Variation in Raising and Control *

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Abstract Some infinitival constructions in English pattern as canonical control constructions and others are well behaved raising constructions. A middle set of infinitivals pattern ambiguously as either control or raising predicates. This study probes how categorical the standard contrast between raising and control structures is with a survey of acceptability judgements of native English speakers. It tries to understand the pattern of variation that emerges from this survey. Two kinds of explanations are entertained, one making use of thematic relations as prototypes, the other broadening the modal ordering base of modal predicates to include epistemic orderings.

Keywords: syntax, semantics, expletives, thematic relations, modality, raising, control

1 Introduction

Cross linguistic variation is widely recognized as an important empirical fact requiring explanation by theories of language that posit a core set of properties characterizing natural languages (i.e. Universal Grammar). Of course, variation appears in all components of a grammar, and syntactic variation is pervasive. To take just one example, it is well known, among linguists at any rate, that languages differ in whether the direct object typically precedes or follows its head verb (i.e. there are OV and VO languages), and that some languages exhibit clause initial constituent question phrases while others do not (i.e. some language have wh-movement structures, like English, and other languages leave wh-phrases in their argument position, like Mandarin Chinese). In the Principles and Parameters tradition it has become common to assume that variation between grammars should be localized to properties of heads of phrases, either in terms of their distributional properties or inherent

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features.[1] Minimalist theories (e.g. Chomsky (1995)) go a step further and restrict this variation to the distribution and properties of grammatical features. These types of restrictions are motivated by an attempt to define in an elegant but descriptively adequate fashion the logical space of grammatical variation.[2].

While the variation in verb object ordering and the variation with respect to wh-movement structures have attracted a great deal of theoretical attention, there is variation in raising to subject structures that has been less well theorized and remains problematic to this day. The set of verbs that allow raising varies between grammars. While English verbs like *seem* and *appear* are classically described as raising to subject predicates, the corresponding verbs in Persian do not allow raising (c.f., Karimi (2008)). The variation just pointed to involves raising to subject. There is similarly variation in raising to object structures. While English has a number of verbs that appear in this construction, including *believe*, French does not (c.f. Kayne (1981)). The corresponding French verbs (e.g. *croire "believe"*) are control verbs. Moreover, the standard distributional generalizations used to classify predicates as raising or control predicates do not correlate one with the other perfectly. Observing this fact, Ruwet (1991) summarizes the situation in this way: "...from one speaker to another we find that judgments vary considerably according to the verb chosen and the tests; from one dialect to another or from one state of a language to another, a particular verb will or will not present the telltale features of Raising or of Control."[3] This paper will give empirical content to Ruwet's impression of the range of variation. We will show that the standard expletive diagnostics for raising to subject versus subject control generally correlate closely. Nevertheless, there is some variation when English native speakers are asked to provide acceptability judgments of sentences that probe whether expletives show expected distributional patterns with 'control' predicates such as *promise, try, force,* and *allow*. Our claim is that this variation is not a set of random errors (or sampling noise) but instead exhibits natural

1 Emonds (2000) is an example of an treatment in this mode, but other more localized proposals abound.

2 Other theories posit variation more widely in lexical items. Lexical Functional Grammar, for example, posits richly structured lexical representations that permit variation between grammars generally as well, as well as recognizing variation in the patterns of rules defining ordering relations between syntactic constituents. See Bresnan (2000)

3 We resist Ruwet's continuation as rhetorical élan rather than a theoretical proposal: "To take the extreme position, it might even be said that there are virtually no typically Control verbs which, if the conditions are appropriate, will not show some properties of Raising." The difficulty here is that the licensing conditions are not given any specification and lack predictive content.

patterns found in other languages, and requires to be theorized as such. For example, the variation is skewed in such a way that the expletive *there* is more preferred as a subject than is expletive *it*. Rather than leave this pattern in the residual variation unexplained, or treat it as linguistically unnatural, we will attempt to derive this variation as a difference in how expletives check grammatical ϕ features or θ roles (as in the movement theory of obligatory control outlined in Hornstein (2001)).

2 Variation in Raising and Control

Classical movement accounts of raising to subject predicates build on two crucial assumptions: first, that expletives are unable to appear in positions assigned a θ role and, second, that raising predicates, unlike control predicates, do not assign θ roles to their subjects.[4]

(1) Jill seemed to have cats in the house.

(2) Jill tried to have cats in the house.

(3) There seem to be cats in the house.

(4) *There tried to be cats in the house.

(5) It seemed to be necessary to leave.

(6) *It tried to be necessary to leave.

(7) The cat seemed to be out of the bag.

(8) *The cat tried to be out of the bag.

If *seem* is classed by hypothesis as a raising to subject predicate, it semantically selects an infinitival clause but selects no other argument, specifically no subject. As a result, the subject of the infinitive is able to move to become a derived subject of *seem*. In this way, any restriction on the subject of *seem* will have been inherited from the lexical material within the infinitive. In contrast, control predicates like *try* semantically select their subjects, the 'agent' or 'tryer' of the event. This difference between *seem* and *try* is responsible for

4 For the purposes of this discussion it is not material whether subjects are understood as being generated within a layer of the verb phrase and moved to specifier of IP or if they are generated in that position initially.

the contrasts in (1) through (8). Because they cannot be assigned a θ role, expletives will be unable to appear in (4) but they will surface in examples like (3) so long as they are licensed in the embedded infinitive. At the same time, the idiom *the cat is out of the bag* can be separated by *seem* as in (7) but not *try* as in (8) because *the cat* as part of the idiom must be with the rest of its idiom and can only be separated from it by movement.

Since the important work of Perlmutter (1970) some verbs have been hypothesized both to belong to the raising to subject and the control class of predicates, in something like the relation of homonyms. Such a conclusion is invited by the observation that *begin* co-occurs both with an agentive interpretation in examples like (6) and with the standard diagnostics for not semantically selecting a θ role in examples (10) through (12).

(9) Jill began to sing.

(10) There began to be a problem.

(11) It began to be obvious that the trees were dead.

(12) The cat began to be out of the bag

Ruwet (1991) expresses some skepticism about the explanatory value of this move, retreating in self-criticism from his own earlier practice in Ruwet (1972).

While dual entry verbs like *begin* pose an explanatory challenge to the standard dichotomy between raising and control, a second difficulty is presented by descriptive variation. Specifically, syntacticians sometimes differ in how they class individual predicates. Lack of agreement is most pronounced in raising to object vs. object control structures. For example, both *force* and *allow* are standardly classed as an object control verb (cf. Davies & Dubinsky (2004)). There is reason to think that there is substantial variation on this score, however, since the literature on *allow* is contradictory. While Davies & Dubinsky (2004) class it as an object control verb, Huddleston (1971) says that it has a dual lexical entry, like the analysis of *begin* suggested by Perlmutter (1970). Postal (1974) treats *allow* as a special raising to object predicate, one in which the raising operation has an associated, but unformalized, semantic effect.

A third difficulty concerns whether raising or control is obligatory. Raising to subject appears to be obligatory in English. The contrast in acceptability between (13) and (14) is strong and has been modeled as a consequence of Case Theory since Chomsky (1981). In contrast, Seiter (1978) shows that

raising to subject in Niuean is systematically optional. There is also reason to believe that the contexts which allow a subject to escape its clause vary, at least superficially. For example, raising is required from English infinitives and prohibited from tensed clauses. In Niuean, raising is optionally permitted from clauses with a complementizer that is glossed as 'subjunctive' (cf Seiter (1978)). French, on the other hand, does not allow raising from subjunctives, tensed clauses, or any clause with an overt complementizer (Kayne (1981)).

(13) Jill seems to like cats.

(14) *it seems (for) Jill to like cats.

(15) it seems (that) Jill likes cats.

English *try* is an obligatory control verb for some, if not most, speakers, but it is a verb of optional control for others.[5] This is a very complex problem that we will for the most part skirt in the body of this paper choosing instead to focus attention on the first two challenges sketched above. We will however return to this third challenge briefly in our concluding remarks.

To summarize the discussion thus far, syntactic work has been slow to theorize variation in the patterning of raising versus control and, when it has, the results have been weak explanatorily. Moreover, when formal approaches to variation in this domain have deduced the verb classes from semantic selection, the resulting classification have been descriptively weak, precluding description of many forms that can be observed in grammars both within and across languages.

3 Survey of Acceptability Judgments

We elicited judgments from 27 native speakers of English enrolled in an introductory linguistics course in 2009. These students had been introduced to the general goals of linguistic description, but they were naive as to the specific goals of the survey. The survey items manipulated four verbs *promise, try, force* and *allow* with the expletives *there* and *it* in either main clause subject or object position in a two by two experimental design. The survey items used are listed in the Appendix. Respondents to the survey judged eight distinct stimulus sentences in each condition. These sentences were (pseudo) randomly distributed in a larger set of distractor sentences that were also given acceptability judgments. Judgments were made on a Likert scale of 1 to

5 For example, Grant Paul wrote *Please note that an ETA is, by definition, an estimate. There may still be delays, although we will try for there not to be any.* Twitter, October 7, 2010.

6 in order to facilitate completion of the task without respondents struggling over intermediate classes. Subsequently judgments of 1 through 3 were coded as *unacceptable* and judgments of 4 through 6 were treated as *acceptable*.

The results of this survey are tabulated in the following table.

(16) Table 1 – Survey Results

Expletive	Position	Accepted	Rejected	total
There	subject	10	38	48
	object	27	21	48
It	subject	2	46	48
	object	18	30	48
total		57	135	192

This contingency table shows a general trend for expletives to be disfavored in these constructions. The expletive *there* is more likely to be acceptable as either a subject or an object than the expletive *it*. The expletive *it* is least commonly accepted in subject position. These observations are surprising from the point of view of standard theorizing about raising and control. Standard theorizing would lead us to expect that all the data would concentrate exclusively either on the left or the right of the table above, with the left side of the table being labeled *raising* and the left labeled *control*.

We can characterize these patterns more carefully using measures from descriptive statistics. In descriptive statistics, odds ratio is a measure of effect size.[6] It expresses the odds that an object will have a property of interest, call it property A, in comparison to the odds that it will have some second property, property B, as a ratio. An odds ratio of 1 indicates that the object is equally likely to have property A as property B. A ratio of less than 1 represents a situation in which property A is less likely to have property A than B, and a ratio of greater than 1 occurs when the chances of an object having property A is greater than that of having property B. If the two properties are independent, we expect an odds ratio of 1. Statistical analysis of the table above shows that the odds ratio of both expletives being accepted in these constructions is 0.422. The odds ratio of the expletive *there* being accepted is higher 0.627. This compares with the lower odds ratio of 0.262 for the expletive *it* to be accepted. Expletive *there* in subject position has an odds ratio of 0.262 for being accepted, while it has an odds ratio of 1.286 of being accepted in object position. In contrast expletive *it* in subject position has an odds ratio of only 0.042 of being accepted, with 0.6 in object position. Since

6 Our discussion here follows the treatment of Wickens (1989).

not all of the odds ratios here are less than 1 and the odds ratio greater than 1 are not a symmetrical scale to those less than 1, logs are often used to make the values comparable. The log of the odds ratio (henceforth *logodds*) of both expletives being accepted is -0.863 while the logodds of *there* being accepted is -0.467 and the logodds of *it* being accepted is -1.339. In subject position the expletive *there* has the logodds of -1.339 and its logodds are 0.252 in object position. The expletive *it* has -3.170 as its logodds in subject position and -0.511 in object position.

In the next section we offer a possible explanation for why the actual acceptability judgments we collected in our survey departed from the ideal pattern expected by current theorizing based on the assumption that both expletives are semantically vacuous and that the raising vs. control distinction is based on whether a syntactic position is semantically unrestricted.

4 Interpretation

4.1 Locating Variation in Thematic Relations

It is always possible to view the variation in the table above as variation in linguistic performance, viewing the linguistic judgments as a task rather than a reflex of linguistic knowledge. In that case, linguistic theory is insulated from the data presented. The other alternative is to try to understand this variation as reflecting variation in speakers' knowledge (i.e. their I-language in the sense of Chomsky (1986)). We pursue the latter course here because we believe it makes linguistic theory more contentful and, potentially, explanatory.

There are four major properties of Table 1 that require modeling.

- Both expletives are variably accepted and rejected
- Both expletives are more likely to be rejected than accepted
- The expletive *there* is more likely to be accepted than *it*
- Both expletives are more likely to be accepted in object position than in subject position

To understand the variation in our table we need some source of variation in linguistic knowledge, and given the general outlines of Principles and Parameters theories, this will be located in lexical items. This variation could be in the linguistic representation itself or in how it is accessed from its memory storage. There will, in addition, need to be two dimensions of variation, one

distinguishing the expletives from one another, and the other separating subjects from objects. The conceptual tools of Case marking and person number features might, at first glance, seem able to serve this task. After all, Case marking distinguishes subject and object positions (via their respective Case markers, TENSE and V), and the two expletives are distinguishable by the fact that *it* has fixed person number features (third person singular) while *there* lacks its own person number features and instead inherits them from another nominal expression. What these tools lack, as far as we can see, is a natural source of variation that could make them interact. Such a source of interaction will be required to model the observed variation in our table.

Some semanticists have attributed thematic relations (i.e. θ roles) with inherent variation. We suspect that θ roles are good candidates for modeling the variation in our table because they instantiate a relation between a predicate and its nominal arguments, and, to the extent that semantic selection makes use of subcategories of nominals, we would have a grammatical subsystem that seems to involve the dimensions in the table The analysis of θ roles most sympathetic to variation between θ roles is Dowty (1991). Dowty suggests that θ roles are not primitives of linguistic representations but are emergent properties of lexical items that select semantic arguments. Familiar terms like *agent* are, on this view, not primitive representational concepts but patterns of similarity between groups of lexical items and the nominal arguments that they select. Dowty further suggests that these emergent properties are organized around some prototypical core. Two fundamental θ roles are posited: proto-agent and proto-patient. Proto-agent properties are marked by tending to exhibit the properties in (17).

(17) a. Volitional involvement in the event or state
b. Causing an event or change of state in another participant
c. Sentience (and/or perception)
d. Movement (relative to the position of another participant)
e. (Exists independently of the event named by the verb)

The advantage of the prototype theory of θ roles is that not all instances of *agents* will license entailments from this set. Instead, specific arguments, the *hitter* argument of the verb *hit* will license entailments from some cluster of these properties, and we expect to see variation between this 'agent' and the 'agent' of *meet* or *criticize*.

In addition to the proto-agent role, Dowty recognizes a proto-patient role. Its properties are listed in (18).

(18) a. Undergoes change of state
b. Causally affected by another participant
c. Stationary
d. Incremental theme
e. (Does not exist independently of event)

Predicates often select multiple arguments and Dowty uses these θ roles to organize how arguments are mapped onto syntactic structures. He conjectures that the argument with the most proto agent properties is projected as the 'subject'.[7].

The last parenthesized property in each proto-role (i.e. (17e) and (18e)) is most relevant to modeling the variation regarding the two expletives and their interaction with the syntactic positions of subject and object. The properties in (17e) and (18e) are the weakest properties of proto-roles.[8] We will refer to roles composed exclusively of these most minimal or bleached properties as *light θ roles*. We hypothesize that expletives can have (or check) these light θ roles. This claim is a departure from standard theorizing that characterizes expletives as *dummies*, semantically vacuous in every respect and only present to satisfy syntactic properties.[9]. However, Chomsky (1986) treats the expletive *it* in (19) as having a marginal argument status, being assigned a place holder θ role, $\sharp$, because of its ability to enter into relations of control.[10]

(19) It drizzled without making the roads slick.

The analysis we are advocating here generalizes that claim and extends it by recognizing a difference between *there* and *it* in how they saturate (or check if we treat θ roles as features) such light θ roles. This difference is expressed in (20a) and (20b), modeling two of the central properties we took away from Table 1.

7 It is immaterial here whether that position is [SPEC,IP] or [SPEC,*vP*]

8 Dowty is unsure whether they are actually thematic or pragmatic. We will assume that they are thematic in the remainder of this discussion. If it turns out that they are pragmatic their place in the proto-roles would need to be taken by some general place holders, perhaps $\sharp_a$ and $\sharp_p$ respectively that have the pragmatic content as reflexes.

9 In a minimalist syntax we would say rather that they satisfy requirements at the interface with the sensory motor system of Phonological Form; see Chomsky (1995)

10 Chomsky also suggests that extraposition *it* patterns differently and is incompatible with control. We are unsure of the reliability of this claim and believe it deserves further empirical investigation. We say this because examples like *it was suggestive without being conclusive that his fingerprints were on the glass* seem acceptable and each gerund would have a controlled PRO subject.

(20) a. Expletive *there* can saturate the weakest proto-agent θ role.
b. Expletive *it* can saturate the weakest proto-patient θ role.

The hypothesized difference is that expletive *there* saturates (or checks) the proto-agent role while *it* has the ability to saturate the proto-patient role.[11] If this theory of expletives is wedded to a movement theory of obligatory control like that suggested in Hornstein (2001), we will be able to define an emergent typology of predicates that allows classic raising when no θ role is selected by a predicate, a classic control predicate when a heavy θ role is selected, and ambiguous predicates when a cluster of non proto-typical properties are selected that include light and heavy θ role properties.

We note in passing that one advantage of this account is that it offers a straightforward explanation for the appearance of expletive *it* in direct object positions such as (21), a kind of phenomena that is otherwise problematic for the claim that expletives cannot have any θ role (see Postal & Pullum (1986)).

(21) They hate it that she got sick.

Why does Table 1 show that both expletives have a preference for object over subject position? Part of the answer to this question comes from the correlation between expletive *it* and the proto-object role. But why should *there* also show a preference for object position, especially since the it saturates the proto-subject role? Object control structures and raising to object structures of the type associated with the verbs *allow* and *force* in our survey instrument permit *there* to originate in the subject of an embedded clause and surface as an object of a matrix clause. In these types of structures *there* can more naturally appear in object position. Because the light proto-object role correlates with a lack of reference independent of the event, the light proto-object more naturally is saturated by (non-referential) expletives.

Another feature of Dowty's treatment of θ roles is that given a two place predicate the argument with the most agent like properties will be most likely to be projected as a syntactic subject. In this regard it is worth noting that for many speakers *promise* optionally selects two arguments as illustrated in (22a). Yet, when the expletive *there* is present, only (22b) is acceptable, as illustrated by the unacceptability of (22c) to our ears. This follows from Dowty's theory because *him* in (22c) would be a better agent and subject than *there*. *There* only functions as an acceptable subject when the predicate has no other argument that would outrank it as a (light) proto-agent.

11 This theory echoes and generalizes the thematic difference for two Dutch expletives suggested by Ruys (2010).

(22) a. She promised (him) to bring a present.
b. There promises to be a storm tomorrow.
c. *There promises him to be a storm tomorrow.

4.2 A Modal Alternative

The line of thought in the preceding sub-section explains the variation in control verbs in the structured content of θ roles, the arguments of verbal predicates. An alternative would be to locate the variation in the content of the relevant verbs. This idea is suggested by the way in which variation in the semantics of modal verbs like *can* are treated in Kratzer (2012), as extended in Portner (2009). The meaning of sentences is understood to be a proposition that consists of the set of possible worlds in which the proposition is true. A proposition that contains a modal predicate has a (universal or existential) quantifier over possible worlds. Possible worlds differ in how accessible they are from the current world. Accessibility is a ranking determined by two sets established by the discourse context: a conversational background that serves as the modal base and another set, a modal ordering. This modal base is established by epistemic, teleological, deontic, bouletic, circumstantial and stereotypical properties, among others. The modal ordering compares elements of the modal base allowing them to instantiate the content of the modal base to differing degrees. The ambiguity of sentences like (23) between an epistemic or deontic proposition is, in this system, not a lexical ambiguity represented as distinct predicates *must*, but is instead a result of using differing modal bases to evaluate the proposition.

(23) Jill must be innocent.

(24) Jill drank her tea.

If an epistemic base is invoked, (23) is a claim about having reason to believe Jill is innocent of wrong doing, whereas the choice of a deontic base gives us a claim about Jill's obligation to be innocent. An episodic narrative sentence like (24) is not evaluated with respect to different modal bases in this way. Evaluating 23 with an epistemic modal base comprised of the set of possible worlds we have knowledge of, we expect every possible world in that set to be one in which Jill is innocent.

It is possible to conceptualize the variation between (25a) and (25b) as evaluating the contribution of *promise* of the proposition with respect to different modal bases.

(25) a. There promised to be many people at the party.
b. She promised to bring a present.

On this view, *promise* is a verb being evaluated with respect to an epistemic modal base in (25a). It is not clear to me whether *promise* should be theorized as a modal verb in all its uses or whether it is extended to have a secondary modal use. If *promise* is uniformily evaluated with respect to a modal base then the more standard (25b) would employ a circumstantial modal base. In either case the interpretation employing the epistemic modal base is the locus of greater variation. This observation converges with what is often claimed about diachronic development of modal verbs in historical linguistics and with the intuition on the part of some semanticists that epistemic modals are simpler than other modal verbs, perhaps for only being evaluated with respect to a modal base and without requiring a modal ordering (cf. von Fintel (2006)).

It is generally believed that epistemic modals take wider scope than negation (and other sentential operators) (cf Portner (2009). Such an assumption would suggest that negative counterparts of (25) should be unavailable.

(26) a. There didn't promise to be anyone at the party.
b. There didn't promise to be a party.

In (26) the negation operator c-commands and has wider scope than the predicate *promise*. This scope relation makes the epistemic interpretation of the predicate less available. This empirical issue is not addressed in the survey reported in the previous section, but is in-line with our own speech.

The survey results summarized in Table 1 indicate that *there* is more likely to be accepted than *it* in our stimuli. Perhaps this aspect of the variation in Table 1 can be linked to the fact that *it* has intrinsic person and number features while *there* does not. If control involves a relation between pronominals, *it* is a more probable controller than *there*. From this perspective *there* is a stronger cue to an epistemic raising construction in the context of our survey. Table 1 also shows that both expletives are more accepted in object position than in subject position. This trend is unexpected on classical syntactic accounts of raising and control verbs, and is equally unexpected on the semantic accounts offered in this section. A possible way to make sense of this trend is made available by semantic accounts of modality inspired by Hacquard (2006). This view is mid way between the θ account entertained in the previous sub-section and the modal account hypothesized in this sub-section because it recognizes a foundation role for the arguments of a predicate in projecting a modal base. The alternative possible worlds that make up the modal base

must include normal entities corresponding to the verbal arguments. This theoretical option would need to be augmented before it could distinguish the subject and object position. I know of no proposal that treats subjects as more basic in determine a predicate's modal base, but if one were forthcoming we would be able to fully model the results in Table 1. Because the proto-θ role account is able to model this aspect of Table 1, it appears to have an advantage.

5 Conclusion

Variation is inherent to language use, and a substantial body of work in the Labovian tradition offers analysis of such variation as correlated with social variables of various sorts. This paper has directed attention to variation in knowledge of language, focusing specifically on the distinction between raising and control predicates. We have investigated the distribution of expletives in predicates typically identified as control predicates and shown that there is variation as to whether speakers of English accept expletives as the subject or object of predicates typically identified as control verbs. We have treated the resulting patterns as part of speakers' knowledge of language and modeled it as a consequence of expletive *there* and *it* satisfying non-prototypical θ roles differentially. The resulting pattern should surface as a natural pattern in other grammars cross-linguistically, either synchronically or diachronically. This is a general claim. We expect to find variation routinely in I-languages.

Although it was not the focus of this paper, we noted in our introduction that languages differ with respect to whether raising to subject is optional or obligatory as well as with respect to the kinds of embedded clauses that allow a subject to raise. Our general claim leads us to expect that we should not be surprised if such variation shows itself in the internalized grammars of English speakers, and it seems fitting to end this paper by considering whether this kind of expectation is realistic. Reflection suggests that it is since we do, indeed, find such variation. Our own idiolect includes the judgments in (27) - ([71a]). What is noteworthy here is that raising out of a finite clause introduced by *like* rather than *that* is possible, both for expletive *there* in (28), the idiomatic *the cat* of (29), and arguments selected by the embedded verb such as the plural *the women* in (30). The acceptability judgments here reverse when *that* introduces the embedded clause, as evidenced by (31) - (33).

(27) It seems like there is a problem on the freeway.

(28) There seems like there is a problem on the freeway.

(29) The cat seems like it's out of the bag already.

(30) The women seem like they've met before.

(31) *There seems that there is a problem on the freeway.

(32) *The cat seems that it's out of the bag already.

(33) *The women seem that they've met before.

The sentences employing *seem like* show variation in judgments, but the judgments of our idiolect reflect the pattern exhibited in the Niuean raising structures described by Seiter (1978). Recall that Niuean allowed raising optionally from subjunctives. Not only do the sentences in (27) - (30) optionally allow raising, but the sentence initial *like* appears to function as a subjunctive marker. In our idiolect it is available to introduce embedded tensed clauses under a subset of verbs of perception and emotion (e.g. *feel, appear*) but not factives (e.g. *know, believe*). The corresponding *seem that* constructions resist raising.

6 Appendix

The sentences used to elicit intuitive judgments in the survey instrument are listed in Table 2.

Expletive	*Position*	*verb*	*stimulus*
There	subject	promise	There promised to be a lot of surfers at the beach.
			There promised to be several speakers on the topic.
			There promised to be a lot of shells at the beach.
			There promised to be several articles on the topic.
			It promised to be necessary that the museum earn more money.
		try	There tried to be five customers at the table.
			There tried to be enough teachers for the course.
			There tried to be five chairs at the table.
			There tried to be enough textbooks for the course.
	object	allow	The coach allowed there to be another practice.
			The caterer allowed there to be enough beer for the event.
			The schedule allowed there to be another practice.
			The keg allowed there to be enough beer for the event.
		force	The sale forced there to be a discounted price.
			The budget forced there to be another tuition increase.
			The manager forced there to be a discounted price.
			The governor forced there to be another tuition increase.
It	subject	promise	It promised to be required that every tent come with a sleeping bag.
			It promised to be necessary that the professor earn more money.
			It promised to be required that every camper come with a sleeping bag.
		try	It tried to be encouraged that the marathoner only run for two hours.
			It tried to be possible for the cashier to accept credit cards.
			It tried to be encouraged that the play only run for two hours.
			It tried to be possible for the machine to accept credit cards.
	object	allow	The researcher allowed it to be proven that red wine is healthy.
			The baker allowed it to be a surprise that the cake was chocolate.
			The experiment allowed it to be proven that red wine is healthy
			The icing allowed it to be a surprise that the cake was chocolate.
		force	The doctor forced it to be shown that the tumor was cancerous.
			The dean forced it to be necessary to study a foreign language.
			The ultrasound forced it to be shown that the tumor was cancerous.
			The prerequisites forced it to be necessary to study a foreign language.

Table 2

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