized position is no longer the TC matrix subject position, but rather the embedded object position. Such relativization is equally awkward with canonical TC adjectives, as shown in 7b.

(7) a. ?a risk factor for a heart attack that it is common to see in periods of high stress
   b. ?something that it is tough to understand

*Rare*-class adjectives likewise pattern with canonical TC adjectives in showing evidence of unbounded A′-movement within the embedded infinitival clause. In this, they are further differentiated from the *heavy to lift* construction, whose gapped infinitival clause shows no evidence of supporting unbounded dependencies. Tests for unbounded dependency, sensitivity to weak and strong islands, and licensing of parasitic gaps are shown for canonical TCs in 8, for *rare*-TCs in 9, and for the *heavy to lift* construction in 10.

(8) a. John is tough to attempt to love.
   b. *John is tough to wonder whether to love.
   c. John is tough to find someone who loves.
   d. John is tough to talk to without being annoyed by.

(9) a. That kind of statement is rare for a politician to attempt to make.
   b. *That kind of statement is rare for a politician to wonder whether to make.
   c. That kind of statement is rare for a politician to support someone who makes.
   d. That kind of statement is rare for a politician to make without regretting.

(10) a. The box is heavy to attempt to lift.
    b. *The box is heavy to wonder whether to lift.
    c. The box is heavy to find someone who can lift.
    d. *The box is heavy to lift without dropping.

Since *rare*-TCs pattern with canonical TCs in multiple ways, it is sensible to conclude that examples like those in 3 are legitimate instances of the TC, and not of some other construction. Any general analysis of the TC thus must account for the behavior of these adjectives of frequency and distribution. I note in passing that not all frequency adjectives can occur in the TC: participation is limited to those that independently select
infinitival arguments (as shown for rare, uncommon, and common in 6). In particular, frequency adjectives like daily and occasional, which are analyzed in detail by Stump (1981), neither take infinitival arguments nor occur in the TC, as shown in 11. I set them aside for the remainder of the present investigation.

(11) a. *It is daily/occasional for a politician to make that kind of statement nowadays.
    b. *That kind of statement is daily/occasional for a politician to make nowadays.

Having established that adjectives like rare do in fact occur in the TC, I now turn to an analysis of the selectional restriction that has long caused them to be overlooked.

3. A selectional restriction on rare-TC subjects. Rare-class adjectives in the TC impose a semantic selectional restriction on the TC matrix subject: they require the subject to be kind-denoting.4 The existence of this restriction has, as far as I am aware, gone completely unnoticed in the previous literature on the TC. The infelicity of examples in which the matrix subject fails to meet this heretofore unrecognized restriction has led many to draw the too-hasty conclusion that rare-class adjectives are categorically barred from the TC. In this section I examine the nature of the restriction placed on rare-TC subjects. I show that it is entirely in keeping with the behavior of rare-class adjectives outside of the TC; moreover, the restriction is not associated with the embedded gap position whose reference the matrix subject controls. This state of affairs has direct consequences for the syntactic analysis of the TC, a matter I pursue further in §5.

Before we begin, I offer two comments on the data to be considered. First, TCs with rare-class adjectives are not terribly common. With the notable exception of cases in which the rare-TC matrix subject is relativized (which I discuss in §4), they are almost completely absent from major corpora such as the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA).5 It is nonetheless possible to find attestations, produced in fluent and idiomatic English by what appear to be native speakers, simply by searching the internet. In what follows, I use naturally occurring attestations to support my claims, with the exception of negative data and a few uncontroversial points about canonical TC adjectives.

Second, the class of adjectives in question—those that denote frequency or distribution and take infinitival-clause arguments—appears to be quite small. It includes at least rare, which I use throughout as a representative of the group, as well as common, uncommon, and unusual, which I include in cited examples wherever possible. I exclude odd from the discussion below in order to avoid possible interference from its aforementioned interpretation as a propositional attitude predicate. The apparently small size of the class of adjectives in question does not detract from the robustness of the selectional restriction displayed by its members, nor from the broader significance of their behavior for our understanding of the TC.

3.1. Kind-denoting subjects. The basic generalization about subjects of rare has been known at least since Carlson 1977b (p. 106): rare requires that its subject denote a

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4 I use ‘kind-denoting’ as a synonym for ‘kind-referring’, the term employed in Krifka et al. 1995. I choose the former term primarily because it enjoys the simple argument structure of the English verb denote, as compared to the syntactically more complex refer to. An expression is kind-denoting in the sense intended here iff its model-theoretic interpretation (or that of its semantic metalanguage translation) is an individual kind.

5 The BNC is a 100-million-word parsed corpus of written and spoken texts (http://www.natcorp.ox.ac.uk/); COCA is a 450-million-word (and growing) corpus comprising diverse genres (http://corpus.byu.edu/coca/).
kind. The property denoted by *rare* does not felicitously apply to individual objects; *rare* is similar in this respect to predicates like *widespread* and *extinct*, which also require kind-denoting arguments (though it differs subtly from them; see below and also Krifka et al. 1995:95ff.). Though Carlson does not discuss the occurrence of *rare* in the TC, it is striking to observe that TCs with *rare* place just the same requirement on their matrix subjects.

To begin, consider the contrast between the *rare*-TC examples in 12, where the matrix subject does not denote a kind, and those in 13 through 15, where it does. The examples in 13 contain subjects in which the noun *kind* occurs overtly; those in 14 and 15 contain, respectively, bare plural subjects and subjects with ‘identifier’ *such* (Bolinger 1972:60), both of which have long been analyzed as kind-denoting expression types (Carlson 1977b).

(12) a. #John is rare to see around the office.
   b. #Most cats are rare to find in the wild.
   c. #That group of students is rare for me to find in the library.
   d. #That Mary might be wrong is rare for me to imagine.

(13) a. That kind of demeanor is rare to see in a young pitcher.9
   b. I’m only 24 years old, but have to comment that that kind of self-candor is rare to find these days in a commercial public medium.
   c. Because of my location, that kind of thing is pretty uncommon for me to come across.
   d. Plump or skinny, doesn’t matter, that kind of actress is rare to come by … they should be happy to have her around!!
   e. I want to start by giving thanks to Algonquin and Lakeshore Catholic District School Board for giving me the opportunity to live this experience because this kind of trip is rare to have.

6 Unlike *rare*, these adjectives do not select infinitival-clause arguments, and so they do not participate in the TC.

7 In 12 and similar examples below, I use ‘#’ to indicate infelicity or unacceptability (I use these terms interchangeably below). I take it that such unacceptability can spring from ungrammaticality (typically marked with ‘*’), but use ‘#’ as a neutral indicator so as not to prejudge the source of the violation in a given class of cases.

8 Certain clausal constituents have also been analyzed as kind-denoting (Krifka et al. 1995:102)—gerundials strike me as a bit more natural in this interpretation than infinitivals—but they seem to be unattested as *rare*-TC subjects. This may be due to a semantic failure on their part to enter into the required coreference relationship with the TC embedded gap position. Alternatively, it may be that the kinds of verbs that take such clausal complements are independently awkward as infinitival complements of TC *rare*, or that examples with such subjects are simply vanishingly uncommon (cf. the note above about the low frequency of *rare*-TCs with nonrelativized subjects). It is possible to construct *rare*-TC examples with gerundial-clause subjects that sound acceptable, as in (i); meanwhile, gerundial clauses make good subjects of non-TC *rare*, as in (ii). (For a discussion of event-kind denotation in finite clauses, see Landman & Morzycki 2003.)

(i) Going to the dentist is rare for anyone to enjoy.
(ii) Enjoying visits to the dentist is rare.

(14) a. True limited editions are rare for precision diecast companies to issue since their tooling dies are extraordinarily expensive to produce.\textsuperscript{10}
b. However, we would like to note again that we do not take in cats or kittens, and dogs are rare for us to take in too.
c. Flashbacks are common for survivors to experience and these can be triggered off by anything which may remind you of the abuse.
d. Socks higher than the ankle length are unusual for cyclists to wear.
e. Not that lose-lose situations are unusual for libcomms to involve themselves in, but examples such as the Maher/Savage tirade are completely and obviously indefensible.

(15) a. ‘Such petitions are rare for organizations to file,’ admits Edward Pittman, an attorney in the Washington, D.C. office of Dechert LLP representing the STA.\textsuperscript{11}
b. Such distinctions are increasingly rare for port authorities to achieve in the current economic climate.
c. Such situations are uncommon to see, and this particular one is most likely evidence of how third-party software can rely on unsupported or internal OS behavior.
d. Such expressions of devotion are unusual for her daughter to voice, Bremness said.
e. Such ‘blocking’ tactics are not unusual for UFCW union officials to use, as recently witnessed by grocery employees in Illinois.

Examples with non-kind-denoting subjects like those in 12 have fed the misperception that rare-class adjectives are infelicitous in the TC. The examples in 13 through 15 show, on the contrary, that rare-TCs are perfectly acceptable in the presence of a suitable subject. The nature of the subjects in these examples suggests strongly that what makes a rare-TC subject suitable is precisely the semantic characteristic that Carlson (1977b:106) identified for subjects of rare outside of the TC: kind denotation.

I take it as uncontroversial that DPs whose head noun is kind, like those in 13, denote kinds (Carlson 1977b:208ff.).\textsuperscript{12} Bare plurals, as found in 14, have likewise been taken since Carlson’s (1977b) classic analysis to denote kinds. Though others have argued that bare plurals are ambiguous between kind-denoting and indefinite interpretations (Wilkinson 1991, 1995, Diesing 1992, Greenberg 2003; for a ‘Neo-Carlsonian’ rejoinder, see Chierchia 1998, as well as Dayal 2004), the rare-TC bare plurals in 14 are not indefinite: they do not have (merely) existential quantificational force, and they do not express generalizations that are true of particular individuals in the manner of characterizing generic sentences (Krifka et al. 1995; e.g. it does not follow from 14 that any particular flashback is commonly experienced). Identifier such, as found in 15, is anaphoric to a characteristic


\textsuperscript{12} Wilkinson (1995) discusses examples in which DPs with overt kind may be interpreted existentially, but this reading appears to be unavailable for such DPs in the matrix subject position of rare-TCs.
or kind; as Carlson (1977b:232) observes, identifier *such* cannot refer back to a discursively salient antecedent property if that property does not pick out a kind.\(^{13}\) Indeed, the examples in 15 all readily admit paraphrases with the phrase *such NPs* changed to *that kind of NP* (and with a concomitant change in number agreement on the verb).

Experimental results confirm the contrast shown in 12 vs. 13–15. Participants \((n = 80)\) were asked to rate the acceptability of rare-TCs whose subjects were names, bare plurals, and DPs with head noun *kind*. The presence of a name (a non-kind-denoting expression) in the subject position of the rare-TC was associated with a strong negative effect on the acceptability rating compared to DPs with *kind*, which served as a baseline. A mixed-effects ordered logistic regression model (with subjects and items modeled as random effects) estimated that, for a given value on the rating scale, the odds of a name subject falling above that value were just \(0.03 = e^{-3.48}\) times the odds of a *kind* subject falling above that value \((\beta = -3.48, z = -10.76, p < 0.0001)\); that is, at a given scalar threshold, the odds of success for names were 97% lower than they were for *kind*-DPs (and even in a fixed-effects-only model showing a smaller negative effect for names, the decrease in odds for names was 94%). Bare plurals, which readily denote kinds, had no such effect; acceptability for bare plural subjects was not significantly different from that for their fellow kind-denoters, DPs with *kind* \((\beta = -0.45, z = -1.48, p = 0.15)\). The ratings results are summarized in Figure 1; the experiment and statistical analysis are described in full in the appendix.

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\(^{13}\) Bresnan (1973:303) calls this use ‘character or kind’ *such*. It is to be contrasted with *such* that refers to degrees or extents (Bolinger’s ‘intensifier’ *such*). Siegel (1994) argues that identifier *such* need not always refer back to a kind, but instead can take any common noun denotation as its antecedent. I do not weigh in on the issue here, but simply note that identifier *such* always needs a kind-denoting antecedent when it occurs in the matrix subject of a rare-TC, in keeping with the requirement placed by rare-class adjectives on their subjects.
The experimental results support the generalization that kind denotation is the common factor underlying the acceptability of the rare-TC subjects in 13 through 15, an observation in keeping with Carlson’s (1977b) proposal for non-TC rare. It must be noted, however, that not just any kind-denoting subject will do. It will be helpful here to draw a distinction between kind denotation (a property of DPs) and kind predication (a property of the relationship between subject and predicate). Rare-TCs appear to require that there be an identifiable semantic or pragmatic connection or relationship between the subject and the infinitival clause in order to license kind predication with rare. For example, in 15a *such petitions refers to petitions seeking to overturn SEC approval; evidently, this category of petitions is sufficiently distinctive with respect to the act of petition-filing that a DP describing it can be felicitously used as a rare-TC subject (i.e. kind predication is licensed). By contrast, it would be quite unnatural for *such petitions to refer to, for example, petitions drafted on a Wednesday, unless the context could be accommodated such that there were something special for the filing process about Wednesday-drafted petitions. Consider also the relatively degraded rare-TCs with bare mass-noun and bare plural subjects in 16 and 17, respectively. (I cite McCawley’s ‘*’ judgment in the former case, but use the more neutral ‘#’ in my own examples in the latter.)

(16) *Pickled garlic was unusual to ask for. (McCawley 1998:110)
(17) a. #Cats are rare to see around the office.
   b. #Coins are common to find in the woods.
   c. #Students are unusual for me to find in the library.

In 16, the unusualness of asking for pickled garlic is tied to local culinary custom, not to any deep and abiding property of pickled garlic itself. There is likewise nothing in the nature of the bare plural subjects in 17 that is obviously related to the properties expressed by the respective infinitival clauses. Cats do not instinctively abhor or otherwise avoid offices (even if it is in fact rare to see a cat in an office); nothing in the nature of coins makes them predisposed to presence in the woods (even if one often finds coins there); as for students, they are, if anything, by nature inclined to spend time in libraries. In the absence of any clear pragmatic connection to the infinitival-clause denotation, these subjects, though apparently kind-denoting, are insufficient to license kind predication and are thus infelicitous as rare-TC subjects. (Note further that the subjects in 16 and 17 cannot be interpreted as indefinites.)

The situation is quite different with the bare plurals in 14. Being a true limited edition is intimately connected to the property of seldom being produced, as the appended reason clause in 14a makes clear; while the connection between the bare plural subject and TC predicate is less clear in 14b, the preceding clause indicates that the speakers have a policy of not taking in animals of the indicated kinds, and this policy, in turn, may provide a sufficient connection in the relevant sense; in 14c, we understand that having flashbacks is part of what it means to be a survivor (of some trauma); cyclists naturally avoid long socks in order to avoid aerodynamic drag and mechanical entanglement, and ‘libcomms’ have, in the author’s mind, a natural propensity for getting into lose-lose situations, whence the felicity of 14d and 14e, respectively. All of the attestations of rare-TCs with bare plural subjects in 14 thus share the property that there is some significant

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14 For non-TC rare, the issue does not arise, since there is no infinitival-clause property with which the kind-denoting subject must establish a connection.

15 The preceding sentence in the source document is as follows: On Nov. 20, the STA filed a petition with the SEC asking its five commissioners to overturn the approval given by the Division of Trading and Markets, the SEC unit responsible for overseeing transfer agents.
pragmatic connection between the denotations of the subject and predicate, thereby licensing kind predication.

Far from being an idiosyncrasy of rare-TCs, this requirement for a pragmatic, possibly extragrammatical connection or relationship is a well-documented phenomenon in the literature on kinds and generics. Carlson (1977b:199) observes that such a connection is needed in order to license kind predication with bare plural subjects. Greenberg (2003:33) notes a disparity in the acceptability of indefinite singular and bare plural subjects in generic sentences where the subject and predicate denote ‘extremely unconnected properties’. It is thus unsurprising to discover that rare-TCs require us to be able to construe a connection between the kind denoted by the subject and the property denoted by the infinitival clause.

Note in this connection that DPs that contain an overt occurrence of the noun kind are not subject to this pragmatic-connection requirement—or, perhaps better, they cannot fail to satisfy it. Consider the contrast in 18. In 18a, a well-known example from Carlson 1977b:199 (attributed to Barbara Partee), kind predication is unavailable in the absence of any clear connection between greenness and narrow-neckedness. In 18b, where the bare plural subject has been replaced by a DP with overt kind, we readily infer that narrow-neckedness is one of the properties that makes a bottle an instance of the kind in question, and kind predication proceeds without difficulty.

(18) a. Green bottles have narrow necks.
   b. That kind of bottle has a narrow neck.

We must take care to distinguish this pragmatic-connection requirement from the notions of ‘principled connections’ between kinds and their core properties (Prasada & Dillingham 2006, 2009) and ‘well-established’ kinds (Krifka et al. 1995:95). The properties denoted by rare-class adjectives do not distribute over instances of the kinds denoted by their subjects, and perforce cannot license the expectation that individual instances or tokens will possess the property in question, in the manner of principled connections. These are properties of the kind itself, not properties whose possession by individuals serves as a deep conceptual justification for those individuals’ inclusion in the relevant kind category. Meanwhile, rare-TCs—once again following rare outside of the TC—differ from kind predicates like extinct and invent in allowing arguments that denote ad hoc, non-well-established kinds. The examples in 19 and 20 (adapted from Krifka et al. 1995:95; ‘*’ judgment original) show the distinction between extinct and (non-TC) rare, with the well-established kind rhinos and the ad hoc kind rhinos with blue eyes.16

(19) a. Rhinos are extinct.
   b. *Rhinos with blue eyes are extinct.
(20) a. Rhinos are rare.
   b. Rhinos with blue eyes are rare.

Like non-TC rare, rare-TCs allow subjects that denote ad hoc kinds, as shown in 21; note, for comparison, the contrast between the well-established kind coupon and the ad hoc kind Diet Coke coupon in the object position of invent in 22.

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16 Though the notion of well-establishedness appears to be linguistically significant, as seen in the contrast in 19, Krifka and colleagues (1995:111) explicitly decline to offer a formal definition of it.
(21) a. Diet Coke coupons are rare to come across and this one will make great matchups.\textsuperscript{17}
b. Hospitals practicing modern techniques of surgery are rare to find in Nigeria.
c. Small business opportunities to grow into a large sustainable business are rare to find.
d. Themes for iPhone 4 iOS devices are rare to see.

(22) a. Asa Candler invented the coupon.\textsuperscript{18}
b. #Asa Candler invented the Diet Coke coupon.

It should be noted that both non-TC rare and rare-TCs resist subjects with what we might call spatiotemporally ad hoc denotations, as in 23. Carlson (1977b:195) argues that such DPs do not denote kinds. (Example 23a is Carlson’s; ‘*’ judgment is original, and mirrored for symmetry in 23b.)

(23) a. *People in the next room are rare.
b. *People in the next room are rare to see.

Rare-TCs thus require a pragmatic connection or relationship between subject and infinitival clause in order to license kind predication, as seen above in the contrast between 14 and 17. Kind predication, however, can be licensed to occur even with subjects that denote ad hoc, non-well-established kinds, as in 21, though not with spatiotemporally ad hoc expressions like those in 23, which fail to denote kinds. There is some dispute as to whether phrases denoting ad hoc kinds can be true subjects of kind predication: Krifka and colleagues (1995:96) take the permissiveness of rare to indicate that it is not a kind predicate but rather a second-order predicate of individuals denoting the distribution of individuals belonging to the set denoted by its argument. The notion that well-established kindhood constitutes a distinct grammatical phenomenon is disputed by Cohen (1999:47ff.), who analyzes the relative strictness of kind predicates like extinct as a simple selectional restriction; it would seem to follow, on this line of thinking, that extinct is not different in kind from its fellow predicate rare, to judge simply from their grammaticality with subjects denoting ad hoc kinds, as Krifka and colleagues (1995:95ff.) do. As our major preoccupation here is not the semantics of rare but the thematic status of rare-TC subjects, I confine myself to the observation that, on both the kind predication view and the second-order individual predication view of rare and rare-TCs, the subject appears to be a thematic argument. I will persist in calling rare a kind predicate and saying that its subject, in the TC and elsewhere, must be kind-denoting, with the proviso that ‘kind-denoting’ here is to be understood in a relatively loose sense encompassing ad hoc kinds.

Note finally that rare-TCs mirror non-TC rare in making kind predication available for at least some indefinite singular subjects, as shown in 24. This sets them clearly apart from strict kind predicates like extinct and invent, as in 25.\textsuperscript{19}


\textsuperscript{18} This according to Wikipedia (http://en.wikipedia.org/wiki/Coupon#Origin, accessed 30 Nov. 2011). In light of the awkwardness of 22b, it is ironic to note that Candler is said to have invented the coupon in his work for the Coca-Cola Company, of which he was a founding partner.

\textsuperscript{19} Following standard practice, I ignore the ‘taxonomic’ reading of the indefinite singular in 25, on which, for example, a rhino refers to some identifiable subspecies of rhino (Krifka et al. 1995:10). Note that 24a is acceptable on a nontaxonomic reading.
(24) a. A rhino is rare.
    b. Beautiful [sic] women are everywhere, but a real man is rare to find.\(^{20}\)

(25) a. #A rhino is extinct.
    b. #Asa Candler invented a coupon.

I hasten to observe that the predications involving *rare* in 24 are not characterizing sentences in the sense of Krifka et al. 1995. That is, they do not state generalizations that are true of particular individuals: if John is a real man in the intended sense, it does not follow from 24b that John is rare to find (or its felicitously expressed equivalent). For the same reason, these cannot be construed as law-like statements about individuals, as is typically the case with indefinite singular generics (Lawler 1973, Nunberg & Pan 1975, Burton-Roberts 1977, Cohen 1999, 2001, Greenberg 2003), nor as statements of principled connections in the aforementioned sense articulated by Prasada and Dillingham (2006, 2009). The pragmatic relationship that must hold between the *rare*-TC subject and infinitival clause, however, is clearly present in 24b: the adjective *real* rather strongly implies rarity in this usage. Even with indefinite singular subjects, then, there is something kind-like about predication with *rare*, both inside and outside of the TC.

We have now seen ample evidence not only that *rare*-class adjectives may occur in the TC, but also that their matrix subjects must denote kinds. The latter point is in keeping with Carlson’s (1977b) observation about non-TC uses of *rare* and its adjectival kin. That this selectional restriction should be maintained in the TC is quite remarkable, as TC matrix subjects are generally assumed not to be thematic arguments of TC predicates. We must therefore take care to show that the kind-denotation requirement does not spring from elsewhere; in particular, we must rule out the possibility that it is associated with the embedded gap position whose reference the TC matrix subject controls.

It is to this issue that I now turn.

### 3.2. Lack of constraints on the embedded gap position

The coreferentiality of the matrix subject and embedded gap is the core interpretive characteristic of the TC. It therefore behooves us to ask whether the kind-denotation requirement observed above for matrix subjects in *rare*-TCs might somehow find its source in the embedded gap position: if so, we might clear the way to maintaining the traditional view that TC matrix subjects are not thematically related to TC predicates. I show in this section that the embedded gap position cannot plausibly be the source of the kind-denotation requirement. A fuller consideration of the consequences for TC syntax is offered in §5.

It is a straightforward exercise to show that *rare*-TC embedded gap positions are not subject to a kind-denotation requirement. To begin, let us consider the impersonal counterparts of the *rare*-TCs shown above in 12. The latter have subjects that fail to denote kinds and are thus infelicitous in the construction. Their impersonal counterparts, in which the offending matrix subject is found instead in the position corresponding to the TC embedded-clause gap, are perfectly acceptable. The *rare*-TCs are repeated in 26; their impersonal counterparts are shown in 27.

(26) a. #John is rare to see around the office.
    b. #Most cats are rare to find in the wild.
    c. #That group of students is rare for me to find in the library.
    d. #That Mary might be wrong is rare for me to imagine.

(27) a. It is rare to see John around the office.
    b. It is rare to find most cats in the wild.

c. It is rare for me to find that group of students in the library.

d. It is rare for me to imagine that Mary might be wrong.

If the infelicity of the rare-TCs in 26 were due to a requirement imposed on the embedded gap position, then we would expect the corresponding impersonal constructions in 27 to be infelicitous as well, contrary to fact.

The judgments for 27 are corroborated by our experimental results. In the subset of the data consisting of impersonal constructions with rare-class adjectives ($n = 959$), examples containing names (i.e. non-kind-denoting DPs) in object position had five-to-one odds in favor of being rated ‘totally acceptable’ or one point below. Moreover, they were not rated significantly differently from examples with kind-DP objects, according to fixed-effects-only ($\beta = -0.01, z = -0.06, p = 0.95$) and mixed-effects ($\beta = -0.004, z = -0.01, p = 0.99$) ordered logistic regression models.

To summarize, a closer consideration of the embedded-clause gap position only strengthens the conclusion that the kind-denotation requirement on matrix subjects of rare-TCs is a requirement imposed by the adjective on its subject: that is, a canonical selectional restriction. Moreover, this particular selectional restriction is not a novel one, but one that has been known at least since Carlson (1977b) identified it for non-TC uses of rare-class adjectives. Extending Carlson’s analysis to rare-TCs is entirely natural, though it forces some choices in the syntactic analysis of the TC that ordinary TC sentences do not, a matter I consider in §5. Before embarking on that discussion, I conduct a more detailed examination of the syntactic construction in which rare-TCs are most commonly found: relative clauses.

4. Relative-clause rare-TCs. While the rare-TC is a productive and well-attested construction of English, the kind-denotation requirement placed on its subject makes it relatively easy to invent infelicitous examples. It is interesting to observe that a large proportion of rare-TC attestations—impressionistically, the overwhelming majority—occur not in main clauses, but in relative clauses in which the matrix subject of the rare-TC is the relativized position (henceforth, I refer to this specific configuration as a relative-clause rare-TC). It is far more difficult, though not impossible, to construct infelicitous relative-clause rare-TCs. I argue that this is due not to any particular property of the syntax of relativization, but to the way in which relative clauses compose with the phrases they modify at the syntax-semantics interface. Though the kind-denotation requirement for rare-TC matrix subjects holds equally regardless of the external syntactic environment, rare-TCs are more likely to compose felicitously with the surrounding structure in relative clauses than in main clauses, and this in turn may be a factor underlying the preponderance of the former type of example among actual attestations.

Let us begin by considering some examples of relative-clause rare-TCs in 28.

(28) a. The diversity in representation and work has created a culture that is rare to find at other schools.21

b. Are there unexpected attachments that are unusual for this sender to include in a message?

c. That’s a great example of social interaction that is rare to see nowadays.

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d. Everybody post exercises you do that are uncommon to see.
e. Some disorders that are common for obese cats to develop include: diabetes mellitus, lower urinary tract disease, joint stress, aggravation of osteoarthritis, non-allergic skin diseases, decreased stamina, and Hepatic lipidosis, which is fat deposited in the liver.

In each of the examples in 28, the relative-clause gap is understood to refer not to some particular individual or group of individuals (i.e. an ‘individual object’ in the terminology of Carlson 1977b), but to a kind exemplified by the phrase that the relative clause modifies. In 28a, what is rare to find is not the particular instance of the culture found at the school under discussion, but the kind of culture it instantiates; in 28b, it is not the particular email attachments that are unusual for the sender to include, but the kind they exemplify; and similarly for the (example of) social interaction, the exercises, and the disorders at issue in 28c–e, where it is the relevant kinds, not the particular instances, that can be said to be rare, uncommon, or common.

Relative-clause rare-TCs are thus kind predicates, much like their main-clause counterparts. When used restrictively, as in the examples in 28, they simply combine by intersection with an NP denotation to create a larger predicate, which in turn composes with a determiner in the usual way. The resulting DP need not be kind-denoting; this is similar to what we find in sentences like John shot a bird that is rare in these parts, where a relative-clause kind predicate is a semantic component of a non-kind-denoting DP. The way in which restrictive relative-clause rare-TCs are interpreted at the syntax-semantics interface thus makes such relatives a far more welcoming syntactic environment for rare-TCs than are main clauses, where a kind-denoting matrix subject is needed in order to avoid infelicity.

Something more must be said about nonrestrictive relative-clause rare-TCs, which are attested in examples such as those in 29.

(29) a. In a relatively uncluttered environment, which is common for blind subjects to have in their homes, simple tasks like finding objects on a table can save the subjects time.22
b. One of the accusations is that Socrates is an evil-doer where Socrates points out that it is the good-doer who is rare to find just like the trainer of the horses

Example 29a in 29a and 29b, though nonrestrictive, are nonetheless unproblematic kind predicates. The DPs with which these relative clauses combine semantically—a relatively uncluttered environment and the good-doer, respectively—readily denote kinds. Example 29b is noteworthy for its use of a definite description to denote a kind (cf. The owl hunts at night) and for its use of the cleft construction to compose the nonrestrictive relative with its argument, but is otherwise unremarkable for our purposes.

Example 29c appears at first sight to be a counterexample to the generalization that relative-clause rare-TCs are kind predicates. Here, the nonrestrictive relative combines

not with a kind-denoting indefinite or definite DP but with a proper name referring to a single individual (or, by metonymy, to a group of musicians under that name). To account for this case, we are forced to say that the proper name, *Buckwheat Zydeco*, refers not to an individual object but to an individual kind. This claim is not as outlandish as it may at first appear. To begin, it is instructive to recall that Carlson (1977b:61ff.) treats kinds not as properties but as individuals, based in part on the similarities between the philosophical difficulties presented by identifying individuals and those presented by identifying kinds. Moreover, kinds may be formed directly from stages of individuals: ‘If certain (unknown) conditions hold, a series of stages are organized into an individual object. Alternatively, and possibly simultaneously, a set of stages might be organized into an individual kind’ (Carlson 1977b:69). The organization of stages into an individual kind seems particularly plausible in the case of a touring musical act, with each stage corresponding to a prototypical discrete temporal chunk, such as a concert. Indeed, 29c is most naturally understood as saying that it is rare to see a Buckwheat Zydeco concert on the west coast; only secondarily may we draw inferences about the probability of seeing the man himself in, say, a San Francisco coffee shop. In examples where a proper name lends itself less readily to a kind interpretation, a nonrestrictive relative-clause *rare*-TC is more awkward: ??I’m having coffee with *John, who is rare to see on the west coast*.

Finally, there is an intriguing effect associated with the definiteness of the DP in which a relative-clause *rare*-TC appears. Consider the examples with definites in 30 and with indefinites in 31.

(30) a. Since their formation in summer 2010, Brass Tacks has been playing packed venues with the kind of artistic chemistry that is rare to see in this day and age.24
b. Keep in mind, I believe many sex practitioners offer a profound service, one that provides the kind of healing that is rare to find.
c. Although these seven Supreme Court cases involved requirements ties of the sort that Seabright claims are rare for non-gangsters to impose, they did involve tied products that were needed to get value out of the tying product, so were likely metering ties, rather than ties that extract individual consumer surplus.

(31) a. a glitch that is rare to see for the wii
b. This act made available a kind of document that is rare to find inside Tibet at this juncture for three reasons

c. In poems like ‘Solarium’ and ‘Chai’, he captures in gently persuasive lyrics the hope of ongoing life and love, and these are poems that offer the reader incomplete solace with a kind of graciousness that is rare to uncover among new poets.

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23 Note that, though the author of 29c neglects to follow the prescriptive orthographic convention of setting off the nonrestrictive relative clause with a comma, the relative is clearly nonrestrictive in meaning in this example.


d. It’s the only piece of print news I read regularly, mostly because they spend humongous amounts of time on thorough background investigation and are dedicated to a kind of independent journalism that is rare to find these days.

Of particular note is the degree-like interpretation associated with relative-clause **rare**-TCs contained in definite DPs, like those in 30. In 30a, for example, we are made to understand that the group in question achieves not just a variety, but a degree, of artistic chemistry that is rare to see; that is, their degree of artistic chemistry exceeds those of comparable groups. Similarly, 30b is concerned not merely with the variety of healing but with the degree of healing provided, and 30c not merely with the sort of requirements ties imposed but with their degree of onerousness.

The degree-like interpretation of these relatives, along with the presence of the definite determiner heading the DPs in which they are contained, makes them good candidates for an analysis as ‘maximalizing’ relatives (Grosu & Landman 1998; on degree/amount relatives, see also Carlson 1977a, Heim 1987, Herdan 2008). Maximalizing relatives are different from restrictive relatives, and indeed, on the most natural readings of these sentences, the relative-clause **rare**-TCs found in definite DPs do not restrict the denotations of their head nouns. In 30a, for example, if we were to interpret the relative-clause **rare**-TC restrictively, then the definite determiner would force us to accommodate the questionable presupposition that there is a single (familiar) kind of artistic chemistry—a multifarious and ephemeral notion at best—that is rare to find; rather, the sentence seems to say that the group achieves a degree of artistic chemistry (however defined) that is rare to find. Similarly questionable uniqueness and/or familiarity presuppositions arise on restrictive interpretations of the relatives in 30b and 30c; on the contrary, these sentences are perfectly interpretable even in contexts in which there are multiple known varieties of healing or requirements ties that are rare. If instead we treat these relatives as maximalizing relatives, the degree-like interpretation and the felicitous use of the definite determiner fall out automatically, the relative clause picking out the unique maximal degree of the gradable property in question.26

Alongside the definites in 30, relative-clause **rare**-TCs may occur in indefinite DPs, as in 31. Unlike what we observed for the definite cases, in indefinite DPs these relatives fail to have a degree-like interpretation and are interpreted restrictively. In 31a, what is rare to see is the kind of glitch in question, not the degree of glitchiness. In 31b, we seem to be concerned with a type of document, namely the kind that has the property of being rare to find inside Tibet at this juncture, a property denoted by the restrictive relative-clause **rare**-TC. It thus appears that our analysis must countenance both maximalizing and restrictive structures for relative-clause **rare**-TCs. The structure implicated in a particular example will be clear from its interpretation and from the kind of determiner used in the containing DP.

That certain examples might be ambiguous, or that there might be a continuum between the maximalizing and restrictive poles, is suggested by examples like 31c and 31d, which contain indefinites but seem to have both restrictive interpretations (one of a number of kinds of graciousness/independent journalism that are rare) and degree-like interpretations. According to this criterion, the head of the relative is raised to its surface position from the position where, on the surface, we find the relative-clause gap. NPs headed by **kind** and **sort** readily satisfy the kind-denotation requirement placed on the relative-clause rare-TC’s subject position, that is, their merge position prior to raising on such an analysis.

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26 I refer the interested reader to Grosu and Landman’s paper for details. I note here that the data presented are consistent with these relatives’ being sortal-internal, one of Grosu and Landman’s major criteria for maximalizing relatives. According to this criterion, the head of the relative is raised to its surface position from the position where, on the surface, we find the relative-clause gap. NPs headed by **kind** and **sort** readily satisfy the kind-denotation requirement placed on the relative-clause rare-TC’s subject position, that is, their merge position prior to raising on such an analysis.
interpretations (a rare degree of graciousness/journalistic independence). Even 31b may have a degree-like interpretation, if we understand kind of document to indicate a degree of goodness or usefulness of the document in question. As discussed by Grosu (2000:140), degree relatives can be interpreted restrictively, and thus felicitously co-occur with the indefinite determiner, in cases where there is ‘a multiplicity of situations’ at issue. Fuller examination of the details will take us too far afield; I refer the interested reader to Grosu’s paper for further discussion.

Having taken stock of the interpretive disparity between maximalizing and restrictive relatives, I close by observing that this distinction, while interesting, is orthogonal to our primary concern, namely the kind-denotation requirement for rare-TC subjects. Though maximalizing relatives differ from restrictive relatives in denoting degree predicates at LF (logical form), not kind predicates, this clause-level semantic difference results from the fact that maximizing relatives involve abstraction over degrees instead of over individuals (Heim 1987, Grosu & Landman 1998, Herdan 2008). It is not due to any difference in the selectional restrictions that rare-TCs place on their subjects in such relative clauses. Indeed, there is ample evidence to suggest that the raised subjects of maximalizing relative-clause rare-TCs satisfy the kind-denotation requirement (see n. 26). Relative-clause rare-TCs are thus uniformly consistent with the generalization that rare-TCs require their subjects to denote kinds.

5. Syntactic analysis. The behavior of rare-TCs has the potential to shed valuable new light on a major dilemma in TC syntax: the thematic status of the matrix subject. The central tension in the syntactic analysis of the TC has been between (i) the apparent lack of any thematic relationship between the matrix subject and the TC predicate and (ii) the apparent impossibility of deriving the matrix subject via movement from the embedded infinitival clause—seemingly its natural thematic home—without running afoul of known restrictions on movement. As noted at the outset, a relatively small number of authors have suggested that matrix subjects in canonical TCs are thematic arguments of the TC predicate (Lasnik & Fiengo 1974:543, Jones 1991:Ch. 4, Kawai 1992, 2002, Huddleston & Pullum 2002:1247ff.). Others, adopting the basic position of Chomsky 1977, have held that TC matrix subjects must originate in the matrix clause but explicitly deny any thematic relationship between the TC matrix subject and predicate (Browning 1987, Heycock 1994:251ff.; for a thematically more agnostic take on this idea, see Oehrle 1979). Still others have taken aim at the other horn of the dilemma, proposing novel lexical or phrase-structural analyses that permit feature inheritance (Flickinger & Nerbonne 1992) or movement (Hicks 2009), respectively, between the embedded object and matrix subject positions. Data from rare-TCs have not, as far as I am aware, played a role in any of these proposals.

In rare-TCs, we have a remarkably clear case of a selectional restriction—the kind-denotation requirement—being imposed on the TC matrix subject. Moreover, we saw in §3.2 that no such restriction is associated with the embedded-clause gap position whose reference the matrix subject controls. Under standard assumptions, such a selectional restriction can only be imposed by a predicate on a thematic argument. On its face, then, the rare-TC appears to demand an analysis akin to that of a control construction, with a matrix-clause thematic argument controlling the reference of an embedded thematic argument (though any such analysis owes an account of how the rare-TC matrix subject comes to control an embedded object, rather than an embedded subject as in other known cases of control).

Alongside the question of how best to analyze the rare-TC itself, then, we face the question of the relationship between rare-TCs and canonical TCs. In particular, if the
major difference between the two is that rare-TC subjects bear a thematic role assigned by the matrix predicate while canonical-TC subjects do not, then it is natural to ask whether we can simply analyze the rare-TC as a ‘control variant’ of the canonical TC. The answer, of course, will depend in part on how we choose to analyze the canonical TC in the first place, as well as on our assumptions about control. But if the relationship between the rare-TC and the canonical TC is indeed a close one, then the rare-TC may provide an illuminating and heretofore unknown data point in the study of TC thematics more generally.

Here I advocate the prima facie counterintuitive proposition that the rare-TC matrix subject is not in fact a thematic argument of the rare-TC matrix predicate, and that rare-TCs are thematically identical to canonical TCs in this respect. Though rare-TC subjects clearly must satisfy a selectional restriction requiring them to denote kinds, I propose that this requirement is an epiphenomenon of the way in which the matrix subject is syntactically connected to the embedded object position. I adopt Rezac’s (2004, 2006) analysis of canonical TCs—on which the TC matrix subject is base-generated in the matrix clause and linked to the embedded gap position via the operation Agree (Chomsky 2000, 2001), much as in copy raising—and show that it can be straightforwardly extended to rare-TCs. The crucial difference between rare-TCs and canonical TCs is that rare-class predicates require their infinitival-clause arguments to be kind-denoting, while canonical TC predicates do not. The embedded infinitival CP in a rare-TC thus bears a syntactic kind feature that its canonical-TC counterpart does not; this feature, in turn, enters into the Agree calculus, with the result that it must also be borne by the rare-TC matrix subject.

The picture that emerges is one in which rare-TCs and canonical TCs differ only with respect to the thematic requirements imposed by the matrix predicate on its clausal argument, that is, a lexical semantic difference that exists independently of any considerations stemming from the TC itself. Everything else follows from the syntax of Agree. Since this is the minimal difference that an analysis of the relationship between rare-TCs and canonical TCs could conceivably posit, I take it to be preferable to a control-type analysis if it survives scrutiny.

I begin by considering various possible implementations of a control analysis of rare-TCs in §5.1. I present my own analysis in §5.2.

5.1. A CONTROL ANALYSIS: THREE SKETCHES. There is an apparent thematic parallel to be drawn between (i) canonical TCs and rare-TCs and (ii) raising and control structures; this is sketched in 32 and 33.

(32) a. John is tough to love. (canonical TC)
   b. That kind of demeanor is rare to see. (rare-TC)

(33) a. John seems to know the answer. (raising)
   b. John wants to know the answer. (control)

In these examples, the underlined subject is understood to bear a thematic relation to each italicized predicate. In the (a) examples—the canonical TC and raising—the matrix subject bears a thematic relation only to the embedded predicate; in the (b) examples—the rare-TC and control—the matrix subject appears to bear a thematic relation to both the matrix and embedded predicates.

It thus seems as if a control analysis of rare-TCs might be warranted. To be sure, any such analysis must explain how it is that a control relation may be established between a matrix subject and an embedded object in rare-TCs, rather than between matrix subject and embedded subject: that is, why should control of an embedded object be permitted in rare-TCs but not with ordinary control predicates like want (cf. the ungrammatical
*John wants Bob to like*? But this is of course largely analogous to the problem of establishing a link between the matrix subject and embedded object positions in the canonical TC; perhaps whatever mechanism is employed there might carry over to the rare-TC.

In what follows, I sketch control extensions of several existing analyses of the canonical TC. Though they differ in the details of implementation, they share a crucial distinction from analyses of the canonical TC: they require an otherwise unmotivated duplication of lexical entries for the matrix adjective, with the TC variant of the adjective assigning one more thematic role than the variant that occurs in the corresponding impersonal construction. My own proposal for rare-TCs, detailed in the next section, does not involve a control relation between the matrix subject and embedded object or gap, and thus does not encounter this problem.

To begin, let us consider a control extension of the classical analysis of canonical TCs due to Chomsky 1977. On this analysis, the TC subject is base-generated in the matrix clause and controls the reference of a null A’-operator that has moved to the specifier of the embedded CP, as sketched in 34.

\[(34)\]

A control adaptation of this analysis to rare-TCs might appear to be a natural extension. The structure in 34 looks very much like a control structure already, albeit one in which the matrix subject fails to receive a θ-role. Indeed, one of the chief criticisms leveled against this analysis of canonical TCs throughout the government-and-binding (GB) era was that it is difficult to explain how the matrix subject is licensed to occur without receiving a θ-role. On a control approach to rare-TCs with a syntax on the model of 34, this thematic problem would not arise: the matrix adjective would assign a θ-role to the matrix subject directly.

Let us now consider the TC analysis of Hicks 2009. Hicks revives the movement-based approach to the TC espoused in the early transformational works of Rosenbaum 1967 and Postal 1971, updated so as to overcome the well-known problems with those earlier implementations. Specifically, Hicks proposes that the TC matrix subject is base-generated not in embedded object position, but as the complement of a null operator that heads a complex DP constituent base-generated in embedded object position.

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27 Chomsky (1981:308ff.) follows Nanni (1978) in proposing that the entire tough-plus-VP constituent undergoes ‘reanalysis’, a rather ad hoc process whose chief outcome is to allow the reanalyzed predicate to assign a θ-role to the matrix subject.

28 Hicks’s movement account thus countenances connectivity between the matrix subject and embedded object positions that is somewhat different from that found in prior connectivity-based accounts like those cited above. Among the arguments given against traditional connectivity-based accounts is one due to Jacobson (1992), who observes that sentential subjects in the TC do not obey c-selectional requirements imposed on the embedded object position. Alrenga (2005), however, refining and expanding an idea originally due to
plex null operator DP constituent undergoes A’-movement from embedded object position to SpecCP of the embedded clause in order to satisfy the extended projection principle (EPP), after which the operator’s DP complement undergoes A-movement to matrix subject position to check Case. The initial A’-movement step serves to ‘smuggle’ the eventual TC matrix subject to the phase edge so that it can move up to the matrix clause. Hicks thus solves the problem of this movement’s hybrid nature—that is, the fact that movement from embedded object to matrix subject position seems to have properties of both A’- and A-movement—by decomposing it into two distinct syntactic chains, a move facilitated by the null operator DP shell structure he proposes. Hicks’s proposed structure and derivation are schematized in 35.

There are at least two conceivable ways in which we might extend Hicks’s canonical-TCanalysis so as to accommodate a control relation in rare-TCs. The first is suggested by Hicks (2009:561) himself as an analysis for other complement object deletion constructions. The core idea is that the complement of the null operator simply be PRO, controlled by a thematic argument in the higher clause. If a rare-TC matrix subject receives a θ-role from the matrix predicate, then it certainly qualifies as a licit controller of the embedded PRO. This PRO, meanwhile, having moved into a sufficiently local configuration with the matrix subject to be controlled—namely, in the complex null operator DP that has moved to the embedded SpecCP—would differ from a canonical-TC subject in having no need to move to the matrix clause to check Case, and so the derivation would converge. The result is shown in 36.

Koster (1978), argues that sentential subjects are in fact left-dislocated constituents that bind a null DP in subject position. This analysis, for which Alrenga marshals extensive support, renders Jacobson’s anticonnectivity argument from c-selection moot.
The second possibility for extending Hicks’s analysis involves an embrace of the movement theory of control (MTC), which parts ways quite drastically from the GB tradition in countenancing movement into θ-positions (Hornstein 1999, 2001, Boeckx & Hornstein 2003, 2004, 2006, Boeckx et al. 2010). This enables a much more straightforward control extension of Hicks’s canonical-TC analysis than the one sketched in 36. If we adopt the MTC, then the derivations of a rare-TC would look exactly like Hicks’s canonical-TC derivation in 35, the sole difference being that the final A-movement step would deliver the matrix subject into a position where it not only checks Case but also receives an additional θ-role. On this view, the canonical TC and the rare-TC would join the list of pairs of A-movement constructions differentiated only by the thematic status of the final landing site, alongside raising and control (the principal focus of the MTC literature) and perhaps possessor raising and control (Deal 2013).

There are thus a number of ways in which we might extend existing analyses of canonical TCs in order to implement a control analysis of rare-TCs. Note, however, that any analysis of rare-TCs that posits a control relation between the matrix subject and the embedded-clause operator or gap faces a complication not seen with canonical TCs: the matrix predicate must assign one more θ-role than it does when it occurs in the corresponding impersonal construction. This is illustrated in 37 and 38, where the italicized predicate assigns a θ-role to each underlined constituent.

(37) a. It is **tough** to love John.
   b. John is **tough** to love.

(38) a. It is **rare** to see that kind of thing.
   b. That kind of thing is **rare** to see.

Whether the control relation is mediated via PRO or derived by movement, this kind of analysis entails an unparsimonious proliferation of homophonous lexical items. Alongside impersonal rare in 38a, which takes a single argument, we need a two-argument TC rare in 38b, and likewise for every other rare-class adjective. In 37, by contrast, we need posit only a single tough. Absent independent evidence for the two-argument variants of rare-class adjectives, their use in the analysis of rare-TCs risks being entirely ad hoc. The challenge, then, is to forge an analysis of rare-TCs that derives the kind-denotation requirement for rare-TC subjects while avoiding otherwise unmotivated lexical proliferation. I propose such an analysis in the next section.

### 5.2. Kind denotation as agreement

At the heart of my analysis is the proposition that rare-TCs are syntactically identical to canonical TCs, the sole difference between them being whether the matrix adjective requires its infinitival-clause complement to be kind-denoting. The kind-denotation requirement for rare-TC subjects is derived indirectly, via Agree. On this view, the difference between rare-TCs and canonical TCs reduces to an independently motivated lexical semantic distinction between the two classes of adjectives; that is, we need posit no construction-specific properties to account for the behavior of rare-TCs.

I take as my starting point the canonical-TC analysis of Rezac (2004, 2006). On Rezac’s analysis, the TC matrix subject is base-generated in an athematic position in the matrix clause, and the embedded object is a silent pro bearing a referential index (which

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29 I take no position here on the general appropriateness of the MTC. My reservations about a control analysis of rare-TCs stem from the underlying thematic facts, and thus apply with equal force to all approaches to control. For arguments against the MTC, see, for example, Culicover & Jackendoff 2001, Jackendoff & Culicover 2003, Landau 2003, Bobaljik & Landau 2009, Ndayiragije 2012, and references therein.
is treated formally as an interpretable feature). These two constituents are connected via a sequence of Agree operations (Chomsky 2000, 2001) whose combined effect is to transmit the silent pro’s index to matrix T and thence to the matrix subject, which ‘λ-binds’ the embedded object pro. The overall structure is sketched in 39; Agree relations are represented by dashed lines. I point out a few notable features of Rezac’s system before discussing the fine details and their operation in rare-TCs.

(39)  

First, the matrix subject is merged in the matrix clause much as, under the copy theory of movement, a copy of a lower DP is merged in a higher clause. In both cases, the matrix DP undergoes the operations Merge and Agree, the latter serving to identify the goal bound by the merged DP. In ordinary copy-based movement, the goal is the lower copy (transformed by the operations Trace Conversion and Determiner Replacement of Fox 2002); in the TC, it is the embedded pro. This is how we come to interpret the TC matrix subject as if it occupied the embedded object position. Note that, though the Agree relation is constrained by locality (Rezac 2006:295ff.), agreement between the embedded C and pro is an instance of A′-Agree (Rezac 2006:§4); the chain of Agree relations connecting the TC matrix subject and embedded pro is thus not subject to intervention by the embedded subject.

Second, the matrix subject is connected by Agree with a pronoun, not a copy, in the embedded clause. As Rezac observes, this makes the TC formally very similar to copy raising (Rogers 1971, Potsdam & Runner 2001, Asudeh 2012). This feature of the analysis accounts for the well-known inability of TC matrix subjects to take scope below the tough predicate, as shown in 40: ‘a pronoun is an e-type element, and thus non-e-type, quantificational, properties of the λ-binder cannot “reconstruct” into it’ (Rezac 2006:300). In this, TC matrix subjects behave just like those in copy raising, as shown in 41.

30 Rezac treats the referential index of pro as a φ-feature, a possibly confusing terminological choice in which I choose not to follow him. As Rezac (2004:148) writes, the assumption that referential indices are φ-features ‘goes a bit beyond what is required; indices could be a special feature of their own, which are always transmitted via the free rider principle of [Chomsky 1995] by any instance of φ- and A′-Agree’. In other words, successful derivation of the TC on Rezac’s analysis requires merely that the referential index feature be valued on probes that undergo A′-Agree or φ-Agree (by Chomsky’s free rider principle or by some other mechanism; for discussion, see Rezac 2006:307). I propose below that the same goes for a kind feature involved in the derivation of rare-TCs.
(40) a. Few girls would be difficult for Jim to talk to.
    ≠ It would be difficult for Jim to talk to few girls. (Postal 1974:224)
    b. Many people are easy to talk to.
    ≠ It is easy to talk to many people. (Epstein 1989:651)
    c. Nothing is hard for Melvin to lift.
    ≠ It is hard for Melvin to lift nothing. (Postal 1974:356)

(41) Two people seem like they have won the lottery.
    \((two > seem, *seem > two)\) (Potsdam & Runner 2001:463)

Successful derivation of the absence of scope reconstruction for TC matrix subjects is an important differentiator of Rezac’s analysis from a movement-based approach like that of Hicks (2009). Hicks attempts to prevent TC-subject scope reconstruction by relying on a blanket ban on A-reconstruction of determiners, but there is independent evidence that no such prohibition exists; for discussion, see Fleisher 2013.\(^{31}\)

Let us delve further into the details, starting at the bottom. Rezac (2006:§4) proposes that the A’-chain in the TC embedded clause is formed not by movement of a null operator, but rather by the establishment of an A’-Agree relation between the embedded C and pro (that is, he assumes the presence of an interpretable A’-feature on pro that is probed by C). This is indicated by the lowest of the three dashed lines in 39. By the free rider principle of Chomsky 1995 (or an equivalent mechanism; see n. 30), this instance of Agree results in the valuing of pro’s interpretable index feature \((X = 1, \text{in 39})\) on C, as well. The index borne by pro is thereby transmitted to C and is visible to subsequent operations.

Meanwhile, matrix T values its uninterpretable \(\phi\)-features in the normal manner, probing for a goal with which to enter into an Agree relation. Under ordinary circumstances, T agrees with the syntactically most prominent argument of the matrix predi-

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\(^{31}\) Hicks also cites evidence from binding and idiom interpretation in support of the movement approach. The evidence from binding is, I believe, inconclusive at best. Hicks (2009:552) offers examples in which a reflexive anaphor or ordinary pronoun contained in a picture noun phrase in TC matrix subject position is subject to variable binding by a structurally subordinate quantificational DP. As is well known, and as Hicks acknowledges, antecedence of reflexives in picture noun phrases is not structurally constrained in the manner of antecedence of reflexives among coarguments (see e.g. Postal 1971:185ff., Jackendoff 1972:163ff., Pollard & Sag 1992, Reinhart & Reuland 1993, Büring 2005:Ch. 11; for experimental verification of the exceptional behavior of picture NP reflexives, see Runner et al. 2003, 2006). Even if we limit our attention to cases of quantificational variable binding, Hicks’s TC binding examples in (i) below seem to me no better than those in (ii)–(iv), sentences in which it is either implausible or impossible for the picture noun phrase to reconstruct below its putative binder.

(i) Pictures of himself/his friends are hard for every photographer, to sell.
   (cf. Hicks’s ex. 41 and 42)
(ii) Pictures of himself/his friends hang in every photographer,’s home.
   (cf. *Mary hung pictures of himself/his friends in every photographer,’s home.)
(iii) Pictures of himself/his friends were the highlight of every photographer,’s show.
(iv) Pictures of himself/his friends earned every photographer, an award.

The status of idioms in the TC has always been controversial. Hicks (2009:554) lists a number of idioms—\(\textit{kick the bucket, eat my hat, the shit hit the fan, bury the hatchet, and make headway}\)—whose grammaticality under passivization he finds to mirror their grammaticality in the TC, in keeping with what one expects under a movement account. Lasnik and Fiengo (1974:541) provide another list of idioms—\(\textit{keep tabs, take advantage, pay heed, pay attention, throw the baby out with the bathwater}\)—that they find to be grammatical under passivization but not in the TC, and thus to support matrix-clause base-generation of TC subjects. I do not weigh in on the issue here, except insofar as to say that idiom data are unlikely to be decisive in determining the proper analysis of the TC.
cate; this will typically be an external argument in Spec\(vP\) or similar. In the TC, however, as in copy raising, the matrix predicate selects no thematic DP argument; the TC matrix subject is merged directly in SpecTP, and this happens only after \(T\) has undergone Agree. In this case, then, the closest matching goal that \(T\) finds is the embedded \(C\), as shown by the middle dashed line in 39.\(^{32}\) \(C\), as mentioned, has undergone A'-Agree with the \(pro\) in embedded object position and picked up the latter’s index feature. \(\varphi\)-Agree between matrix \(T\) and embedded \(C\), in turn, causes the index feature to be valued on matrix \(T\).

With the index feature borne by the embedded-object \(pro\) having percolated, via two instances of Agree, to matrix \(T\), we can now consider what happens when the matrix subject is merged. The matrix subject DP, like \(pro\), bears an interpretable index feature. On the standard assumptions about semantic interpretation that Rezac adopts, the matrix subject must bear the same index as the embedded \(pro\) in order to \(\lambda\)-bind it.\(^{33}\) This

\(^{32}\) Since Agree is subject to locality, \(\varphi\)-Agree between matrix \(T\) and embedded \(C\) is subject to intervention effects in the manner of ordinary A-movement. Rezac’s system thus successfully accounts for the intervention effect of matrix experiencer PPs in the TC noted by Hartman (2009), shown in (i)–(iii) (for similar observations about matrix of-PPs, see Hendrick 2013). In such structures, the matrix experiencer is the closest available goal for the \(\varphi\)-probe of matrix \(T\), and this in turn preempts the establishment of the \(\varphi\)-Agree between matrix \(T\) and embedded \(C\) that is required in order to derive a convergent TC structure.

(i) Cholesterol is important (*to Mary) to avoid.
(ii) Strawberries are enjoyable (*to me) to eat.
(iii) John is annoying (*to those boys) to talk to.

TC for-phrases, of course, are commonly analyzed as matrix PPs, yet they clearly do not give rise to the kind of intervention effect seen above, a fact that leads Hicks (2009:557ff.) to treat them as defective interveners like the matrix PPs found in raising with seem. Hartman, by contrast, attributes the lack of intervention to the availability of a structure in which for is the embedded \(C\) and the following DP is the embedded subject, a parse not available for other matrix prepositions. Independent evidence for this proposal comes from quantifier scope; as Hartman (2009:§5) shows, every student participates in a scope ambiguity with impossible in the impersonal construction in (iv) but not in the corresponding TC in (v), as expected if it is a matrix-clause constituent in the former but an embedded-clause constituent in the latter.

(iv) It is impossible for every student to fail this test.
\[\text{impossible} > \text{every student}, \text{every student} > \text{impossible}\]
(v) This test is impossible for every student to fail.
\[\text{impossible} > \text{every student}, *\text{every student} > \text{impossible}\]

Note finally that on Hartman’s assumptions it should be possible for an expletive subject to occur in embedded subject position with for parsed as the embedded \(C\), as in his example (vi). Expletive there is often taken to be ungrammatical in TC embedded subject position, as in (vii). I note that the violation is far weaker when the TC matrix subject/embedded gap is something other than the associate of there, as in (viii), suggesting that examples like (vii) may be bad for independent reasons (in particular, if the embedded gap contains \(pro\), as on the Rezac-style analysis proposed in this section, then this would follow as a violation of the definiteness restriction; Milsark 1974, Heim 1987).

(vi) Cholesterol is impossible for it to be important to Mary to avoid. \(\text{(Hartman 2009, ex. 26b)}\)
(vii) \(\ast\)Rhubarb is impossible for there to be in this cake. \(\text{(Hendrick 2013:3)}\)
(viii) \(?\)This cake is impossible for there to be rhubarb in.

\(^{33}\) See Rezac 2004, 2006 for details of the compositional semantics. Essentially, Rezac adopts a version of the predicate abstraction rule of Heim & Kratzer 1998. By this rule, the index on the label of the predicate constituent with which the matrix subject is merged identifies the variable bound by the \(\lambda\)-abstractor. With the index of embedded \(pro\) having percolated to matrix \(T\), this means that the matrix subject \(\lambda\)-binds the embedded \(pro\) upon merger with the constituent headed by matrix \(T\). For Rezac, then, matrix subjects in copy raising and the TC are interpreted via predication; the analysis develops ideas proposed by Williams (1980) and explored further by Browning (1987).
index matching is ensured by the match condition (Rezac 2006:297), which forbids constituents joined by Merge from differing in feature values (specifically, in the valuations of \( \varphi \)-features and other formal features such as the referential index feature; see n. 30). Since the matrix subject DP is merged with the constituent headed by matrix T, and since matrix T has acquired the index value of \( pro \) via Agree, the matrix subject must bear the same index feature as \( pro \). This ensures that the matrix subject DP successfully \( \lambda \)-binds the embedded \( pro \), that is, that we get the correct TC interpretation. Satisfaction of the match condition between matrix subject and matrix T is indicated by the curved dashed line in 39.

For Rezac, then, the TC matrix subject’s binding of the embedded object, which yields the characteristic TC interpretation, depends on a chain of Agree operations that transmits the embedded \( pro \)’s index to matrix T. A crucial link in the chain of Agree operations is the embedded complementizer, C. In particular, note that if C bears any formal features of its own (independent of those it picks up via Agree with \( pro \)), these will also be valued on matrix T when it undergoes \( \varphi \)-Agree with C. Equally crucial to Rezac’s account is the match condition, which ensures that the TC matrix subject bears an index feature whose value matches the one on matrix T. As defined by Rezac, the match condition will also ensure that the TC matrix subject bears any other formal features (and valuations thereof) that matrix T might pick up from C. I exploit this prediction of Rezac’s account in my analysis of rare-TCs.

With the details of Rezac’s system as background, my proposal for rare-TCs becomes quite simple: rare-class adjectives require their CP complements to be headed by a complementizer that bears a kind feature. The syntax of the TC takes care of the rest. More precisely, the requisite chain of Agree relations and the match condition conspire to ensure that the matrix subject bears a kind feature to match the one borne by C and transmitted via \( \varphi \)-Agree to matrix T. The kind-denotation requirement for rare-TC subjects is thus derived.

I spell out the details of the derivation in 42–44. The rare-TC derivation is identical in all relevant respects to Rezac’s analysis of canonical TCs, save for the addition of the interpretable kind feature on the embedded C (indicated below as +\( K \)). First, C undergoes A’-Agree with \( pro \) in order to eliminate its own uninterpretable A’ feature; by the freerider principle, the index feature of \( pro \) \((X = 1)\) is also valued on C. At this stage, C has two features valued on it: the index feature from \( pro \) \((X = 1)\) and the kind feature (+\( K \)), which I take to be a featural reflex of the thematic, s-selectional requirement imposed by the matrix adjective that selects the CP (more on this below).

\[
\begin{array}{c}
\text{(42)} \\
\begin{tikzpicture}
  \node (C) at (0,0) {$C_{[+K,A']} \text{ TP} \text{ to see } pro_{[A',X=1]}$} ;
  \node (CP) at (3.5,0) {$CP$} ;
  \draw (C) -- (CP) ;
\end{tikzpicture}
\end{array}
\]

Next, matrix T probes for \( \varphi \)-features; C is the closest matching goal. Matrix T and embedded C thus enter into \( \varphi \)-Agree, with the features borne on C transmitted to matrix T. I assume that the kind feature, +\( K \), has the same formal status as the referential index feature, meaning that it will be valued on a probe via \( \varphi \)-Agree by the freerider principle (see n. 30).
Finally, the matrix subject is merged. Per the match condition, it may not differ from matrix T in its formal feature valuations. This condition ensures that the matrix subject bears the same index as the one found on matrix T and thus λ-binds the embedded pro (as in canonical TCs; cf. 39); crucially, it also ensures that the matrix subject bears the kind feature (+K) found on matrix T.

On my proposal, then, the kind-denotation requirement for rare-TC matrix subjects falls out as a consequence of syntactic mechanisms—namely, Agree and Rezac’s match condition—individually needed to ensure λ-binding of the embedded pro in all TCs. This follows straightforwardly from Rezac’s canonical-TC derivation together with the assumption that the head of the CP selected by a rare-class adjective must bear a kind feature. The picture that emerges is one in which the kind-denotation requirement for rare-TC subjects is an epiphenomenon of a kind-denotation requirement imposed on the clausal argument of the rare-class adjective. Agree and the match condition conspire to pass this requirement along to the matrix subject. Importantly, we need not assume that the matrix subject is a thematic argument of the rare-class adjective.

With the rare-class adjective selecting just a single CP argument, the analysis of rare-TCs proposed here extends naturally to the corresponding impersonals, such as It is rare to see that kind of thing. The lone difference between the rare-TC and its impersonal counterpart lies in the featural composition of the embedded C, just as Rezac (2006:298ff.) proposes for canonical TCs and their corresponding impersonals. Specifically, the uninterpretable A′ feature found on the embedded C in the rare-TC is absent from the corresponding impersonal construction: in place of the C_{[+K,A′]} seen in 42, we find C_{[+K]}. This C bears the kind feature that the rare-class adjective selects for, but
lacks the uninterpretable $A'$ feature that triggers $A'$-Agree and the associated index percolation seen in the TC. Since there is no $A'$-Agree relation established between the embedded $C$ and the embedded object, these impersonals are free to contain embedded objects that are neither active in the $A'$ system nor kind-denoting, whence the grammaticality of examples like *It is rare to see John around the office*, as seen above in §3.2 (see n. 37 for discussion of a related point; for thoughts on why the $A'$ pro found in the TC occurs only alongside $C$ bearing an uninterpretable $A'$ feature, see Rezac 2006: 314ff.). I follow Rezac (2006:298, n. 10) further in assuming that φ-Agree between matrix $T$ and embedded $C$ yields default insertion of matrix expletive *it* in this case, as there is no referential index feature passed along via Agree from a constituent in need of $\lambda$-binding. I see no problem with assuming that this expletive *it* bears a kind feature (+$K$), in conformity with what φ-Agree and the match condition would appear to require in this case, though I see no clear way of bringing independent evidence to bear on the matter.

My analysis of rare-TCs depends crucially on the assumption that the embedded $C$ bears a kind feature. I take the presence of a kind feature to be the syntactic reflex of the thematic kind-denotation requirement imposed by the rare-class adjective on its argument. Evidence that CP complements of rare-class adjectives are kind-denoting comes from at least two sources. First, we know that rare-class adjectives require their DP arguments to be kind-denoting; this is a core empirical observation of Carlson 1977b, discussed above in §3.1. If this requirement is a thematic (i.e. s-selectional) requirement of the adjective, then we should expect it to apply equally to DP arguments and to CP arguments. Note in particular that if we implement the requirement by having rare-class adjectives bear an uninterpretable kind feature that must be eliminated via Agree, then it follows that both DP and CP arguments of such adjectives must bear the same interpretable kind feature, and this in turn ensures that the match condition will be satisfied when the matrix subject DP’s kind feature is matched against the kind feature that has percolated from the embedded $C$.

Second, in cases where a rare-class adjective takes a CP argument, the CP argument cannot be interpreted episodically in the past tense, unlike CP arguments of canonical tough-class adjectives. This follows if the CP argument of rare is constrained to denote only event kinds, not particular events. Consider 45: 45a, with tough, supports an episodic reading, but 45b, with rare, is only interpretable on an iterative or habitual reading (e.g. when read as a statement about many different people’s attempts to solve the problem in question).

\[(45)\] a. It was tough to find the solution to that problem.
   b. #It was rare to find the solution to that problem.

Note further that, even in cases where the matrix subject is kind-denoting, rare-TCs are infelicitous if the infinitival CP fails to denote a kind, as shown in 46.\(^{36}\)

\[(46)\] a. That kind of problem is rare for first-years to solve.
   b. #That kind of problem is rare for first-years to solve this morning.

There is thus both empirical and theoretical support for the conclusion that rare-class adjectives require their CP complements to be kind-denoting. On the assumptions

\(^{34}\) For discussion of other ways in which kind denotation can interact with the grammar, see Chierchia 1998, 2010.

\(^{35}\) For discussion and a formal proposal concerning event kinds, see Landman & Morzycki 2003.

\(^{36}\) I owe this observation to Tue Trinh.
adopted here, this means that the C that heads this CP must bear a kind feature. This kind feature, in turn, enters into the Agree calculus alongside the index feature that originates with pro, and is subject to the same percolation to matrix T via Agree. I likewise must assume that any DP bearing a kind feature must be kind-denoting, and thus that the match condition will ensure that only a kind-denoting DP can felicitously merge as the matrix subject of a rare-TC, where Agree has delivered the kind feature of the embedded C to matrix T.37

To summarize, on the account proposed here the kind-denotation requirement for rare-TC subjects is an unavoidable consequence of the syntactic operations involved in the derivation of a TC structure, in combination with the selectional requirement imposed by the adjective on its CP argument. That is, I suggest that the kind-denotation requirement for rare-TC subjects is an epiphenomenon, the product of an interaction between independently motivated aspects of syntax and selection. Crucially, there is no need for the rare-class adjective to select the matrix subject as a thematic argument; we thus avoid the problem of unmotivated lexical proliferation encountered by control analyses. Indeed, on the view advocated here, the rare-TC is syntactically parallel to the canonical TC in all respects, the lone difference being the rare-TC matrix predicate’s selection of a C bearing a kind feature, and that feature’s percolation to the matrix subject via Agree and the match condition.

6. Summary. I have argued that, contrary to the received opinion on the matter, adjectives like rare occur felicitously in the TC. It is remarkable in retrospect that this fact should have gone unnoticed until now, the acceptability of rare-TCs flimsily but effectively obscured by the adjective’s imposition of a kind-denotation requirement on its subject, a selectional restriction long since recognized for such adjectives outside of the TC. With the present study’s recognition of the existence of rare-TCs, the empirical picture of TC phenomena in English is more completely filled in.

On its face, the kind-denotation requirement for rare-TC matrix subjects looks like strong evidence in favor of treating the matrix subject as a thematic argument of the rare-TC matrix predicate. The requirement is one imposed on the subject of rare, just as Carlson (1977b) proposed for non-TC cases. Moreover, as discussed above in §3.2, no such requirement is discernible for the rare-TC’s embedded gap position. The possibility that the rare-TC matrix subject might be a thematic argument of the TC matrix predicate could be taken as a welcome development for proponents of various theories of the TC and of control. For those few who propose that canonical-TC matrix subjects are

37 I note in passing that my analysis of rare-TCs is compatible with either of two views about the internal syntax of the embedded-clause A’-chain entertained by Rezac. As discussed above, Rezac (2006:§4) ultimately endorses the view that the embedded-clause A’-chain is formed via pure A’-Agree, without associated movement of pro to the specifier of CP. On this view, C is the closest goal for φ-Agree with matrix T, as sketched in 39 and 43. If, instead, pro moves to SpecCP, then it is closest and is the goal for matrix T (Rezac 2006:§3). In this case, pro takes on the kind feature of C via A’-Agree and then passes it on to matrix T when targeted by φ-Agree. Note that this scenario does not contradict our observation, from §3.2, that there is no kind-denotation requirement imposed on the embedded-gap position in rare-TCs. All of the cases considered there involve impersonal constructions, not TCs, since these provide the only direct form of evidence for or against a selectional requirement on that position. But, unlike the TC, the impersonal construction involves no A’-chain between the embedded C and the embedded-clause direct object. Absent A’-Agree between the embedded C and embedded object, the presence of a kind feature on C will impose no requirement on the embedded object, consistent with what we observed in §3.2. Indeed, Rezac (2006:298ff.) treats the complementizers heading the infinitival CPs found in the TC as featurally distinct from those heading the infinitival CPs found in the corresponding impersonal constructions.
thematic arguments of the TC matrix predicate (Lasnik & Fiengo 1974, Jones 1991, Kawai 1992, 2002, Huddleston & Pullum 2002:1247ff.), the *rare*-TC data would provide new evidence for the claim that TCs can have thematic subjects, evidence far stronger than any yet mustered in support of that position. For proponents of the movement theory of control, the *rare*-TC data could be coupled with a Hicks 2009-style syntax for canonical TCs in order to support the view that *rare*-TCs and canonical TCs differ only in the thematic status of the final landing site of A-movement, thereby bringing another pair of constructions into the purview of that approach to A-movement. More generally, the apparent thematic status of the *rare*-TC matrix subject is a compelling and challenging new data point for all approaches to TC syntax.

Here I have drawn a far more conservative conclusion from the kind-denotation requirement. I have argued that this requirement, as it applies to *rare*-TC matrix subjects, is an epiphenomenon of the independently motivated requirement that *rare*-class adjectives’ infinitival-clause arguments be kind-denoting. The indirect imposition of this requirement on *rare*-TC matrix subjects is derived through the Agree calculus that identifies the TC matrix subject and embedded object positions via matrix T and embedded C (following Rezac 2004, 2006). I thus advocate the position that *rare*-TCs are syntactically and thematically identical to canonical TCs, the sole difference between them being located in the selectional restrictions imposed by the adjective on its infinitival-clause argument. That is, I contend that we need posit only the minimal conceivable difference between the two TC constructions: a lexical semantic difference that is needed independently of any considerations related to the TC itself. I take it that this position is to be preferred on general grounds. The syntactic analysis put forward in §5.2 can thus be seen as an attempt to defend the most conservative possible interpretation of the *rare*-TC facts. That such a stance is even possible here is striking in itself, and is an object lesson in the virtues of formalization in linguistic theory. As Chomsky (1957:5) famously put it, ‘a formalized theory may automatically provide solutions for many problems other than those for which it was explicitly designed’. If I am right, then Rezac’s theory of canonical TCs automatically provides a solution to the problem, un-contemplated by him, of the kind-denotation requirement for *rare*-TC matrix subjects. This solution, in turn, has surprising consequences for our assessment of the *rare*-TC matrix subject’s thematic status, turning our preformalization conventional wisdom on its head.

**APPENDIX: ACCEPTABILITY RATING EXPERIMENT**

**OVERVIEW.** Participants were asked to rate the acceptability of *rare*-TCs with different types of subjects in order to assess the proposal that *rare*-TCs require their subjects to denote kinds. Participants were also asked to rate impersonal constructions with *rare*-class adjectives and canonical TCs, in order to isolate any effects that might be independently associated with the DP type or construction type under investigation.

Participants were undergraduates at the University of Wisconsin–Milwaukee (UWM); all were native speakers of English. Participants were compensated with $5 cash or extra credit in a UWM linguistics course (the latter per instructor consent). A total of eighty-eight participants took the experimental survey. Results from eighty participants were used in the statistical analysis below; the others were excluded due to failure to follow the survey instructions or obvious inattention to the experimental task (as evidenced by, for example, giving consistently high ratings to severely ungrammatical filler sentences).

All experimental work was carried out in accordance with UWM Institutional Review Board guidelines. The experimental protocol was granted Exempt status on April 19, 2013 (UWM IRB #13.369, ‘Sentence acceptability study’, Nicholas Fleisher, PI).

**EXPERIMENTAL DESIGN AND METHODS.** Participants were asked to complete a pen-and-paper survey consisting of 110 sentences. Participants were asked to rate each sentence on a seven-point scale whose endpoints were labeled ‘Totally unacceptable’ and ‘Totally acceptable’, as shown here:
Eleanor is rare to see at the coffee shop.

| Totally unacceptable | | | | | | | | Totally acceptable |

Participants were instructed to rate the acceptability of sentences according to their judgment of whether they sounded like something a competent speaker of English might produce, and were encouraged to disregard considerations related to prescriptive grammatical rules and injunctions. With those ground rules in place, participants were then instructed to make use of the scale however they saw fit. Five practice sentences were provided prior to the start of the survey in order to allow participants to familiarize themselves with the rating task.

A scale rating task was used instead of a magnitude-estimation task (Bard et al. 1996) due to concerns that have been raised recently about the utility and appropriateness of magnitude estimation for linguistic acceptability judgments. Magnitude estimation has been found not to be more informative than scale rating for linguistic acceptability (Weskott & Fanselow 2011). Moreover, judgments of linguistic acceptability fail to satisfy one of the core prerequisites for the use of magnitude estimation: they do not yield ratio-scale data (Sprague 2011). A seven-point acceptability scale was chosen in order to give participants ample leeway to make distinctions in acceptability. As shown above, no numerical indicators were provided on the scale; only the endpoints were labeled. Since the acceptability judgments collected in the experiment yield only ordinal-level data, our choice of statistical analysis methods is concomitantly constrained, as discussed below.

Of the 110 sentences seen by each participant, thirty-six were experimental sentences and seventy-four were fillers of various levels of grammaticality/acceptability. The thirty-six experimental sentences consisted of four examples each from a 3 × 3 design crossing subject type (kind-DP, bare plural, and name) with construction type (rare-TC, impersonal construction with rare-class adjective, and canonical TC). This design was chosen in order to isolate effects on acceptability due to subject type from those due to construction type (e.g. to see whether any decrease in acceptability found in rare-TCs might be independently attributable to their TC syntax). Kind-DPs were chosen to represent the class of kind-denoting DPs, names to represent the class of non-kind-denoting DPs, and bare plurals to represent a middle ground (namely, DPs that readily denote kinds but sometimes fail to support kind predication; see §3.1).

Tokensets were constructed as follows. Each token set consisted of nine sentences (per the 3 × 3 design). The subset of each token set crossing the kind-DP and bare plural subject types with the rare-TC and impersonal construction types was constructed according to a standard 2 × 2 factorial design, with the same embedded VP in each case and minimal modification of the DP (e.g. that kind of house vs. Victorian houses). Due to the difficulty of generating a sufficient number of embedded VPs that could felicitously combine with both kind-denoting and non-kind-denoting subject DP, the subset of each token set that crossed the name subject type with the rare-TC and impersonal construction types used a different embedded VP in a 1 × 2 factorial design. For analogous reasons, the canonical TC construction type used different embedded VPs from those used with the rare-TC and impersonal construction types, as well as different embedded VPs for the kind-DP–bare plural (2 × 1) and name (1 × 1) subject types. An example token set is shown in Table A1.

<table>
<thead>
<tr>
<th>kind-DP</th>
<th>IMPERSONAL</th>
<th>CANONICAL TC</th>
</tr>
</thead>
<tbody>
<tr>
<td>This kind of material is rare for roofers to use nowadays.</td>
<td>It is rare for roofers to use this kind of material nowadays.</td>
<td>That kind of laptop is easy to carry around.</td>
</tr>
<tr>
<td>Spanish tiles are rare for roofers to use nowadays.</td>
<td>It is rare for roofers to use Spanish tiles nowadays.</td>
<td>Lightweight laptops are easy to carry around.</td>
</tr>
<tr>
<td>Samantha is rare for me to agree with.</td>
<td>It is rare for me to agree with Samantha.</td>
<td>William is easy to get in touch with.</td>
</tr>
</tbody>
</table>

Table A1. Sample token set. Each 3 × 3 token set consisted of a 2 × 2 factorial subset crossing the kind-DP and bare plural subject types with the rare-TC and impersonal construction types, a 1 × 2 factorial subset crossing name with rare-TC and impersonal, a 2 × 1 factorial subset crossing kind-DP and bare plural with canonical TC, and a 1 × 1 subset crossing name with canonical TC. The different factorial subsets are indicated by borders within the table.

With token sets constructed in this way, a total of sixteen token sets were needed in order to produce four examples for each experimental condition: the largest factorial subset of each token set was 2 × 2, and 4 × (2 × 2) = 16. For the rare-TC and impersonal construction types, half of the token sets used examples with rare, with the remainder split evenly between examples with common and examples with uncommon. This
was meant to reflect the apparent preponderance of rare among actual attestations. Canonical TC examples were divided evenly among examples with tough, hard, easy, and difficult. Care was taken to minimize variation in constituent length that might have an independent effect on acceptability and thus introduce noise into the ratings (to the extent possible; kind-DPs are generally longer than names, for example). Across all construction types (and all adjectives within a given construction type), examples were divided evenly between those that contained a for-phrase in the embedded infinitival clause and those that did not.

Finally, the examples were distributed into four lists such that no more than one example from any factorial subset of a given token set occurred on a given list, and each list contained exactly four examples from each experimental condition \((4 \times 3 \times 3 = 36\) experimental sentences per list, as mentioned earlier). The lists were then arranged into blocks containing exactly one sentence from each experimental condition; the blocks were then integrated with the filler sentences and pseudo-randomized, per the method described by Cowart (1997:94ff.). Each participant saw one such list.

**Results and Statistical Analysis.** The results of the experiment, cross-tabulated by construction type and subject type, are shown in Table A2. A cell count at column \(c\) and row \(r\) indicates the number of examples of the construction type and subject type at \(c\) that received the rating at \(r\). In the ‘rating’ column, the value 1 corresponds to the scalar endpoint labeled ‘Totally unacceptable’ on the survey seen by participants, and the value 7 corresponds to the scalar endpoint labeled ‘Totally acceptable’. The intervening values represent, in order, the intervening points on the scale. Recall that participants did not see any numerical values whatsoever on the scales used in the survey; their use here is purely for expository convenience.

<table>
<thead>
<tr>
<th></th>
<th>RARE-TC ((n = 958))</th>
<th>IMPERSONAL ((n = 959))</th>
<th>CANONICAL TC ((n = 960))</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATING</td>
<td>KIND</td>
<td>BARE PL</td>
<td>NAME</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>10</td>
<td>59</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>7</td>
<td>71</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>25</td>
<td>58</td>
</tr>
<tr>
<td>5</td>
<td>38</td>
<td>41</td>
<td>43</td>
</tr>
<tr>
<td>6</td>
<td>67</td>
<td>66</td>
<td>35</td>
</tr>
<tr>
<td>7</td>
<td>191</td>
<td>170</td>
<td>35</td>
</tr>
<tr>
<td>TOTAL</td>
<td>319</td>
<td>320</td>
<td>319</td>
</tr>
</tbody>
</table>

Table A2. Raw survey results. Cell counts show the number of responses at a given rating value for a given combination of construction type (rare-TC, impersonal rare construction, or canonical TC) and subject type (kind-DP (Kind), bare plural (BarePl), or name). Rating value 1 corresponds to the scalar endpoint labeled ‘Totally unacceptable’ on the survey, 7 to ‘Totally acceptable’. Rating values are represented numerically here for convenience only: the rating scale is ordinal-level (not interval-level; differences between values are not guaranteed to be directly comparable), and participants saw no numerical values on the rating scales they used. One participant inadvertently skipped a page of the survey, yielding the discrepancy in column totals seen above. The logistic regression modeling techniques used in the analyses described below are resilient in the face of such discrepancies.

Statistical analysis was done with R (R Development Core Team 2012), supplemented with the rms and ordinal packages (Harrell 2012, Christensen 2012, respectively). Results were modeled using ordered logistic regression (specifically, the proportional odds version of the cumulative logit model; Agresti 2010:53), a technique appropriate for ordinal-level data such as the acceptability ratings collected here. The data are (merely) ordinal level because, while the ratings are ordered along a scale, there is no guarantee that the distances between different pairs of adjacent values on the seven-point rating scale are equivalent; this, in turn, makes it impossible to calculate means (an important differentiator of ordinal-level data from interval-level data, where intervals are guaranteed to be comparable). Subject type (kind-DP, bare plural, or name) was modeled as a categorical predictor (i.e. a factor with three unordered levels), with the kind-DP level serving as a baseline. Construction type (rare-TC, impersonal rare construction, or canonical TC) was modeled similarly, with the impersonal level serving as a baseline. The ordered logistic regression models reported below all incorporate the proportional odds assumption, a simplifying assumption appropriate for response variables for which it is plausible to assume that there is an underlying continuous variable (i.e. a latent variable; Agresti 2010:53ff.). This is a reasonable assumption for a response variable like acceptability rating, which is explicitly treated as continuous in methods such as magnitude estimation.

In an ordered logistic regression model of the whole data set \((n = 2,877)\) considering the effects of subject type and construction type on acceptability rating (with kind-DP subject and impersonal construction as baselines, as mentioned above), two predictors emerge as significant: the name level of the subject-type factor
(β = −1.25, z = −13.63, p < 0.0001) and the rare-TC level of the construction-type factor (β = −1.31, z = −14.25, p < 0.0001). In a model considering the interaction between subject type and construction type, the lone significant predictors are the interaction between name and rare-TC (β = −2.82, z = −12.48, p < 0.0001) and the (much weaker) interaction between name and canonical TC (β = −0.81, z = −3.58, p = 0.0003). This indicates that the negative effects on acceptability rating associated with the name and rare-TC levels in the noninteraction model are in fact almost entirely due to the interaction between them: the negative effect on acceptability (compared to the kind-DP subject and impersonal construction baselines) comes from those cases where a rare-TC contains a name subject (i.e. a non-kind-denoting subject). This result is consonant with what we see in the cross-tabulated results above. In addition, there appears to be a weak negative effect of name subjects in canonical TCs. Goodness-of-fit statistics for the interaction model are as follows: likelihood ratio χ²(8) = 660.25, p < 0.0001; c = 0.66.

Looking just at the subset of the data consisting of rare-TCs (n = 958), an ordered logistic regression model confirms that the name level of the subject-type factor has a strong negative effect on acceptability compared to the kind-DP baseline (β = −2.78, z = −16.51, p < 0.0001) while also showing a negligible effect for bare plural subjects (β = −0.33, z = −2.15, p = 0.03). For this model, the likelihood ratio χ²(2) = 367.41, p < 0.0001; c = 0.71. An ordered logistic regression model of the canonical-TC subset of the data (n = 960) shows a small negative effect for name subjects vs. the kind-DP baseline (β = −0.80, z = −5.07, p < 0.0001); likelihood ratio χ²(2) = 39.01, p < 0.0001; c = 0.59. These subset models thus confirm the findings of the interaction model described above.

The models described above fail to control for variance stemming from the idiosyncrasies of particular participants or experimental sentences; that is, they ignore the possibility that particular participants’ ratings (or ratings for particular examples) might be clustered in an idiosyncratic range of the response scale. In order to take those factors into account and thereby get better estimates of the effects discussed above, I constructed random-intercept mixed models with subjects and items modeled as random effects. In a mixed model for the entire data set (random effects: subjects n = 80, SD = 1.35; items n = 144, SD = 0.73), the name–rare-TC interaction showed a stronger (though more widely dispersed, i.e. with a lower z-score) negative effect on acceptability (β = −3.70, z = −8.49, p < 0.0001) than in the fixed-effects-only model reported above (β = −2.82, z = −12.48, p < 0.0001). In a mixed model for the rare-TC subset of the data (random effects: subjects n = 80, SD = 1.02; items n = 48, SD = 0.74), the name level of the subject-type factor likewise had a stronger negative effect on acceptability with greater dispersion (β = −3.48, z = −10.76, p < 0.0001) than in the fixed-effects-only model (β = −2.78, z = −16.51, p < 0.0001), while bare plural subjects had no significant effect (β = −0.45, z = −1.45, p = 0.15). Analysis of variance indicates that the mixed-effects models provide a better fit of the data than their fixed-effects-only counterparts: for the whole data set, the likelihood ratio χ²(2) = 767.49, p < 0.0001; for the rare-TC subset of the data, the likelihood ratio χ²(2) = 151.95, p < 0.0001.

With regard to model fit, it should be noted that all of the models have very low log-likelihood values, indicating poor overall fit. For example, the log-likelihood value for the mixed-effects model of the rare-TC data subset is −1321.6. That said, the models all show significant likelihood ratio χ² values compared to the corresponding null models, as reported above, indicating that inclusion of the explanatory variables under consideration causes significant reductions in model deviance. In this connection, it must be kept in mind that, with the exception of name subjects in the rare-TC and the canonical TC, the ratings summarized in Table A2 are all heavily skewed toward the top end of the rating scale. For example, kind-DP subjects of rare-TCs had 3 : 2 odds in favor of being rated ‘Totally acceptable’, while no such example was rated ‘Totally unacceptable’. These imbalances, and the resulting sparseness at the bottom end of the scale, can cause problems in generating estimates of model parameters like β and in assessing goodness of fit for cumulative logit models like the ones used here (Agresti 2010:64ff.).

We can informally evaluate the cumulative logit models by considering the actual odds ratios that emerge from the survey results. Using the raw ratings results from Table A2, I show in Table A3 the actual odds, log odds, and differences in log odds between name and kind-DP subjects of rare-TCs at the various scalar thresholds. The difference in log odds ranges from −3.51 at the ≥ 3 threshold to −2.49 at the ≥ 7 threshold. This indicates that the estimates of the regression coefficient β for rare-TC name subjects generated by the various models above are reasonable, notwithstanding any difficulties in assessing goodness of fit. Rare-TCs with name subjects (i.e. with non-kind-denoting subjects) receive markedly and (per our models) significantly worse acceptability ratings than those with kind-DP (kind-denoting) subjects. The results are thus consistent with the proposal advanced in the present article, namely that rare-TCs require their subjects to be kind-denoting.

Two final points: First, as mentioned above, name subjects in canonical TCs also showed a decrease in acceptability relative to the kind-DP baseline, albeit a much smaller one than seen in rare-TCs. The effect for canonical TC name subjects was greater but more widely dispersed in the mixed-effects model (β = −1.12, z = −3.42, p < 0.001) than in the fixed-effects-only model (β = −0.80, z = −5.07, p < 0.0001). Restricting our
attention to the mixed-effects models, this means that the estimated odds of a name subject in the canonical TC yielding an acceptability rating at or above a given level for that subject type (odds ≥ rating), and the corresponding log odds (log odds ≥ rating). The rightmost column shows the difference in log odds between name subjects and kind-DP subjects (the latter having served as the baseline in the ordered logistic regression models reported above; I set bare plurals aside here). The difference in log odds is the value estimated by the regression coefficient β; it represents the effect that a name subject has (relative to the kind-DP baseline) on the log odds of the acceptability rating falling at or above the indicated scalar value. In the models reported above, the proportional odds assumption yields a single estimated value for β that holds at all scalar thresholds. Note that since the number of rare-TCs with a kind-DP subject receiving a rating of 1 (‘Totally unacceptable’) was zero, the odds and log odds for kind-DPs and the difference in log odds are undefined at the ≥ 2 threshold.

Second, there was no decrease in acceptability associated with the rare-TC construction itself. This was assessed by looking at the examples with kind-DPs (n = 959) and modeling the effect of construction type on acceptability. (Kind-DPs were chosen because, unlike names, they are not independently associated with a decrease in acceptability in rare-TCs.) With the impersonal construction serving as a baseline, a fixed-effects-only model showed no significant effect on acceptability for the rare-TC construction (β = −0.23, z = −1.45, p = 0.15); a mixed-effects model with subjects and items as random effects likewise showed no significant effect for the rare-TC construction (β = −0.37, z = −1.20, p = 0.23). The rare-TC construction itself is thus not independently deleterious to acceptability, a result consistent once again with the proposal that the low ratings for rare-TCs with name subjects are due to their violating the selectional requirement that rare-TC subjects be kind-denoting.

REFERENCES


BARD, ELLEN GURMAN; DAN ROBERTSON; and ANTONELLA SORACE. 1996. Magnitude estimation of linguistic acceptability. Language 72.32–68.

BOBALJIK, JONATHAN DAVID, and IDAN LANDAU. 2009. Icelandic control is not A-movement: The case from case. Linguistic Inquiry 40.113–32.


BOECKX, CEDRIC; NORBERT HORNSTEIN; and JAIRO NUNES. 2010. Control as movement. Cambridge: Cambridge University Press.


QUIRK, RANDOLPH; SIDNEY GREENBAUM; GEOFFREY LEECH; and JAN SVARTVIK. 1985. A comprehensive grammar of the English language. London: Longman.

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