

Introduction

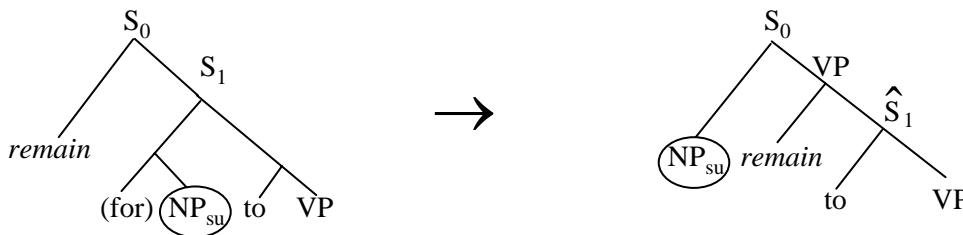
Ross (1977) tentatively proposes that the English verb *remain* governs a peculiarly-constrained variant of **A-Raising**, a rule that allows the Subject of the infinitive complement of *remain* to appear instead as the Subject of *remain* itself. He proposes this to account for the construction typified by (1)a, which he claims is productive and not idiomatic:

- 1)a** I remain to be convinced that your plan is feasible. [= Ross 1977 (1)]
1)b Headway remains to be made on the difficult problem of deblenification [= (26)a]

Examples like (1)b show that downstairs idiom chunks like *headway* in *make headway* can appear as the subject of *remain* in this construction, a characteristic of Raising (Postal 1974). Other arguments for Raising can be easily constructed, such as Borkin's (1972a,b, 1984) metonymic 'beheaded Noun Phrases' like *Washington for the American government*, *Homer for Homer's works*, etc, that transfer as subjects of *remain*, as in (1)c-d:

- 1)c** Washington remains to be convinced that interstitial regelation is the key technology.
1)d Most of Homer remains to be deconstructed.

The structures assumed as the input and output of A-Raising are, roughly:



A-Raising requires an underlying intransitive predicate (B-Raising, by comparison, requires a transitive predicate), and takes a sentential complement (S_1 above) as its subject. It predicationally relates (and syntactically fuses) an intransitive matrix clause with its Subject complement infinitive clause, and is derivationally assumed to occur on the cycle (S_0) that processes the matrix clause, rather than on the lower cycle (S_1) of the complement.

This is a fairly specialized subcategorization, and, if correct, it identifies *remain* with a non-agent subject (we will return to the agent subject case below) as an epistemic (or at least one-place) verb whose meaning is more grammatical than lexical, in effect a Continuative Aspect Operator. Since it is an operator, more a part of the grammar than of the lexicon, it is perhaps somewhat less surprising that the construction has “a raft of weird restrictions”, as Ross puts it. Like the most prototypical A-Raising predicates (e.g. *seem*, *appear*, *likely*), *remain* can also govern Extraposition; however, extraposed infinitive complements of *remain* can have an explicit subject (marked with *for*). *Seem*, *appear*, and *likely*, on the other hand, govern finite complements in this case, while *remain* does not.

- 2)a** It remains (for Martha) to strew the aisles tastefully with rose blossoms.
2)b *It remains that Martha (will) strew(s) the aisles tastefully with rose blossoms.
3)a *It is likely/seems/appears for Martha to strew the aisles tastefully with rose blossoms.
3)b It is likely/seems/appears that Martha will strew the aisles tastefully with rose blossoms.

Only *likely* resembles *remain* in being a 1-place stative with a sentential subject, and *likely* refers of course to modality, in the sense of probability. *Seem* and *appear*, however, both have human perceivers associated (arguably underlying, and expressed occasionally in a *to*-phrase), and, indeed, any predication of likelihood represents a judgement that may be either presupposed or claimed by the speaker, so there is available in any of these cases, as usual, a variety of readings, usually depending on whether human agent/experiencers are salient.

Our task, then, is to chart the verb *remain* and its constructions and affordances, with an eye to explaining as much as possible of the peculiar constraints on A-Raising with *remain*, which, according to Ross (1977), include:

- | | | |
|---|---|---------|
| A. <u>No Negatives</u> | *That doesn't remain to be decided, after all. | |
| B. <u>No Progressive</u> | *He is currently remaining to be convinced. | |
| C. <u>No Perfect</u> | *This case has remained to be settled for too long. | |
| D. <u>No Gerundive</u> | *Though remaining to be promoted, Maggie is cheerful. | [(12)b] |
| E. <u>No Equi above <i>remain</i> cycle</u> | *He planned to remain to be told who had won the race. | |
| F. <u>No Raising above <i>remain</i> cycle</u> | *Headway is believed to remain to be made on this problem.. | |
| G. <u>Obligatory Downstairs <i>be</i>-Passive</u> | *I remain to believe that your plan is feasible. | |

In addition, there are several characteristic parts to this construction with *remain* that need to be separately accounted for:

- The **infinitive** in the complement
- The **passive** in the complement
- The origin of the **subject** of *remain*

As Tufte (1990) puts it, 'To clarify, add detail.' To find details about *remain*, look it up. As it happens, the OED contains some 7,167 quotations that use a form of "remain"¹, and most of these are verbal uses. This makes an interesting corpus, and sheds some light on the remote origins of this and other constructions. It also makes an easy corpus to access, at least with the online interface provided by the Digital Library Production Services², which makes it possible to search for and receive such minicorpora of quotations electronically, on demand.

Such a list is, of course, selected rather than collected, and is not representative of ordinary usage, even written usage, so it is inappropriate for statistical questions. However, it is very likely that this set of *remain* quotations will contain multiple occurrences of every possible construction, idiom, important collocation, subcategorization, and selectional restriction that *remain* participates in, identified as to source and date. Consequently, while it might not be useful for socio-linguistic studies, it's very, very useful for syntactic investigations, especially if they can be localized to just one search term.

In what follows, the first part of the reference number of each OED sentence is the year of its citation; the second part is its order in the list of quotations from that year. Thus (4a) is the third quotation from 1770 in the corpus formed from the OED quotations containing *remain*. This corpus is available on the Web (in full, as received, 2 MB) at <http://www.umich.edu/~jlawler/oedqa-remain.html>. A mildly massaged 1.5 MB version, sorted in chronological order, and equipped with unique reference numbers, is at <http://www.umich.edu/~jlawler/oedqc-remain.html>. Such is my data for this study, and I have 'stained the slides' of the examples I give below to indicate the presence of specialized lexical items, like quantifiers, negatives, modals, NPIs, *wh*-words, and complementizers, and the specialized structures they participate in. See the table at the end of the paper for details of these 'slide stains'.

¹ This number appears to be about normal; various related verbs like *keep*, *stay*, and *leave* range between 4,000 and 13,000 quotations. There are, in all, 2,435,659 quotations in the OED, Second Edition.

² The institutions currently subscribing to this interface are Cornell, Columbia, Georgia, Harvard, Indiana, Indiana-PUI, Northwestern, Rice, and Michigan.. Other institutions can subscribe to the OED, or for that matter the content of any other collections. Those interested should contact:

John Price-Wilkin
Digital Library Production Services
University of Michigan
jpwilkin@umich.edu

Overview

Remain participates in a number of constructions containing infinitives, though that does not begin to exhaust its productivity. For instance, *remain* can have an **agent** subject (prototypically human), and thus be an activity (4a-e), or it can have a **patient** subject and thus be stative (5a-f).

- 4 a) (1770.3) Fools_i, who_i came to _i-scoff, *remained* to _i-pray. Goldsm. *Des. Vill.* 180
 b) (1800.5) Some witlings and jest-mongers_j still *remain* **For** fools_i to _i-laugh at_j. Joanna Baillie (O.)
 c) (1875.40) Two powers_j now *remained* to _i-struggle for the dominion of the trilateral island [Sicily].
 Merivale *Gen. Hist. Rome* xviii. (1877) 102
 d) (1901.26) Few Boers_i have *remained* to _i-face the bayonets. Linesman *Words by Eyewitness* (1902) 100
 e) (1974.48) Hayes_j, his middle stump removed by a Holder no-ball., *remained* to _i-fight another day. *Sunday Tel.* 3 Mar. 33/7
- 5 a) (1603.5) The wales, marks, scarres and cicatrices_i of sinne and vice *remaine* to _i-**be** seene. Holland *Plutarch's Mor.* 558
 b) (1604.4) But now that we have left the sea, let vs come to other kinde of waters_i (**that**_i *remaine* to _i-**be** spoken of).
 E. G[rimstone] *D'Acosta's Hist. Indies* iii. xv. 169
 c) (1779.2) So much_i *remains* to _i-**be** done, (**that** I can hardly spare a single day from the Shop).
 E. Gibbon *Let.* 15 May (1956) II. 215
 d) (1813.5) Some fragments_i of marble linings *remain* to _i-attest the ancient magnificence of this port. Eustace *Italy* I. vii. 281
 e) (1880.12) From the palm-oil bath by means of tongs, the sheets_i are passed by the tinman..to the tin pot, which is full of molten tin, and here they_i *remain* to _i-soak for a period of 20 minutes. Flower *Hist. Trade Tin* xiii. 170
 f) (1950.4) In a moderated reactor **there** *remain* more free neutrons_i to _i-sustain and _i-propagate the chain reaction of U²³⁵.
 F. Gaynor *Encycl. Atomic Energy* 114

The ‘basic’ sense of *remain*, not generally taking an infinitive, is the Continuative Aspect Operator, which simply asserts that the subject exists (or is located), while presupposing that it existed (or was located in the same place) in the past. This is an ‘existential’ sense, and thus *there*-insertion is always possible with this sense. It is often present in more elaborate senses as an invited inference, at least. We can find two rather distinctive elaborated types of meaning relation between *remain* and an associated infinitive.

- The prototype infinitive that appears with the basic sense of *remain* is not a complement at all, but rather a **Purpose** infinitive, like the ones found in (4a) and (4d). Far from being a noun clause functioning as Subject, Purpose Infinitives are adverbials, and can be attached to any sentence with an agent subject, to comment on the motivation of the agent in performing the action. Purpose infinitives also occur in other sentences, with patient subjects, like (5a), in which the purpose is attributed to the hypothetical observer of the phenomena, or (5e), where it is attributed to the (designer of) the process. A test for Purpose infinitives is whether one can substitute *so as to* for the *to* of the infinitive. This is not the sense that occurs in Ross’s Raising cases, though there is significant ambiguity.
- A different case of an infinitive with *remain* is closer to what Ross discusses; call it the **Decremental** sense, exemplified by (5b-d). In this usage, semantically there is assumed to be some process that removes items from consideration, in order, and *remain* identifies the items that have not yet undergone the process. Syntactically, the infinitive associated with *remain* functions as a complement in most respects. There is often a locative or physical existential (i.e., ‘basic’) sense, in which case there is usually ambiguity between Decremental and Purpose understandings, but this is not always present. The Decremental sense is given as Sense 1 by the OED – “To be left after the removal or appropriation of some part, number or quantity.” A necessary but not sufficient test for this sense is whether it can be Extraposed, since this is always possible with Decrementals, but it is occasionally possible with other types, as well.

In both these senses, *remain* has been extensively mined for literary idiomatic phrases and constructions over the centuries. Some familiar examples that come easily to mind include

- a flowery species of complimentary close (6),
- 6 a) (1600.2) I will ever *remain* Your assured friend Charles Percy. C. Percy in *Shaks. C. Praise* 38
 b) (1793.1) I *remain*, my dear friend, Affectionately yours, W. C. Cowper *Let. to J. Hall* 10 Dec.
- the *nothing... but* construction (7),
- 7 a) (1588.10) *Remaineth nought but* to _interre our Brethren, And with low'd Larums _welcome them to Rome. Shaks. *Titus Andronicus*. i. i. 147
 b) (1843.12) Apparently *nothing but* warmth_i *remained* to *i*_indicate (**that** life had not already become extinct). R. J. Graves *Syst. Clin. Med.* v. 71
 c) (Mod.4) **There remains no more but** to _thank you for your courteous attention.
- *All*-clefts (8) – cf Collins (1991), as noted in McCawley (1998:485n29)
- 8 a) (1605.1) *All that remains is* (by this, or some such like deed, to _professe my sensibleness of your great fauour). A. Wotton *Answ. late Popish Art. Ded*
 b) (1887.24) *All that*_j *remained for the brakemen and switchmen*_i to *i*_do_ *was* (to *i*_go to the office..and *i*_call for what is known in railroad parlance as their ‘time’). *Courier-Journal* (Louisville, Kentucky) 12 Jan. 6/3
- an extraposed idiom of historical commentary (9) – note the perfective **has** in (9a), contra Constraint C:
- 9 a) (1906.3) **So** utterly has the status of woman been accepted as a sexual one (**that it has remained for the woman’s movement of the nineteenth century**_i to *i*_devote **much** contention to the claim (that women are persons!)) C. P. Gilman *Women & Economics* (ed. 5) iii. 49
 b) (1971.14) **It remained for Samuel de Champlain**_i to *i*_spike the legend of a City of Norumbega, storied like a New Jerusalem. S. Morison *Euro Disc Amer.: North Voy.* xiv. 469
 c) (1976.6) **It remained for Proust**_i to *i*_summate the retrospective social novel. J. Bayley *Uses of Division* i. i. 24
- and an extraposed equivalent to “In Conclusion,” or “Last but not least” (10), beginning and ending with uses by linguists over a period of 4 centuries.
- 10 a) (1599.2) **Now it remaineth** to _giue a Paradigma or example of euery Coniugation of their Moodes. Minsheu *Span. Gram.* 20
 b) (1834.15) **It now only remains** to _mention the fate of Inchi Oowan Saban. P. J. Begbie *Malayan Peninsula* ii. 83
 c) (1909.3) **It remains** to _show (**that** the operator ∇ applied to **V** gives the grad). J. G. Coffin *Vector Analysis* 103
 d) (1952.14) **It remains now** to _discuss the generation and removal from the lattice of the large number of vacancies which do not form voids. *Proc. Physical Soc. B.* LXV. 522
 e) (1970.25) **There remain still** to *i*_be considered the instances_i of pronominalization in simplex sentences - reflexives, emphatics, and topicalized sentences. Chapin *Language* XLVI. 374

Most importantly, there is a construction *remain to be seen*, which **is** idiomatic, according to the OED, which is also metaphoric – an example of the ‘actinic’ SEEING IS KNOWING metaphor theme (Lakoff & Johnson 1980, 1999), and which appears to constitute the prototype case of the peculiar version of A-Raising with *remain* discussed by Ross (which I will henceforth call **R-Raising**). I use the term ‘prototype’ here rather specifically – I do in fact mean to suggest that R-Raising, and several other types of construction with *remain*, are structured syntactically and semantically after the prototypic example of *remain to be seen*, and that that fact explains a great deal of the oddity of R-Raising.

Some examples of this idiom:

- 11 a) (1921.15) **It remains to be seen (how** the Persian Court will take to the idea of Sovietisation). *Glasgow Herald* 17 Jan. 11
 b) (1938.7) (**Whether** I’ll write **anything** for publication)_i **remains to be seen**. H. L. Mencken *Let.* 23 Apr. (1961) 427
 c) (1959.34) **It remains to be seen (whether** he could also ‘liaise’ successfully). *Guardian* 15 Oct. 10/7
 d) (1971.37) **It remains to be seen (whether** the small amounts of racemic amino-acids were syngenetic with the meteorite parent body). *Nature* 12 Mar. 108/2
 e) (1976.41) **It would remain to be seen (to what extent** it would be practical or desirable to build houses there). *Southern Even. Echo* (Southampton) 13 Nov. 3/6

This construction typically takes an disjunctive embedded question as its subject, frequently extraposing this heavy NP subject – though not always, as Mencken demonstrates in (11b). The fact that the embedded Q is disjunctive indicates

that *remain* in this sense is not factive. Indeed, it is if anything **antifactive**; that is, the point of the *remain to be seen* construction is to cast doubt on a proposition, rather than to presuppose it.

Note, in passing, that this idiom is **not** what can be observed in (5a), nor in (12) below:

- 5 a) (1603.5) The wales, marks, scarres and cicatrices_i of sinne and vice *remai*ne to _i **be** seene. Holland *Plutarch's Mor.* 558
 12) (1700.13) I press'd..that Capt. Checkley should give Daniel a Deed; that so this Fraudulency_i **might not** *remain* to _i **be** seen. S. Sewall *Diary* 18 Apr. (1879) II. 11

In both of these cases we have a 'basic', existential understanding – those things **do** still remain, and it **can** still be seen that they remain. They are positive, not negative: the true subject of *remain* in (11) is *Fraudulency*, a noun, rather than (*for*) *Fraudulency to be seen*, a complement clause. The subject is asserted to exist by *remain*, the infinitive is a Purpose infinitive, and the absence of the subject of *be seen* in the infinitive is to be ascribed to some version of Equi rather than to any type of Raising. (5a) and (11) are striking counterexamples of the idiomatic *remain to be seen*, and they strike us as strange because they go counter to the familiar idiomaticity, which is attested further by all the jokes based on a euphemistic nominal sense of *remains* for *corpse*, as in *viewing the remains*. Everybody has run across jokes based on phrases like "Remains to be seen at XYZ Funeral Home." What's funny about them (aside from Death, which is taboo and therefore attracts humorous treatment) is their play on a familiar idiom, and especially on one that indicates doubt, whereas Death leaves no doubt whatsoever.

Idioms

What is an idiom? One can approach this structurally as a failure of compositionality – a situation in which the meaning of a phrase with meaningful components cannot be deduced from their composition. But that is a result of the establishment of an idiomatic meaning in the first place, rather than a cause, and it is reasonable to expect that such an establishment would solve more conventional problems than it could cause by defying compositionality. I.e, we expect idioms to be useful in their appropriate contexts, or else we wouldn't go to the trouble of having and learning them. The question, then, is to find the appropriate context(s) for the idiom *remain to be seen*.

Several facts emerge from this question:

- *Remain to be seen* is polite. That is, it's a more tactful thing to say that something has yet to be demonstrated than that it's false, in case there is anybody who might be offended at a bald denial.
 - One of the reasons why it's polite is that it's very indirect. Not only does it hold out the possibility that the proposition may be affirmed at some future time, but it does so metaphorically. It **does** effectively deny affirmation, but it does so by wending its way through a thicket of implications, metaphoric extensions, presuppositions, and invited inferences, rather than by overtly denying on the record.
 - Quite frequently other, more directly mental, verbs like *determined*, *proven*, *resolved*, or *found*, are used, a mild extension from the actinic visual metaphor *seen*, though they always have the same polite sense of the idiom:
- 13) a) (1763.1) The question, (**Whether** a Secretary of State can grant a general warrant against authors, printers, and publishers, without naming **any** names), *remains yet* to _i **be** determined. A. B. *Let.* 7 May in *Gentl. Mag.* XXXIII. 246
 b) (1965.24) The capability_i of Langerhans cells to synthesize melanin *remains* to _i **be** proven. *Jrnl. Investigative Dermatol.* XLV. 403/1
 c) (1979.27) The lack_i of rescuability of focus-forming activity from transformants caused by MSV DNA fragments *remains* to _i **be** resolved. *Nature* 22 Nov. 382/2
 d) (1979.29) They have included evidence for the 'gluon' (the photon of the quark-quark force), and excited states of the upsi-
 lon (which contains a beauty quark and its anti-particle), but 'truth_i' (the quark beyond and pairing with beauty) *remains* to _i **be** found. *Nature* 6 Dec. 546/2

(Ross (1977) comments in a footnote that Perlmutter had pointed out some selectional restrictions on downstairs verbs with R-Raising, and that ‘.the class seems to center around such verbs as *determine* and *show*, and this construction has an even more bookish ring than other remain-S’s.’ The generalization to be captured is that all of them are versions, specialized in context for mental sensation, of a general *sense/experience* predicate, as represented in the idiom by the prototypic sense verb *see*.)

- *Remain to be seen* is, nevertheless, **negative**, in the sense that it triggers weak NPIs. Note, for instance, that (8a) uses the NPI **much**, triggered by the Decremental historical *remain*. Ross (1977) notes this in another footnote. This negativity is weak because it is indirect, but it is real, and it is in very striking contrast to the affirmative, existential nature of the Purpose infinitives in (5a) and (12).
- *Remain to be seen* is Stative, and has a Patient subject. Even though *remaining* is potentially a volitional action with an agent subject, even human subjects of *remain to be seen* are interpreted as Patients.

If it is the case, as I suggest, that R-Raising is an adaptation of this idiom, then we should expect several phenomena:

- R-Raising should be more limited in its variability than a more ordinary collocation. This is essentially what Ross reports; i.e, it is not surprising that a construction derived from an idiom should have many restrictions, since idioms are heavily restricted, often to individual lexical items.
- R-Raising, as a negative, should not occur with free negatives, though incorporated negatives are possible. This is Constraint A.
- R-Raising is limited to stative uses of *remain*, hence is restricted to constructions which allow statives with Patient subjects. This disallows, among others, the Progressive (Constraint B), as well as Equi (Constraint E), which requires volitionality in the complement.
- Just as the form of the idiom can occur in a non-idiomatic function, as in (5a), it is possible for R-Raising to be ambiguous between its negative sense and an existential Purpose sense.

- 14 a) (1712.5) You may fill up the Holes to the Level of the Ground to take up the Earth_i (**that_i may possibly remain to _i-be** disposed of). J. James tr. *Le Blond’s Gardening* 121
- b) (1727-51.3) The work_i being thus far gilt, when dry, *remains* either to _i-**be** burnished, or matted.. Chambers *Cycl.* s.v. *Gilding*
- c) (1857.26) When players are very equally matched, neither party has gained an advantage; hence the match_i *remains* to _i-**be** played another day. *Chambers’ Inform.* II. 693/1
- d) (1863.7) After the centre of the field has been ploughed, the head-lands_i **will remain** to _i-**be** ploughed separately. *Fawcett Pol. Econ.* i. vi. 81
- e) (1953.14) The gas stock (and a few other tranches, too)_i *remains* to _i-**be** sold. *Economist* 15 Aug. 470/2

(14a-e) are all ambiguous between a negative Decremental sense and an existential Purpose sense. The NPs marked as subject both of *remain* and of the infinitive can be interpreted as still existing, for some (future) purpose; **or** they can be interpreted as not existing as fulfilled potential. Oddly, neither one seems odd; and both seem to be true simultaneously. The gas stock **does** still exist, and at the same time it **does** need to be taken care of. I call this the **half-full/half-empty** case, in that both senses are true, though only one may be relevant or salient to a given usage.

This last phenomenon, of widespread ambiguity, is also a key to the restricted distribution and syntactic affordances of *remain* in R-Raising. I suggest that a **quasi-idiom** (by which I mean this type of phenomenon – a construction based on extending an idiom in a certain class of contexts for pragmatic reasons) must be able to be distinguished easily from non-idiomatic uses, or ones with distinct and occasionally opposite senses. A true, lexical, idiom does this simply by be-

ing itself, lexically immutable; but a quasi-idiom has been able to extend the lexical range of its components into a range of situations where ambiguity is possible. Several outcomes are possible in a given usage: listeners may misunderstand, they may understand properly, or they may interpret both senses and have to guess as to which is preferable. This is a much lighter processing load, however, in the case where both senses work, and that appears to cover a rather large number of cases.

The conclusion I draw is that R-Raising is constrained because it is still sticking close to its prototypic case, and as long as it is useful for pragmatic reasons, it is also useful to keep it distinguished from other constructions, except in the cases where they don't constitute any important meaning difference. Note that I have not fully explained (nor attempted to explain) all of the Constraints that Ross posited; but I have given what I think is an etiology (and etymology) of the construction that makes predictions in line with the observed facts and the meaning.

Moral

This paper began when I ran across an offprint of a squib that Haj Ross had sent me. I'd run across it before and scribbled several strata of notes, and this time I decided to see what could be found out about the anomaly the squib posits. This, then, is an example of what squibs are good for. They pose questions, which are required for answers; more importantly, they point one in directions one would never take without them.

References

- Borkin, Ann. 1972a. "Coreference and Beheaded NP's". *Papers in Linguistics* 5:28-45.
 ————— 1972b. "A Note on *want* and *desire*". *Linguistic Inquiry* 3:3.378-385.
 ————— 1984. *Problems of Form and Function*. Ablex.
 Collins, Peter C. 1991. *Cleft and Pseudo-cleft Constructions in English*. Routledge.
 Levin, Beth. 1993. *English Verb Classes and Alternations*. University of Chicago Press.
 McCawley, James D. 1974. 'On identifying the remains of deceased clauses'. *Language Research* (Seoul), 9.2.73-85.
 ————— 1998. *The Syntactic Phenomena of English* (2nd edition). University of Chicago Press.
 Postal, Paul. 1974. *On Raising*. MIT Press.
 Ross, John Robert. 1977. 'Remnants'. *Studies in Language* 1:1.127-135.
 Sadock, Jerrold J., & Judith N. Levi. 1977. 'Ergativity in English?'. *CLS Book of Squibs*, 91-3.
 Tufte, Edward. 1990. *Envisioning Information*. Graphics Press.

Note: I have taken the liberty of 'staining' my example sentences to pick out various lexical, syntactic, and semantic features that are of possible interest with respect to this construction.

Key:

<i>for Proust_i</i> to <i>i₋summate</i> = Infinitive Subject
<i>ruins_j</i> to <i>unbury_{-j}</i> = Infinitive Object
to <i>_be seen</i> = Indefinite Subject
but = Fulcrum of Cleavage
<u>some</u> = Quantifier <u>now</u> = Deictic element
<u>will</u> = Modal <u>nought</u> = Negative
<u>any</u> = Negative Polarity Item