

Beth Levin & Malka Rappaport Hovav, *Argument realization* (Research Surveys in Linguistics). Cambridge: Cambridge University Press, 2005. Pp. viii + 277.

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In the last decades, an important body of research has been amassed with the aim to derive as much as possible about the syntactic realization of a verb's arguments from the verb's semantic properties. *Argument realization* organizes and presents this wealth of information objectively and critically in a book that can either be read from cover to cover or be used as reference to find out about specific topics. Levin & Rappaport Hovav (henceforth L&RH) identify the major empirical issues that are addressed by theories of argument realization and present and discuss the theoretical proposals that have been made to account for these issues.

The first part of the book discusses theoretical proposals for representing the grammatically relevant facets of verb meaning. Chapter 1 presents 'Challenges for theories of argument realization', while chapters 2–4 review various forms of lexical semantic representation. Chapter 2 considers 'Semantic role lists'; chapter 3, 'Current approaches to lexical semantic representation', is devoted to generalized semantic roles and predicate decomposition; and chapter 4 looks at 'Three conceptualizations of events' (localist, aspectual, and causal). The second part of the book

explores issues relating to the correspondence between the semantic and the syntactic representation of arguments. Chapter 5 addresses theories of ‘The mapping from lexical semantics to syntax’; chapter 6, ‘Thematic hierarchies in argument realization’, discusses the properties of a thematic hierarchy and its use in theories of argument realization; and chapter 7 is concerned with ‘Multiple argument realization’ (the ability of a verb to appear in a variety of syntactic contexts), including phenomena of argument alternation, i.e. the alternate expression of arguments. Finally, chapter 8, ‘Postscript’, summarizes the results.

There are many thought-provoking and enlightening discussions in this book. Rather than enumerating them and providing critical observations, I will explore one idea in this book in greater detail and use it as a starting point for the analysis of some of the empirical data given in the book. The idea in question concerns the need to distinguish the lexical entailments that a verb imposes on a particular argument from the choice of ‘filler’ for that argument.

Fillmore’s (1968) subject-selection rule, according to which the agent is the first choice for subject, the instrument is the second choice and the theme or patient is the third choice, was motivated by data such as (1) and (2).

- (1) (a) The door opened.

- (b) John opened the door.
 - (c) The wind opened the door.
 - (d) John opened the door with a chisel.
- (2)
- (a) *The door opened with the wind.
 - (b) *The door opened by John.
 - (c) *The chisel opened the door by John.

The examples above seem to indicate that a patient cannot be a subject in the presence of an agent, instrument or natural force, and that an instrument or natural force cannot be a subject in the presence of an agent, which is exactly what Fillmore's rule predicts. However, verbs like *open* are not polysemous in having one semantic representation with an agent, instrument and patient, one with a natural cause and a patient, another one with an instrument and a patient, and yet another one with only a patient. Such verbs are polysemous between an inchoative change-of-state interpretation, illustrated in (1a), and a causative interpretation, illustrated in (1b–d). A polysemy that is systematic and, at least partially, predictable. In the causative interpretation, the verb takes a cause and a patient argument and does not place any further requirements on the cause argument (such as animacy or volitionality). Consequently, as stated by L&RH (177), the cause argument can be 'filled' by agents, instruments, or natural causes. Accordingly, there is no actual argument alternation in (1b–d). The fact that

the cause is normally interpreted as an agent in (1b) and (1d), as a natural cause in (1c), and as an instrument in examples like *The chisel opened the door*, merely reflects the range of entities that can qualify as causes; that is, the cause argument can be filled by a variety of types of entities. According to L&RH, the alternation in argument fillers in (1b–d), which may be called ‘filler alternation’, falls outside the domain of argument realization. (Note that in order to explain the ungrammaticality of the examples in (2), we need on the one hand to assume that a cause argument is a preferred choice of subject over a patient, thus accounting for (2a) and (2b), and, on the other hand, to postulate constraints on the use of oblique expressions. Thus, (2b) and (2c) are ruled out by the inability of an oblique phrase to express an agent.)

L&RH’s idea opens the way for analyzing many phenomena that have fallen under the rubric of argument alternation as instances of filler alternation and therefore outside the scope of a theory of argument realization. Two such phenomena are the *with/against* alternation and the possessor-attribute factoring alternation, which are both discussed as instances of argument alternations in L&RH.

The *with/against* alternation, as in example (3), originally studied by Fillmore (1970), occurs with verbs of impact, such as *hit*, *slap*, *strike*, etc.

- (3) (a) John hit the fence with a stick.

(b) John hit the stick against the fence.

The sentences in (3) are claimed to be paraphrases of each other. That the alternation illustrated is restricted to the class of verbs of impact can be verified by replacing the verb *hit* in (3) by a causative change-of-state verb like *break*, which has the consequence that the resulting sentences are no longer paraphrases of each other. If the alternation in (3) is to be handled by a theory of argument realization, it would imply that the verb *hit* has three arguments: an agent, an instrument and a location (or surface). The argument alternation would consist in either having the location be the object and the instrument an oblique, as in (3a), or having the instrument be the object and the location an oblique, as in (3b).

Although L&RH do not actually propose an analysis of the *with/against* alternation, they implicitly assume that it qualifies as an argument alternation. However, treating it as an argument alternation is unenlightening and counterintuitive, given that the oblique phrases in this alternation would normally be analyzed as adjuncts. The instrumental *with*-phrase in examples like (3a) is clearly optional; and although the locative *against*-phrase seems to resist omission if the object is to be interpreted as an instrument in examples like (3b), it becomes omissible when certain pragmatic conditions hold, such as likelihood of the object to suffer pain, as in *He hit his head (against the wall)*. Moreover, these oblique phrases pass

the VP-ellipsis and *do-so* tests for adjuncthood (cf. *John hit the fence with a stick and Pete did so with a bat* and *John hit the stick against the fence and Pete did so against the gate*). Analyzing the alternation in (3) as an argument alternation would force us to treat the oblique phrases as arguments rather than as adjuncts.

The alternative is to assume that the *with/against* alternation is another case of filler alternation. Suppose that verbs of impact like *hit* impose little restriction on their second argument (with the first argument, i.e. the entity that inflicts impact, being some kind of immediate cause or effector). All that verbs of impact require is that the second argument be entailed to receive an impact. How it receives the impact is of no concern to the verb. Thus, the second argument can be a non-moving entity that receives an impact through the intervention of a moving object, in which case the moving object may be expressed as a *with*-phrase, as in (3a). Alternatively, the second argument can be an object that receives an impact by being moved against a fixed surface, in which case the surface may be expressed as an *against*-phrase, as in (3b). In this analysis, all that we need to do is spell out what kind of semantic relations the various prepositional obliques can express, which is something that needs to be done even when treating the *with/against* alternation as a case of argument alternation. (An explanation why certain verbs of impact, such as *clubber*, *club*, *punch* and *spank*, do not take part in the alternation that we find with *hit*, *bang*, *beat*,

bump and *kick* might proceed by suggesting that the former differ from the latter by imposing further entailments on their second arguments.)

Another alternation that seems to lend itself to an analysis as a filler alternation is what L&RH call the possessor-attribute factoring alternation, which is illustrated in (4) (L&RH's example (74), 232).

- (4) (a) Tony admired them for their integrity.
 (b) Tony admired the integrity in them.
 (c) Tony admired them.
 (d) Tony admired their integrity.

If we wanted to analyze this alternation as an instance of argument alternation, we would have to assume that a verb like *admire* takes two arguments in addition to the experiencer: (i) the attribute or quality that is the object of admiration and (ii) the possessor of that attribute. This claim goes against the assumption that the oblique phrases in (4) are adjuncts. As in the previous case, the oblique phrases have the expected properties of adjuncts, such as optionality and the fact that their preposition is semantically predictable. The *for*-phrase in (4a) behaves as an adjunct with respect to the VP-ellipsis test (*John admires them for their integrity, but I do for their ambition*); and the *in*-phrase in (4b) is not even a syntactic dependent of the verb, but a modifier of the noun *integrity* (cf. *The integrity*

in them is what I admire). As adjuncts, these phrases have a predictable meaning. While the *for*-phrase is a cause (*I invited them for their money; I chose her for her simplicity*), the *in*-phrase is a location (*the main claim in the book*).

If we treat the alternation in (4) as a filler alternation, all we need to assume about *admire* is that it takes two arguments, and that the object is a thing, whether abstract or concrete. If the object is filled by an abstract entity, i.e. a property, we may want to specify who has this property by means of a possessive element, as in (4d), or a locative phrase, as in (4b). If the object is realized as a concrete entity, we may want to specify the reason for the admiration by means of a *for*-phrase, as in (4a).

It is possible to extend this kind of analysis to the locative alternation (cf. (5)), which is one of the paradigmatic cases of argument alternation.

- (5) (a) Pat sprayed paint on the wall.
 (b) Pat sprayed the wall with paint.

Let us assume that the event structure (the grammatically relevant semantic representation of events) of verbs of the *spray/load* class includes only two arguments: (i) the argument of the cause subevent (the causer) and (ii) the argument of the result state subevent. All that the verb requires is that the second argument be an incremental theme, which gets expressed as the

object. No restrictions are imposed as to whether the incremental theme must be interpreted as the substance that undergoes movement or as the location that this movement targets. This proposal makes use of L&RH's idea (based on Grimshaw 1993 and developed by Rappaport Hovav & Levin 1998 and Levin 1999) that not all of the participants associated with a verbal root need to be associated with argument positions in the event structure (168). As argued for by Dowty (1991) and Jackendoff (1996), in each variant of the locative alternation, the direct object is that variant's incremental theme (104). Each verb in the *spray/load* class imposes different entailments on its root participants (for example, what happens to the substance participant of *spray* is not the same as what happens to the substance participant of *splash* in both variants of the locative alternation), but these entailments are not grammatically relevant and thus are not part of the event structure.

If the *spray/load* class of verbs has only two argument positions in its grammatically relevant lexical semantic representation, the locative alternation illustrated in (5) reduces to a filler alternation. If the expression that is chosen as the filler of the incremental theme argument and therefore as the object is construable as a substance, we have the locative variant (5a); if it is construable as a place, we have the *with*-variant (5b). This allows us to treat the oblique phrases in the locative alternation as adjuncts,

accounting for their optionality, their semantic predictability, and their behavior with respect to VP-ellipsis and cooccurrence with *do so*.

Clearly, the idea of accounting for certain alternations as filler alternations, particularly in the case of the locative alternation, may need to be developed further. But the germ of the idea is in L&RH, even though the authors themselves do not apply this idea to the analysis of the three alternations just discussed. What this review hopes to have shown is that the book does not only review existing research, but will no doubt also spark new ways of analyzing the rich and complex phenomena that form the domain of *Argument realization*.

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