On the relationship between argument structure change and semantic change

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Abstract. Argument structure (AS) and meaning are closely related, but the nature of the relationship is disputed. It is not entirely deterministic, as not all aspects of AS and meaning necessarily match up. Most discussion has focused on theory-internal issues and/or synchronic analysis of argument alternations. We, however, take a diachronic perspective, addressing how change in a verb's AS correlates with meaning and vice-versa, and specifically asking if AS changes first, giving new semantics, or if meaning change triggers a different AS. We study these issues empirically via corpus work on the verb *babysit*, since it shows interesting changes involving AS and semantics in the relatively shallow diachrony of modern English.

Keywords. argument structure; semantics; lexical semantics; diachrony; English

1. Introduction

There is a general scholarly consensus that Argument Structure (AS) and meaning are closely related; however, the exact nature of their relationship is not settled, and varies with different theoretical frameworks. Most consideration of this relationship has focused on theory-internal issues (e.g. whether syntax or lexicon is involved) and/or on matters of synchronic analysis of argument alternations. Some linguists have assumed a one-to-one correspondence in a lexeme's AS and its semantics, so that a difference in AS would necessarily be accompanied by a distinct difference in meaning.

At least two syntactic theories have been built on or have championed a direct connection between thematic roles — and therefore argument structure — and syntactic structure: Relational Grammar, as developed by David Perlmutter and Paul Postal in the 1970s, and as laid out in Perlmutter 1980 and in the various papers in Perlmutter 1983 and Perlmutter and Rosen 1984, with its Universal Alignment Hypothesis, and Government and Binding theory, with its Uniformity of Theta Assignment Hypothesis (Baker 1988). Some doubts have been expressed about such a direct connection, as for instance in Rosen 1984, but the theoretical importance of this connection is not a matter for debate.

An important formulation of this presumed relationship between AS and semantics is that articulated by Rappaport and Levin (1986: 3), who argued that "the properties encoded in particular predicate-argument structures are to a large extent predictable from some representation of the meaning of verbs" and that the verb's AS determines the syntactic realization of its arguments. In the course of their examination of locative alternation verbs, as Levin herself summarizes (2013), they maintained that "argument structure alternations arise when a verb has two systematically related meanings, each determining a distinct syntactic realization of its arguments". This formulation implicitly adheres to a "one form, one function" dictum. Levin's (2013) conceptualization, however, of the AS-semantics relationship appears to be somewhat more flexible, as she observes that "a lexical item's argument-taking properties may be driven **in part** [emphasis added] by its meaning".

The extent to which AS is governed by meaning (or vice versa) is one of the central concerns of our investigation. We accept Levin's formulation that AS is driven only in part by se-

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mantics. Such a position necessitates that the relationship between the AS and semantics is not entirely deterministic, in that not every aspect of AS needs to correspond to meaning.

Unlike Rappaport and Levin (1986) and others who examine the AS-semantic relationship with a particular theoretical lens, we examine the issue from a diachronic perspective, addressing how change in a verb's AS correlates with meaning and vice versa. Previous studies of AS in diachrony, e.g. Abraham et al. 2015, have focused primarily on effects of argument-adding processes, e.g. causativization, and argument-reducing processes, e.g. passivization, not on the AS-meaning relationship itself. We offer an extended example from the shallow diachrony of English that bears on the issue, namely, the syntax and semantics of the verb babysit. These examples provide vital counter-evidence to the theoretical position that AS and meaning always go hand-in-hand. We posit that a change in AS does not necessarily occasion a change in the semantics of a lexical item, and more specifically, that in the case of babysit, variation in AS is not accompanied by change in meaning. In both cases, the lexical item changes over a relatively short period of time from having a single (subject) argument accompanied by an adjunct to having two arguments (subject and object), as developed in detail below.

As is apparent also in the Abraham et al. approach, investigating the relationship between AS and meaning from a diachronic perspective raises a basic question: Does AS change first, giving a different meaning, or does the meaning change, triggering a different AS? This is essentially a question of causation: What is the "prime mover" in changes involving lexical meaning and AS? We hope to move beyond a simple question of causation, however, to posit that the very availability of multiple argument structures for a given lexical item provides the environment in which multiple AS with the same meaning may occur.

In what follows, we lay out the relevant data from English, and discuss its implications; we include as well a discussion of our methodology and necessary analytic assumptions.

2. Data: *babysit*

What makes babysit of interest regarding the interrelationship of AS and meaning is its occurrence in two particular syntactic frames,[1] one with and one without a preposition, importantly, with no discernible difference in meaning between the two variants:

(1)   a.   Kim babysat little Robin.
        b.   Kim babysat for little Robin.

The sentences in (1) both describe the same event. Moreover, the identity in meaning of the two variants is demonstrated by the sentence in (2), in which there is an internal contradiction in the sentence inasmuch as the same action is being stated as having occurred and having not occurred:

(2)   *Kim didn't babysit little Robin but rather babysat for little Robin.

In this regard, babysit is unlike other verbs occurring with prepositional and nonprepositional syntax, such as shoot and shoot at, as given in (3):

(3)   a.   Robin shot Kim with the paintball gun.
        b.   Robin shot at Kim with the paintball gun.

Example (3a) can carry with it the implication that Robin not only shot at Kim but scored a hit as well, whereas (3b) means only that Robin launched a shot in Kim's direction. One could charac-

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[1] See section 3 for discussion of other frames for *babysit*.

terize this difference in meaning as a difference in the degree of affectedness,[2] in that Kim is more seriously affected by Robin's action in (3a) than in (3b). Moreover, (4) is acceptable, unlike (2), showing that there is a difference in meaning between the sentences in (3):

(4) Robin didn't shoot Kim but rather shot at Kim.

A key fact about *babysit*, as developed in greater detail in section 3, is that the nonprepositional syntax of (1a) is the innovation, and is predated by the prepositional syntagm of (1b).

3. Methodology
In this investigation, we have drawn on three corpora to provide the basic data for the verb babysit, namely, the Corpus of Contemporary American English (COCA, 1990-2015), the Corpus of Historical American English (COHA, 1810-2009), and Google Books (GB, 1500s-2000s). We have checked these data against the Oxford English Dictionary (OED), particularly for providing roughly the dates of first attestation. We examine several model cases of babysit in spoken and written context, drawing, of necessity, given the origin of the verb, from relatively shallow diachrony; we focus on argument structures that have emerged in the 1940s and 1950s and continue until the present day. In accordance with the research aims stated above, we examine only those cases of the word babysit that display a change in AS but not in meaning. Specifically, we look at the nonprepositional use of *babysit*, e.g. (1a), and the use of *babysit for* followed by an object that names the entity being taken care of, e.g. (1b). We thus omit those usages of *babysit* that are fully intransitive, e.g. *Kim babysits every weekend to earn extra money*, and those in which *babysit for* names the beneficiary of the babysitting rather than the entity taken care of, as in *Kim babysits for Mrs. Jones every weekend.* For the sake of clarity, we refer hereafter to the nonprepositional frame as 'transitive *babysit*', the prepositional nonbenefactive frame as 'prepositional *babysit*', the prepositional benefactive frame as 'benefactive *babysit*', and the intransitive frame as simply 'intransitive *babysit*'.

It is worthwhile to first examine, in brief, the development of the lexeme, before moving on to the discussion of the specific AS constructions we are interested in. The noun form babysitter is apparently the first of this lexical group to appear (GB, *baby sitter* [1924][3]; OED, s.v., *baby sitter* [1937]; COHA, *babysitter* [1948]), with the verb *baby sit* (spelled variously as *babysit*, *baby-sit*, and *baby sit*) emerging as a back-formation as early as 1944 (GB, *babysit*[4]). It seems that the verb babysit first appeared as an intransitive verb, with the babysit for construction appearing around the same time but only with a benefactive sense. In other words, babysit could have only one argument, the subject/agent, at this early stage in its development.[5] Prepositional babysit, in which *for* is followed by the object being babysat (usually children) develops a few years after intransitive babysit and benefactive babysit. By the mid-1950s, we see sentences such as that in (5):

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(5)   Mr. Paul had asked me if I would **babysit for** a one-year-old. (GB: 1955[6])

This pattern is not as well instantiated as the competing intransitive and benefactive construc-
tions until the 1990s, though it gains in popularity in the 1970s and 1980s and accordingly is rep-
resented more robustly in the corpora from the 1980s on.

        The OED claims 1946 as the earliest attestation of intransitive babysit. This general date
(1940s) for intransitive usages of the verb is supported by the evidence from COHA and GB.
Transitive *babysit* appears a few decades later: OED cites the first transitive use in 1962,[7] GB in
1966,[8] and COHA in 1967.[9] Thus, as early as the 1960s the verb babysit has a variety of possible
argument structures, ranging from a single argument (the subject/agent) on one side, to two full
arguments (the subject/agent and the object/patient) on the other, with the two different adjunct
structures – benefactive-babysit and prepositional-babysit – as optional possibilities.

        While the four argument and adjunct structures just mentioned are interesting – and possi-
bly significant, in that they may provide the context in which the relevant relationship of AS and
semantics developed – we are here concerned only with the two possible ASs which bear the
same meaning, namely transitive babysit *NP,* as in (1a), and the synonymous prepositional
babysit for NP, as in (1b). As the simple timeline laid out above makes clear, the verb babysit
developed over time with different argument structures but, significantly, without any concomi-
tant change in semantics. Indeed, the two ASs that were beginning to be possible for babysit in
the 1960s remain as possible variants for the American English speaker at the present time, again
with no corresponding distinction in meaning.

4. Analysis
Crucial to our account of what is going on with *babysit* and the question of the interrelationship
of AS and meaning is finding and utilizing a reliable way of telling arguments from nonargu-
ments. To identify subject arguments in English, there is potential evidence from verb agree-
ment, as well as other tests, such as Subject-Auxiliary Inversion in yes-no questions and Tag
Question Formation. However, our focus is on nonsubject arguments, nominals that occur within
a verb phrase that are governed by the verb. These nonsubject arguments signal a true participant
— a truly affected party — in an action, and are not simply adjuncts added on to modify a verb.
This turns out to be a nontrivial issue as far as nonsubjects in English are concerned, as it is not
just a matter of looking for a postverbal nominal. That is, there can be "unsubcategorized ob-
jects" (Fanego & Bouso 2015) that appear to occupy argument slots in the superficial syntax, but
are not part of the subcategorization frame (i.e., argument structure) for a verb; an example of
such a type is the so-called cognate accusative construction, as in a verb phrase like *sleep a trou-
bled sleep*, since it describes an intransitive event (of sleeping) despite having an apparent argu-
ment object.

        Thus, to help in the identification of object arguments, we follow Perlmutter & Postal 1983
and Lavidas 2014 in looking at passivization evidence. That is, if a bare, i.e. prepositionless,

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[6] *Illinois English Bulletin* 43 (1955): p. 9.
[7] *Popular Science.* Feb. 122. "Electronics will, if you choose, open and close your garage door, baby-sit a slumber-
ing child."
[8] US Congress, Senate. Committee on Banking and Currency. Subcommittee on Securities. *Interstate Land Sales
Full Disclosure Act: Hearings...Eighty-ninth Congress, second session, on S. 2672.* U. S. Govt. Print. Off., 1966: "In
line with his belief that the state shouldn't babysit purchasers, Jensen emphatically states the purposes and limita-
tions of Oregon's law" (p. 343).
[9] *Hall of Mirrors* (Fiction). "They must have sent you down to Lester for him to baby-sit you".

postverbal nominal with an active verb can correspond to the subject of a passive verb, we can consider it to be a direct object and part of the (subcategorized) argument structure associated with that verb.

The importance of the identification of object arguments to our program comes from the fact that we are interested in seeing what the diachronic relationship of argument structure to meaning is, and that requires that we know if the argument structure has changed. Accordingly, we look to Passivization as a way to determine when a verb shows evidence of an argument structure change involving the emergence of an object argument.

5. More diachronic corpus data and its import

In keeping with our agenda as laid out in section 4, we examined the corpora for the occurrence of passive examples. The earliest instance to appear is the following, from 1962:

(6)   Fred Miller, one of the flock of "war babies" of World War II, was nursed
         before a seven-inch television set, toddled and **was babysat** before a
         fourteen-inch television set …   (*The Hungry Eye* (p. 12), by Eugene Paul
                                                                 (New York: Ballantine Books)) (GB)

This passive example indicates that what we have called 'transitive *babysit*' really is transitive, with the postverbal NP as a direct object; the AS for transitive *babysit*, therefore, is bipartite, with *babysit* in this sense being a two-place predicate. Given that the earliest occurrence of transitive *babysit* is 1962 (see footnote 7), the change in AS, giving a true direct object, seems to have occurred virtually simultaneously with a change in the presence versus the innovative absence of *for*, since the postverbal NP is available for Passivization. Importantly, though, this change in argument structure did not occasion a change in meaning, since (1a) and (1b) are synonymous, as argued above. Thus, a change in AS does not necessarily bring about a change in meaning.

In this regard, *babysit* can be compared and contrasted with *graduate*, another verb which occurs in a prepositional and a nonprepositional frame, as shown in (7):

(7)   a.   Robin graduates Ohio State in August.
         b.   Robin graduates from Ohio State in August.

As with *babysit*, the sentence-types illustrated in (7) appear to be synonymous; note that (8) is internally contradictory, as would be expected if (7a) and (7b) had the same meaning:

(8)   *Robin doesn't graduate Ohio State in August but rather graduates from Ohio State in
         August.

An interesting difference between *babysit* and *graduate*, however, is that the postverbal NP with *graduate* is not a direct object; as shown in (9), Passivization is impossible:

(9)   *Ohio State is graduated by Robin in August.

In our terms, then, the sentence-type for graduate in (7a) is not transitive, and the verb in that frame is a one-place predicate, with only a subject argument; *Ohio State* in such a frame is an adjunct, admittedly one not overtly marked as such by a preposition, somewhat like bare-NP adverbials such as *Tuesday* in (10):

(10)   Tuesday, Robin graduates from Ohio State.

The change with *graduate*, then, is merely a change in the marking of an adjunct and not a change in AS; that there is no change in meaning is perhaps expected, given the close, but not deterministic, relationship between AS and meaning.

As long as we are examining *babysit* diachronically, we can speculate that whatever process allows for the elision of a preposition with *graduate* may have been at work with *babysit*, and that *babysit* went through a stage in which the bare postverbal NP was not a direct object, and not part of the argument structure. That stage, however, would have to have been very brief or even nonexistent, to judge from the evidence of the (near-)simultaneity — both first attested in 1962 — of the emergence of transitive *babysit* and the passive construction.

One can further speculate that the benefactive *babysit* construction made it possible for the prepositional *babysit* frame to emerge, in a certain sense "priming" users to interpret it that way. That is, the fact that *for* could be used in the benefactive sense might have allowed an interpretation where it was referring to the entity being taken care of. The broad possibilities for construing the notion of "on behalf of", as a rendering of the benefactive sense, show that; if I babysit on behalf of someone, it could equally well refer to anyone who benefits from my involvement, thus the baby as well as the parents. Such a scenario would entail a change in meaning, an extension of the meaning of *for*, but no change in AS until the entity being cared for truly became an argument.

6. Some caveats

Our account rests on a number of assumptions and methodological decisions, all of which are reasonable in and of themselves, but which admittedly leave us open to questions as to the consequences of doing things differently. Thus we address here some of the possible criticisms that might be leveled at our analysis.

One of the potentially problematic aspects of the methodology here employed lies in the corpora and corpora-search tools at the researchers' disposal. The underlying issues are not unique to this investigation, but rather belong in large part to any foray into well-attested words in shallow diachrony. While admirable and indispensable tools, GB and COHA (the most heavily relied on corpora in this study and the two biggest corpora for contemporary American English) have their blind spots. GB for American English, drawing on some 155 billion words and thus the largest of any corpus to date, has bibliographic problems that make dates, and especially first attestations, potentially unreliable. To take one of the examples from above as an illustration, sentence (5) from section 3 comes from volume 43 of *Illinois English Bulletin*. The search result obtained by searching *babysit for* in GB pulled this example up, claiming that it came from 1955. The "snippet" of text below the entry in the line-up of hundreds of entries containing *babysit for* included the relevant construction that we were searching for.

In this case, the data we found seemed genuine in that the relevant magazine volume really was from 1955 and that the snippet really was a quotation from the 1955 text. In other examples, we were not so fortunate. For instance, the year that GB associates with the text may not belong to the utterance itself, but rather to the year the magazine/journal/series was established. When one follows the link, one may find that the entry has no bibliographic information beyond a title, a year, and a short bit of text, and no links to more complete bibliographic information are available. The researcher then is at an apparent dead-end with that particular attestation. It may also be the case that the GB snippet is not in fact a section of text excerpted from the original text but a précis assembled by some later editor or writer. It is, at times, impossible to tell the difference between genuine and interpolated text.

Naturally, those cases that could not be verified as genuine were discarded from the present study. But it is possible that some genuine data was discarded in error. For this reason, the first attested dates for the constructions given above are intended as "ball-park" estimates, meant to provide relative dating for which constructions appear first, rather than absolute dates for first attestations.

Despite the powerful and nuanced tools available for searching GB and COHA developed by Mark Davies and his team at BYU, there are, inevitably, some kinds of searches that have to be carried out by hand. As such, these searches may miss important data. As outlined above, variants of *babysit* have to be searched for individually, including those spelled as two words (*baby sit*), with a hyphen (*baby-sit*), in different verb forms (*babysat, babysitting*), and combinations of the above. It is possible, then, that some significant example is missing from our searches.

Because of the difficulties with the corpus searches discussed above, specifically with the examples that needed to be discarded, it may be the case that the relative chronology for the development of *babysit*'s AS is not entirely correct. For instance, it is possible that the *babysit for NP* construction was more robust in the early stages of its development (1940s-50s) or that it was a contemporaneous development with the fully intransitive use of *babysit.* While we acknowledge that this is a possibility, one which further research on the issue may illuminate, we maintain that a revisionist chronology does not diminish our central argument. In other words, whether the two-place predicate post-dates or co-exists with the one-place predicate, the point still stands that both structures exist simultaneously at the later stages of its development (1980s-2000s) with the same meaning and thus the emergence of one or the other, at whatever point in the 20th century, has something to say about AS and meaning, given the full synonymy of certain of the variants.

In this investigation, we have made certain assumptions about what constitutes an argument as opposed to an adjunct. These assumptions are closely tied to the assumptions we make about the means of testing whether a postverbal NP is a true direct object, namely, the passivization test. The objection may be raised that what we have here considered two different ASs — (a) the prepositional frame *I babysit for NP* being a one-place predicate with only a subject and an adjunct, and (b) the transitive *I babysit NP* being a two-place predicate with a subject and an object argument — both have, in fact, two-place argument structures. In such a conceptualization, the essential argument structure of (a) and (b) in diachrony does not change except in its surface realization; where the one has a bare postverbal NP (direct object) as an argument, the other has a prepositionally marked phrasal postverbal NP as an argument. This differs from our conceptualization of the issue in that we suppose that the prepositional type bears an adjunct rather than an argument status, so that there was the change in AS from a one-place to two-place predicate with the elision of the preposition.

While we acknowledge that the opposing conceptualization is a reasonable interpretation, we maintain that proponents of such a position would need to come up with an explanation for the early and still robust use of the intransitive *babysit.* If both (a) and (b) are arguments with different surface realizations, are they then to be considered "optional" arguments? Since the verb *babysit* is first attested as intransitive, the proponent of the "both are arguments" view would need to grapple with the thorny issue of how an intransitive verb developed optional arguments, rather than the usual direction of change, in which fully-fledged bare-NP arguments become "submerged" as optional arguments (e.g., *Robin cleaned the house* vs. *Robin cleaned,* with "the house" as an optional argument).

Some may contend that the passivization test used to determine true direct objects is flawed or incomplete, especially because passivization can apply to nonarguments, as in cases like *The bed was slept in*. We acknowledge the problem here but would suggest that it may be more a problem for the proper account of such "prepositional passives" than full counter-evidence to our use of passivization to identify direct objects.[10] We note that a sentence like **Little Robin was babysat for by Kim last night*, a prepositional passive based on our preposi-tional *babysit* type, strikes us as being of questionable acceptability. Thus we would challenge those contenders to produce a more effective test that better accounts for the status of direct objects than passivization.

7. Future research directions

It might well be expected that *babysit* is not the only lexical item in American English currently involved in a change in argument structure without a concomitant change in semantics. In fact, there are several verbs that appear to show innovative usages that could develop — or are al-ready developing — transitive structures with proper direct objects. In some instances, these di-rect objects develop out of prepositional adjuncts. We identify three verbs that may be undergo-ing AS changes similar to that discussed for *babysit,* namely, *rock, shred, pee.*

(11) a. Jordan rocked.
      b. Jordan rocked that blouse.

(12)   a. The rockstar shredded.
       b. The rockstar shredded that song.

(13) a. Alex peed in his/her pants.
      b. Alex peed his/her pants.

In each of these examples, the innovative construction (11b, 12b, 13b) includes a bare postverbal NP affected entity, presumably an argument, in the form of a direct object. The constructions from which these derive are composed of either intransitive verbs (11a, 12a) or of a verb that takes a prepositional adjunct (13a).

While the change in argument structures in (11)-(13) resembles that of *babysit* as we laid out above, there are some possible differences in meaning. In (11), the intransitive construction in (a) is not necessarily synonymous with the type in (b), as proven by the negation test:

 (14)   Jordan did not rock, but rather Jordan rocked that blouse.

Thus, it is possible that Jordan did not rock in a general sense (e.g., *Jordan did not rock at the party,* or *Jordan did not rock at his/her last concert*), but did "rock" in the specific sense of 'to look great in a specific item of clothing or apparel' (*Jordan rocked that blouse*). While difficult to assess using GB or COHA/COCA because of the high frequency of *rock* in a variety of mean-ings, our sense is that *to rock* in a general sense chronologically precedes the more specific form *to rock (an item of clothing)*. The change in AS, then, may be less a matter of different AS but the same meaning than it is an addition of an argument that narrows (and thus changes) the meaning.

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[10] We suggest that the notions of "affectedness" and "obliqueness" mentioned in section 2 (and cf. footnote 2) may be relevant to the proper characterization of these constructions; we note that **New York was slept in* is ungrammat-ical, a city being less affected by someone sleeping there than a bed would be.

In example (12), like (11), it first appears that the meaning is more restricted in the construction that contains a two-place predicate (12b) than in the intransitive construction with a one-place predicate (12a). However, while the semantics in (12b) may appear to be slightly narrower – 'shredded' generally vs. 'shredded a particular song' specifically — the case actually differs somewhat from (11) in that the general verb *to rock* can be used in many different contexts with many different meanings (e.g. *Jordan rocked at the concert, Jordan rocked at the final, Jordan rocked at the donut bake-sale competition*, etc.), while the intransitive verb *to shred* has a very limited semantic range (meaning either 'to chop up very finely' or 'to strum the guitar strings very quickly and rhythmically in a solo performance'; these can be considered homophonous pairs rather than subdefinitions of the same lexeme). Thus, it may be argued that (12a) and (12b) do not actually differ in meaning, since the only possible argument of *shred* in this context is *song* or some synonym of *song.* Moreover, (12a) and (12b) cannot pass the Negation test and so must be considered to describe the same event.

Whether (11a) and (12a) are semantically distinct from (11b) and (12b) is arguable, and future investigations into the finer points of the AS-semantic relationship should yield interesting results. The final example (13) of the three sentence sets given above provides, at least to the sensibilities of the researchers, a case in which distinct semantic differences are more readily apparent. In (13a), the meaning of *to pee in one's pants* is distinguishable from that of (13b) *to pee one's pants*, specifically in degree of affectedness. To *pee in one's pants* connotes a lesser degree of affectedness (i.e., less urine is involved) than in the construction, *to pee one's pants,* which connotes a higher degree of affectedness (i.e., more urine is involved, and perhaps the bladder has been entirely emptied in the process). Until a more thorough chronological investigation has been done, we cannot say for certain how this distinction in meaning relates to argument structure (the adjunct *in one's pants*, as opposed to the bare-NP argument *one's pants*); but preliminary results of the study indicate a strong possibility that the two constructions coexisted at some point in time, and that they were synonymous (that is, not differentiated by degree of affectedness).

It is interesting to note, however, that despite the strong similarities between the apparent chronological development of the AS from one-place to two-place predicates in (11)-(13) and the development AS in *babysit,* the bare postverbal NP of (11)-(13) do not pass the Passivization test and cannot be considered true direct objects. Thus, (15), (16), and (17) are currently ungrammatical in American English:

(15)   *That blouse was rocked by Jordan.

(16)   *The song was shredded by the rockstar.

(17)   *His/her pants were peed by him/her.

The fact that the postverbal NP arguments are not direct objects at this point leads us to theorize that these constructions are in flux, and may progress to the point where the arguments will eventually come to be true direct objects, in keeping with one account of the pattern established by *babysit.* Transitive *babysit* seems to show simultaneous change, in that it develops a true direct object at the same time as it elides the preposition in prepositional *babysit,* as the chronology of the transitive form and passive would seem to suggest (see footnote 7 and example 6). However, the verbs in (11)-(13), as well as *graduate* in (7), would indicate that the elision of a preposition does not necessarily in itself signal a change in argument structure. It will be a task for further research to try to differentiate verbs like *babysit* from those like *graduate*.

Beyond these lexical items from the relatively shallow diachrony of English, we propose that there are several related verb sets from the deeper diachrony of English that may provide further evidence for the kinds of changes we observe with *babysit.* These, namely *promise, threaten, fail,* and *prove,* have multiple AS frames associated with multiple meanings. We tentatively suggest that the AS of these words, each more deeply embedded in the history of the language, may have followed similar patterns of change and stasis in AS and meaning over the course of their development as *babysit.* Consider the following examples:

(18) a. There threatened to be a storm.   (Intransitive)
       b. The workers threatened a strike.   (Transitive)
       c. The workers threatened to strike if their
            demands were not met.   (Transitive + sentential complement)

(19) a. There promises to be a fight on the floor
            of the convention.   (Intransitive)
       b. Robin promises good service.   (Transitive)
       c. Robin promises to be home on time.   (Transitive + sentential complement)

(20) a. There failed to be a consensus at the meeting.   (Intransitive)
       b. Kim failed the test.   (Transitive)
       c. Kim failed to arrive on time   (Transitive + sentential complement)

(21) a. Jordan proved to be a conscientious driver.   (Intransitive)
       b. Jordan proved the yeast.   (Transitive)
       c. Jordan proved to be the best candidate.   (Transitive + sentential complement)

With this group of lexical items, we ask whether it is possible to establish a comparable diachronic development amongst the variants in each set, and whether changes in AS preceded or followed changes in meaning. We leave this as an open question at this point, to be resolved by corpus work into the chronology of the emergence of each of these variants.

We therefore see the diachronic examination of the relationship between argument structure change and meaning change to be a fruitful research area, and the resources available in English make it an especially appealing language in which to pursue this line of investigation.

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