THE LEXICAL SEMANTICS OF UNACCUSATIVITY AND ARGUMENT REALIZATION

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1. Introduction

The book under review, which is a joint work by Levin and Rappaport Hovav (L&RH hereafter), provides a detailed examination of phenomena falling under the name of 'unaccusativity.' Since the introduction of the unaccusative hypothesis by Perlmutter (1978), a number of different views, semantic or syntactic, have been presented in the literature. In their book, L&RH advocate a syntactic view, and advance the claim that while the unergative-unaccusative distinction is correlated with verb meanings, unaccusativity is determined on the basis of D-structure representation.

In this review article, we will examine some of L&RH's arguments, and look into the question of whether or not we can maintain the main thesis that "unaccusativity is semantically motivated but syntactically represented (p. 21)." In the discussion, we will argue that the unergative-unaccusative dichotomy of verbs can be accounted for on the basis of their lexical meanings, rather than D-structure configurations, and that there is no strong empirical motivation for representing unaccusativity syntactically. Furthermore, we will point out a number of problems with L&RH's linking rules, and propose an alternative which dispenses with the ordering of linking rules.

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The discussion proceeds as follows. Section 2 shows that the behavior of the resultative construction can be defined by way of the lexical semantic representation of a verb, rather than by its syntactic configuration. Section 3 is devoted to the discussion of problems on the ordering of L&RH’s linking rules, and proposes a reformation of the linking rules. In Section 4, we will discuss problems with L&RH’s claims on causative alternation and meaning shifts as well as some other issues. The conclusion is presented in Section 5.

2. The Resultative Construction

L&RH put forward the claim that the distinction between unergatives and unaccusatives should be represented in syntax. One of their strongest arguments comes from the behavior of resultative clauses. In Chapter 2, L&RH advance the claim that their distribution is governed by the Direct Object Restriction (DOR). The DOR states that a resultative phrase may be predicated of the immediately postverbal NP, i.e. a direct object, but not of a subject or of an oblique complement.\(^1\) L&RH argue that if it is assumed that the DOR applies at D-structure, the important generalization pertaining to the resultative construction can be characterized.

The basic patterns of the resultative construction are as follows: First, resultative phrases may be predicated of direct objects, but not subjects, of transitive verbs:

\[(1)\]
\[
\begin{align*}
\text{a.} & \quad \text{John pounded the metal flat.} \\
\text{b.} & \quad \ast \text{John pounded the metal tired.}
\end{align*}
\]

Second, resultative phrases cannot be predicated of oblique arguments:

\[(2)\] \ast \text{John hammered on the metal flat.}

Third, intransitive verbs are divided into two classes, unergatives and unaccusatives. The unergative class of verbs allow resultative phrases to be predicated of their single arguments, but the unaccusative class of verbs do not:

\(^1\) L&RH note that the postverbal NP which a resultative phrase can be predicated of may not necessarily be analyzed as a direct object. But in the present paper, for the sake of simplicity, we will use the term ‘direct object’ to characterize the particular behavior of the resultative construction.
(3) a. The river froze solid.
b. *Dora shouted hoarse.

Unergative verbs can appear in the resultative construction if they have non-subcategorized NPs in their direct object positions:

(4) a. Dora shouted herself hoarse.
b. Sylvester cried his eyes out.

Non-subcategorized NPs that appear with unergative verbs may be either reflexive pronouns or full nouns. In contrast to this, unaccusative verbs are never allowed to appear with non-subcategorized NPs:

(5) *The snow melted the road slushy.

Although the level of D-structure is a theoretical construct which often cannot be directly detected by the surface strings, L&RH claim that the fact can be explained on the assumption that D-structure direct objects are the sole target for resultative phrases.

If the restriction on resultative predication is solely derived from the DOR, we would expect that resultative phrases may be predicated of all and only D-structure direct objects. However, not all D-structure direct objects are capable of appearing in the resultative construction. For one thing, verbs of inherently directed motion are incompatible with resultative phrases, as in (6):

(6) *Willa arrived breathless.

The verb arrive is a bona fide unaccusative predicate, but the sentence in (6) cannot mean that Willa became breathless as a result of arriving. For another, resultative phrases cannot be predicated of the arguments of stative predicates (cf. Rapoport (1993)):

b. *Medusa saw the hero stiff.

Since the syntactic constraint of the DOR is unable to handle these facts, L&RH attempt to account for them by positing some semantic constraints: To account for the unacceptability of (6), L&RH claim, adopting Tenny’s (1994) ‘delimitedness’ condition, that since the verb is lexically delimited by carrying a ‘change of location’ sense, it cannot be further delimited by a resultative phrase. L&RH’s account for the ill-formedness of the sentences in (7) is that since there is no such ontology as a ‘delimited’ state, encoded by a stative verb together with a resultative phrase, they are not interpretable.

The necessity of postulating semantic conditions on the resultative predication leads L&RH to conclude that a verb’s ability to occur in a particular syntactic configuration is a necessary, but not a sufficient,
condition. This entails that although the resultative construction may be sensitive to the DOR, a resultative phrase can be predicated of only a subset of D-structure direct objects.

At the outset, L&RH maintain the DOR as a constraint on the resultative construction, but later, the DOR is argued to be derived from the following Change-of-State Linking Rule:

(8) An NP that refers to the entity that undergoes the change of state in the eventuality described in the VP must be governed by (or must be the direct object of) the verb heading the VP.\(^2\)

The Change-of-State Linking Rule dictates that the arguments targeted by resultative phrases are projected onto direct objects.\(^3\)

Despite L&RH’s claim that the DOR follows from the Change-of-State Linking Rule, these two constraints clearly make different predictions. The DOR predicts that all D-structure direct objects should be subject to predication by resultative phrases. But the Change-of-State Linking Rule merely states that the potential targets are realized as D-structure direct objects. Since D-structure direct objects are not necessarily susceptible to resultative predication, it is not correct, to be strict, to say that the DOR is derived from the Change-of-State Linking Rule.

In spite of its initial appeal, L&RH’s analysis confronts serious difficulty in accounting for the fact that resultative phrases can be predicated of the single arguments of adjectival passives.\(^4\)

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\(^2\) Resultative phrases are VP internal elements, so that the state denoted by a resultative phrase must be part of the core eventuality described in the VP.

\(^3\) There are at least two kinds of indication that a non-subcategorized argument behaves just like an ordinary direct object. First, adjacency must hold between the main verb and a non-subcategorized NP:

(i) *John ran yesterday Nikes threadbare.

Second, the non-subcategorized argument can be passivized:

(ii) Nikes have been run threadbare.

These facts motivate a rule which maps an NP referring to an entity which undergoes a change of state into the direct object of the main verb.

\(^4\) The complement to verbs such as *seem, remain* and *feel* is a context in which an adjectival passive, but not a verbal passive, is allowed to occur. Cf. Wasow (1977).
(9) I remember feeling rubbed raw in the wake of Kent State.
A commonly held view for adjectival passives is that their internal arguments are externalized in the lexicon, and are directly mapped onto subject positions (cf. Levin and Rappaport (1986), Bresnan (1982), Wasow (1977)). If this is correct, the resultative phrase in (9) must be successfully predicated of a non-derived subject.

The same problem arises in the middle construction, since the middle construction can also be assumed to involve the externalization of a direct internal argument in the lexicon (see Carrier and Randall (1992) and Fagan (1988)):5

(10) Metal pounds flat easily.
The acceptability of (10) also shows that a resultative phrase is capable of targeting an externalized argument which is directly linked to a subject position.

These facts are clearly at variance with L&RH's analysis, since, in both cases, the resultative phrase is taken to be predicated of a non-derived subject. This shows that the correct mapping relation cannot be properly characterized by their Change-of-State Linking Rule. L&RH note this type of problem very briefly, but no solution is offered.6

Since the resultative predication of a non-derived subject is possible when a lexical rule of externalization is invoked, the distribution of the resultative construction can be better characterized at the level of argument structure.7 Thus, we propose the following reformulation of the Change-of-State Linking Rule:

(11) The argument of a predicate that refers to the entity undergoing the change of state described by that predicate must be its direct internal argument.

5 A different view, which is taken by Keyser and Roeper (1984), is that the middle construction involves syntactic NP movement. In this analysis, it is difficult to explain the fact that the middle construction displays a distribution identical to the adjectival passive construction.
6 It is possible to say that a direct internal argument is mapped onto the direct object position of the verb even when it is externalized by a lexical rule. Carrier and Randall (1992) implement this idea, but this analysis faces a problem in explaining why an externalized argument must be linked to a direct object position.
7 L&RH regard the relation between argument structure and the D-structure representation as being trivial, but it is clear from our discussion that this cannot be true.
The rule in (11) is a lexical rule which relates lexical semantic representation to argument structure rather than to syntax. Given the revised linking rule, we will also need a linking rule to map the arguments into syntax. The reasonable assumption is that external arguments, including arguments externalized in the lexicon, are linked to subject positions, and that direct internal arguments are linked to direct object positions.

This system makes the same prediction as L&RH’s Change-of-State Linking Rule when no externalization of internal arguments is involved. In unmarked cases, therefore, the target of a resultative phrase is realized as a direct object. But our linking rule has a different consequence when externalization is invoked in the lexicon. In our alternative, a direct internal argument is directly mapped onto a subject if it is externalized in the lexicon, and in this case, the target of the resultative phrase is the base-generated subject, but not a direct object. Our alternative overcomes one of the serious problems with L&RH’s analysis.

At this point, some remarks are in order for the treatment of non-subcategorized NPs that appear with unergative verbs. In English, there is a productive lexical rule which yields a change-of-state verb from an activity verb, and the unergative verb’s ability to take a non-subcategorized NP in the resultative construction results from the fact that the lexical meaning of the verb undergoes a change by the lexical rule:

(12) a. John ran.
    b. John ran the shoes threadbare.

In (12a), the verb run is an activity verb and has \([\text{ACT} (x, \text{run}' (x))]\) as its lexical semantic representation.\(^8\) But when it is construed with a

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\(^8\) Directly relevant in the present discussion is the four-way classification of verbs, i.e. states, activities, accomplishments, and achievements, originally proposed by Vendler (1967). The term ‘activity,’ which plays a crucial role in the later discussion, refers to a dynamic action which usually extends over a certain length of time with or without the control of an agent. To represent ‘activity’ in the lexical semantic representation, we use the abstract predicate ACT, in line with Pinker (1989). This abstract predicate takes an individual as its first argument and a predicate as its second argument. Importantly, the first argument is taken to be an ‘actor,’ which does not necessarily imply agency. For some operational tests that distinguish activity verbs from the others, the reader is referred to Dowty (1979).
resultative phrase, as in (12b), it is turned into a change-of-state verb, and comes to have the lexical semantic representation \([\text{ACT } (x, \text{run' } (x))] \text{ CAUSE [BECOME threadbare’ } (y)]\). The change in the verb’s lexical semantic interpretation can be checked by the following adverbial test:

(13)  
   a. John ran for an hour/*in one hour.
   b. John ran the shoes threadbare *for one hour/in one hour.

The examples in (13) indicate that when accompanied by a non-subcategorized NP, unergative verbs are allowed to have extended ‘accomplishment’ meanings, and that as a result, they are furnished with the ability to appear in the resultative construction.9

One notable property of non-subcategorized NPs is that they are unable to participate in lexical operations, due to the fact that they are not originally selected by the verb:

(14)  
   a. The joggers ran the pavement thin.
   b. *The pavement looked run thin.

In (14a), the verb run takes the NP the pavement as its direct object, but it is not a subcategorized argument. Since an adjectival passive involves a lexical rule of externalization, the NP the pavement cannot appear in the adjectival passive sentence, as shown by (14b).

In L&RH's analysis, the syntax of the resultative construction is the syntax of the verb in isolation, and the verb’s lexical semantic representation including its argument structure remains intact in the resultative construction. However, if the distribution of the resultative construction is characterized by the verb’s argument structure, this cannot be true. Instead, when a verb like run carries an extended ‘accomplishment’ meaning as a consequence of a lexical rule, its argument structure must be extended to allow for an extra argument. In such a case, its syntax must also be altered in accordance with the change in argument structure.

The present analysis can provide a ready explanation for a cross-linguistic variation between English and Italian as well. In Italian, as noted by Napoli (1992), resultative phrases may only be predicated of direct objects of accomplishment verbs:

9 In English, this strategy is necessary for an unergative verb to appear in the resultative construction. This comes from the requirement that the verb needs to express some kind of change to license a resultative phrase.
Resultative phrases are not allowed to be predicated of ‘non-affected theme’ arguments:

(16) *Gianni ha martellato il metallo piatto
    Gianni have hammered the metal flat
    ‘Gianni hammered the metal flat.’

Nor can non-subcategorized objects be permitted for the resultative construction, as in (17):

(17) *Samuele ha riso Renato fuori dalla stanza.
    Samuele have laughed Renato out of the room
    ‘Samuele laughed Renato out of the room.’

In Italian, only the affected theme is the legitimate nominal which resultative phrases may be predicated of. The fact indicates that in Italian, it is not possible to convert activity verbs into change-of-state verbs by adding a resultative phrase, and hence their argument structure cannot be changed. But in English, change-of-state verbs can be productively formed from activity verbs with the addition of a resultative phrase. This type of typological difference can be readily accounted for on the basis of lexical semantic representations.

In essence, what we have shown here is that the target of a resultative phrase is realized as a direct internal argument, which is typically mapped onto a direct object. At first blush, it looks as though the fact provides support for L&RH’s syntactic analysis for unaccusativity. But since the mapping of the target of a resultative phrase onto a direct object does not always obtain, it turns out that their syntactic claim is not feasible.

3. Mapping of Arguments and Verb Classification

One central feature of the book is that L&RH formulate some linking rules to determine the status of arguments in argument structure. These linking rules are intended to provide an answer to the question of what kind of argument counts as an external argument or as an internal argument. In Chapter 4, L&RH identify one rule pertaining to external arguments, i.e. the Immediate Cause Linking Rule, and two rules which are related to internal arguments, i.e. the Directed Change Linking Rule and the Existence Linking Rule, supplemented by the
Default Linking Rule.

The Immediate Cause Linking Rule concerns the mapping of arguments referring to the participants responsible for causing the eventuality described by the verb:

(18) **Immediate Cause Linking Rule**: The argument of a verb that denotes the immediate cause of eventuality described by that verb is its external argument.

The Immediate Cause Linking Rule is applicable to both internally caused verbs, represented by *laugh* and *jump*, and externally caused verbs, which include verbs like *break*, *sink*, etc.\(^{10}\) This rule classifies a large number of internally caused verbs into unergative (see Section 4.1).

The Directed Change Linking Rule concerns mapping into internal arguments, as defined in (19):

(19) **Directed Change Linking Rule**: The argument of a verb that corresponds to the entity undergoing the directed change described by that verb is its direct internal argument.

This rule applies to verbs of change of state as well as verbs of inherently directed motions, both of which contain arguments undergoing what they call ‘directed change.’

The Existence Linking Rule covers the linking of the theme argument of verbs of existence and appearance such as *exist*, *appear*, etc.:

(20) **Existence Linking Rule**: The argument of a verb whose existence is asserted or denied is its direct internal argument.

Verbs of existence and appearance are like internally caused verbs, in that they do not participate in causative alternation:

(21) a. A picture appeared.
    b. *The programmer appeared the picture.

However, unlike most of internally caused verbs, verbs of existence and appearance are unaccusative, and they can appear in the *there*-insertion construction:

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\(^{10}\) Internally caused verbs describe an eventuality which is brought about by some inherent property of the argument of the verbs. On the other hand, externally caused verbs describe an eventuality which is necessarily caused by an external cause such as an agent, natural force, or an instrument.
There appeared a ship on the horizon. L&RH claim that since these verbs form a distinct class, a rule mapping the theme argument of these verbs is necessary.

Finally, arguments which are not covered by any of these linking rules are linked to direct internal arguments by the Default Linking Rule:

(23) Default Linking Rule: An argument of a verb that does not fall under the scope of any of the other linking rules is its direct internal argument.

The Default Linking Rule dictates that an argument is construed as a direct internal argument if its argument status is not specified by the other linking rules.

As L&RH note, there are a number of problems with this analysis. First of all, there is a significant overlap among the linking rules, and some arguments may fall under the scope of more than one linking rule. Second, since the Directed Change Linking Rule, the Existential Linking Rule, and the Default Linking Rule are all concerned with determining what arguments count as direct internal arguments, the presence of the Default Linking Rule, at first sight, makes the Directed Change Linking Rule and the Existential Linking Rule superfluous.\(^{11}\)

L&RH claim, however, that these linking rules are ordered, so that they are necessary, especially to correctly account for variation or constancy found in unaccusative verbs among English, Italian, and Dutch. To be concrete, L&RH argue that the Directed Change Linking Rule and the Existential Linking Rule take precedence over the Immediate Cause Linking Rule, and that the Immediate Cause Linking Rule in turn takes precedence over the Default Linking Rule.

L&RH argue that internally caused verbs of change of state offer us evidence for the precedence of the Directed Change Linking Rule over the Immediate Cause Linking Rule:

(24) a. *G è arrossito per 10 minuti.
    G is blushed for 10 minutes
    ‘G is blushed for 10 minutes.’

\(^{11}\) In L&RH’s system, a new linking rule must be introduced every time a new class of verbs is identified.
b. G è arrossito in un secondo.
   G is blushed in one second
   ‘G is blushed in one second.’

The internally caused verb of change of state arrossire ‘blush’ in Italian is unaccusative. The verb blush in English is unergative, since it can appear in the X’s way construction, for instance:

(25) My 92-year-old mother would blush her way through this particular collection of stories, jokes and rhymes.

These verbs are both taken as describing an internally caused eventuality, the sole difference being that the former expresses a change of state, while the latter does not. The difference in verb classification must then be attributed to the presence or absence of a delimited eventuality.

Another type of evidence is presented in Chapter 5, where agentive verbs of manner of motion, which are typically unergative, are shown to be unaccusative in the presence of a goal phrase:

(26) a. Ugo ha corso meglio ieri.
    Ugo has run better yesterday
    ‘Ugo ran better yesterday.’

b. Ugo è corso a casa.
    Ugo is run to home
    ‘Ugo ran home.’

In (26), a goal phrase, which serves to delimit the event denoted by the verb, plays a crucial role in the verb classification. L&RH argue that since a change denoted by the verb is a semantic factor relevant for the verb classification, the Directed Change Linking Rule applies prior to the Immediate Cause Linking Rule.

L&RH claim that evidence in support of the view that the Existence Linking Rule is ordered before the Immediate Cause Linking Rule is provided by the fact that an agentive stative verb in Italian is unaccusative:

(27) Gianni è rimasto apposta.
    Gianni is remained on-purpose
    ‘Gianni remained on purpose.’

In Italian, stative verbs are classified into unaccusative irrespective of whether they express volition or not. Hence, for L&RH, the Existence Linking Rule must apply before the Immediate Cause Linking Rule.

These considerations lead L&RH to conclude that the Directed
Change Linking Rule and the Existence Linking Rule take precedence over the Immediate Cause Linking Rule. One problem with this claim is that the Immediate Cause Linking Rule, which plays a crucial role in their analysis, refers to the notion of internal/external causation. As we will discuss Section 4.1, however, this notion defines the class of verbs with or without causative alternation, and does not have a direct bearing on the partition between external and internal arguments. This notion is, to some extent, correlated with this partition, but the correlation is not complete. If so, it is hard to see why the linking rule for external arguments, i.e. the Immediate Cause Linking Rule, should refer to external/internal causation.

Despite L&RH's claim to the contrary, there is a way of defining linking rules without recourse to the rule ordering. This can be done, for instance, by formulating a linking rule for external arguments in the following way:

(28) The argument of a predicate which refers to the non-affected entity effecting an activity described by that predicate is its external argument.

Notice that the linking rule in (28) is defined without making an appeal to the notion of internal/external causation. The motivation lying behind this linking rule is that the crucial factor for distinguishing between unergatives and unaccusatives is the contrast of 'activity' versus 'non-activity.' On this proposal, an external argument is an 'actor' argument which is not understood to undergo a change. In the current framework, we can state that if an argument which does not fall inside the scope of BECOME counts as the first argument of the abstract predicate ACT, it is realized as an external argument.

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12 Another problem is posed by the fact that an English verb like *die* shows an unergative behavior in that it allows a cognate object, but that the Italian verb *morire* 'die' in Italian is unaccusative. In their system, these two verbs are predicted to fall into the same unaccusative class, contrary to fact, because the sole arguments of verbs of change of state are categorized as internal arguments regardless of their causation type.

13 In L&RH's analysis, the linking rules are formulated by using notions like 'immediate cause' or 'directed change,' which are not directly represented in the lexical semantic representation.
Once the proposed linking rule, which determines what argument counts as an external argument, is formulated in the above fashion, the Directed Change Linking Rule and the Existence Linking Rule can be collapsed into the Default Linking Rule. In our alternative, arguments which do not fall under the linking rule in (28) are simply mapped onto direct internal arguments as a default case. In this analysis, since there is only one linking rule for external arguments plus a default rule, we do not need to refer to the ordering of linking rules.\footnote{In this formulation, there are two linking rules, but they can be readily coalesced into a single linking rule. For instance, if a default clause such as ‘other arguments are direct internal arguments’ is added to the proposed linking rule, there is no need to state the default case independently.}

Importantly, the proposed linking rule can readily explain the basic facts discussed in the book. To illustrate, first, an externally caused verb like break has the lexical semantic representation [ACT (x, do’ (x))] \textsc{cause} [BECOME broken’ (y)]. By our linking rule, the argument of the predicate representing a causing event is an external argument, since it is the first argument of ACT. The argument of the predicate for a central subevent represents an ‘elsewhere’ case, so it is a direct internal argument.

Second, an internally caused verb like laugh has [ACT (x, laugh’ (x))] as its lexical semantic representation. The single argument of the verb is the first argument of ACT, so it is an external argument. By contrast, the externally caused verb break, when it is intransitive, has [BECOME broken’ (x)] as its lexical semantic representation.\footnote{The results are the same irrespective of whether the external argument is construed as being existentially bound, as claimed by L&RH, or being omitted in the lexical semantic representation. See the discussion in Section 4.1.} The single argument is a direct internal argument, since it is an entity undergoing a change of state.

The systems can also handle the data which L&RH claim to support the ordering of their linking rules. First, the contrast arrossire in Italian and blush in English comes from the fact that while the Italian arrossire is a change-of-state verb, the English verb blush is an activity verb. The Italian verb arrossire in (24) has the lexical semantic representation [BECOME blushed’ (x)]. In this case, the sole argument of the verb is a direct internal argument. By contrast, the English verb
blush in (25) has \([ACT (x, \text{blushed'} (x))]\) as its lexical semantic representation. Since the sole argument of blush is the non-affected instigator of the activity, it is an external argument.

Second, our analysis can account for the distribution of a variable behavior verb like correre ‘run’ in Italian. This verb is, in unmarked cases, an activity verb, having the lexical semantic representation \([ACT (x, \text{run'} (x))]\). The single argument is external, since it is the first argument of ACT. The same verb has an accomplishment semantics when a goal phrase is present; thus, in (26b), the verb has the lexical semantic representation \([ACT (x, \text{run'} (x))] \text{CAUSE } [\text{BECOME at' (x, home)}]\). Its single argument is the first argument of the predicate ACT, but it is also an ‘affected’ argument, since it also appears within the scope of the operator BECOME. The argument is therefore a direct internal argument, according to our linking rule.

In L&RH’s analysis, a variable behavior verb like correre ‘run’ is treated as being lexically ambiguous (see Section 4.2). In their system, this means that the verb can have an unaccusative use, i.e. a directed motion sense, even without a goal phrase. But since the verb conveys an activity meaning in the absence of a goal phrase, the fact is not in keeping with their analysis. This problem cannot be fixed unless they provide an additional mechanism to ensure that the verb can have a directed motion meaning only in the presence of a goal phrase. By contrast, in our analysis, the facts can be explained at no extra cost, since we are claiming that the verb can select a goal phrase only when the verb has an accomplishment semantics.

Finally, the lexical representation for a stative verb like rimanere ‘remain’ in Italian in (27) should be \([\text{remain'} (x)]\). In this case, no abstract predicate indicating an activity appears in the lexical semantic representation, so that the argument is a direct internal argument.

In the present analysis, the non-affected argument of a predicate which is understood to effect an activity is construed as an external argument, and others, as direct internal arguments. Although this is just one possible way of dealing with the facts, our discussion shows that L&RH’s claim on the rule ordering is not necessarily validated by the data.

16 L&RH suggest, following Labelle (1992), that since French shows a behavior different from languages like English, Dutch, and Italian, the ordering of rules may
4. Other Issues and Problems

4.1. Intransitive-Transitive Alternation

In Chapter 3, L&RH introduce the notion of 'externally' and 'internally' caused eventualities, and argue that this distinction predicts fairly accurately what verbs can or cannot participate in causative alternation:

(29) a. Jean laughed/*Jean laughed Mary.
    b. The window broke/Jean broke the window.

According to L&RH, *laugh is an internally caused verb, which cannot have causative alternation, but *break is an externally caused verb, which can participate in the causative alternation.

One test for checking the causation type, which L&RH suggest, is to use the adverbial *by oneself; if this adverbial is compatible with a verb while carrying the meaning 'without outside help, spontaneously,' the verb is an externally caused verb:

(30) The plate broke by itself.

An internally caused verb is, by contrast, not consonant with the adverb *by oneself (on the intended sense):

(31) *Molly laughed by herself.

L&RH suggest that the adverbial *by oneself is an expression which modifies a cause while identifying the theme argument as the cause.

Note that externally caused verbs can, in principle, participate in de-transitivization, whereas de-transitivization does not apply to monadic internally caused verbs. But not all externally caused verbs can have intransitive uses:

(32) a. Anita Brookner just wrote a new novel.
    b. *A new novel wrote.

According to L&RH, externally caused verbs can de-transitivize only when the eventuality can be brought about without a volitional intervention of an agent.

L&RH claim that while an externally caused verb like *break is dyadic, having an external cause specified in the lexical semantic representation, a non-alternating intransitive verb like *laugh is monadic.

differ in French. Presumably, this is an indication that the parameter determining the unergative-unaccusative boundary is different in French.
Thus, these two verbs have the following lexical semantic representations:\(^{17}\)

\[(33) \quad \begin{align*}
\text{a. } & \text{laugh: } [x \text{ LAUGH}] \\
\text{b. } & \text{break: } [x \text{ DO-SOMETHING}] \text{ CAUSE } [y \text{ BECOME BROKEN}]
\end{align*}\]

L&RH argue that the concept of internal/external causation is preferred over the concept of 'agent' or 'change of state' for characterizing verbs with or without the causative alternation. First, agentivity is irrelevant because verbs without causative alternation need not be agentive, as shown by (34):

\[(34) \quad \begin{align*}
\text{a. } & \text{Mary shuddered.} \\
\text{b. } & \text{*The green monster shuddered Mary.}
\end{align*}\]

Second, the class of causative verbs with intransitive variants cannot be exhausted by the notion of 'change of state.' A change-of-state verb may lack a transitive variant:

\[(35) \quad \begin{align*}
\text{a. } & \text{The cactus blossomed early.} \\
\text{b. } & \text{*The gardener blossomed the cactus early.}
\end{align*}\]

Since the verb blossom is construed as an internally caused verb of change of state, the notion of internal causation is more appropriate for characterizing the lack of the causative alternation.

According to L&RH, the intransitive break is derived from its transitive counterpart when an external argument is lexically bound and is not projected onto argument structure. In their analysis, the lexical semantic representation of break is identical whether it is transitive or intransitive:

\[(36) \quad [x \text{ DO-SOMETHING}] \text{ CAUSE } [y \text{ BECOME BROKEN}]\]

This analysis of L&RH's is problematic, however. To begin with, this analysis is unable to explain a difference in the interpretation of adverbial modification between the two examples:

\[(37) \quad \begin{align*}
\text{a. } & \text{John almost broke the window.} \\
\text{b. } & \text{The window almost broke.}
\end{align*}\]

\(^{17}\) The notation for lexical semantic representations in this section is L&RH's and differs from the notation used elsewhere in this review article.
In (37a), the adverb almost is ambiguous in that the sentence can mean either (a) John had the intention of breaking the window but did not even begin it, or (b) the breaking of the window was not completed (although John did begin to do it). In contrast, (37b) is unambiguous, permitting only the interpretation in which the act of breaking was not quite finished.

It is often argued (cf. Dowty (1979), Pustejovsky (1991)) that the ambiguity of the adverbial modification arises only when the verb has an accomplishment semantics. The reason is that the adverbial can modify either a causing event or a caused event. The example in (37b) lacks the interpretation on which a causing event is modified by the adverbial, which indicates that the intransitive break must have (38) as its lexical semantic representation:

\[ \text{[y BECOME BROKEN]} \]

If a verb like break has a complex lexical representation both in transitive and intransitive uses, as in (36), the presence or absence of ambiguity with almost remains unaccounted for.

The lexical semantic representation in (36) also does not fit nicely with the notion of 'spontaneous event.' The transitive break, unlike the intransitive break, cannot co-occur with by oneself even if it is passivized:

\[ *\text{The plate was broken by itself.} \]

The deviance of (39) with by oneself comes from the fact that the eventuality described by the verb cannot be a spontaneous event. This adverbial can be added only when the external cause of an externally caused verb is removed from the lexical semantic representation by detransitivization.18

In essence, if the lexical semantic representation of break is the same irrespective of whether it is transitive or intransitive, as claimed by L&RH, we cannot provide an explanation of why the adverbials almost and by oneself behave differently, depending on the transitivity of the verb. The facts suggest that when the verb break is used intransitively, the external cause is not present in the lexical semantic representation.

18 For a different view of this adverbial, see Kageyama (1996).
4.2. Meaning Shifts

In Chapter 5, L&RH present an analysis of what they call ‘variable behavior’ verbs, which include agentive verbs of manner of motion and verbs of sound emission. For example, the Italian verb *correre* ‘run’ in (40) displays a variable behavior in that the verb is typically unergative, but can be an unaccusative verb when accompanied by a goal phrase:

(40) a. Ugo ha corso meglio ieri.
    Ugo has run better yesterday
    ‘Ugo ran better yesterday.’

b. Ugo è corso a casa.
    Ugo is run to home
    ‘Ugo ran home.’

L&RH claim that this shift in verb classification results from a lexical rule that maps verbs of manner of motion onto verbs of directed motion. In their analysis, when mapping from the unergative class to the unaccusative class is mediated by a lexical rule, a single verb can be ambiguous between unergative and unaccusative.

In Chapter 6, L&RH discuss problems with characterizing the locative inversion construction as an unaccusative diagnostic:

(41) Over her shoulder appeared the head of Jenny’s mother.

Although the locative inversion construction is sometimes construed as an unaccusative diagnostic, L&RH claim that its behavior does not reflect the unergative-unaccusative distinction, and that the phenomenon should be explained from a discourse perspective.

Agentive verbs of manner of motion are typically unergative, but since these verbs can appear in some unaccusative frames, L&RH claim that they can sometimes be turned into unaccusative in consequence of a meaning shift. But L&RH deny the possibility that meaning shifts occur with verbs that appear in the locative inversion construction.

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19 In the case of the verb *roll*, its verb classification differs according to whether it takes an animate subject or an inanimate subject:

(i) a. *The curtain rolled itself open.
    b. The children rolled the glass flat.

According to L&RH, the verb *roll* can equally be associated with both, so there is no need to posit a lexical rule. In contrast, for a verb like *jump*, since a non-directed motion sense is more basic than a directed motion sense, their two uses are related by a lexical rule.
They conclude from this that both unergative and unaccusative verbs are allowed in the locative inversion construction, and that the locative inversion construction does not serve as an unaccusative diagnostic.\(^{20}\)

There are a number of reasons that lead L&RH to make this move. In the case of variable behavior verbs, the meaning shift is productive, and yet it is essentially restricted to agentive verbs of manner of motion and verbs of sound emission. Therefore, L&RH claim that it is favorable to posit a lexical rule to account for the distribution of variable behavior verbs. Verbs which can appear in the locative inversion construction, by contrast, include various types of unergative verbs. L&RH speculate that it is difficult to come up with a rule which maps various unergative verbs into unaccusative, and go on to argue that the behavior of the locative inversion construction should be explained in discourse terms.

Although the general conclusions that L&RH have drawn might be on the right track, their arguments are neither definitive nor conclusive. L&RH identify verbs compatible with the locative inversion construction as carrying some sort of ‘appearance’ sense. Recall that L&RH claim in Chapter 4 that verbs of appearance are unaccusative. On the face of it, it seems possible to say that when unergative verbs appear in the locative inversion construction, they undergo a meaning shift and are converted into unaccusative verbs by virtue of carrying an ‘appearance’ meaning.

L&RH simply mention that there would be no compelling reason that the distinction manifested in the locative inversion construction should be reduced into syntactic configurations especially when the VP-Internal Subject Hypothesis is adopted. Under the VP-Internal Subject Hypothesis, the postverbal NP does not automatically qualifies as a direct object. However, since L&RH do not demonstrate that the components of meaning pertaining to the ‘appearance’ sense in the locative inversion construction are irrelevant to unaccusative configurations, their arguments are only suggestive.

\(^{20}\) On the basis of the fact that not all unaccusative verbs can appear in the locative inversion construction, L&RH argue against the unaccusative analysis of the locative inversion construction. Obviously, this is not an appropriate argument. If this argument holds, the resultative construction, which L&RH argue to be a legitimate unaccusative diagnostic, cannot be an unaccusative diagnostic, just as with the locative inversion construction.
In Chapter 5, L&RH argue that a meaning shift can occur only in a restricted set of verbs such as agentive verbs of manner of motion. There is, however, reason to suspect that the appearance of a meaning shift is not so restricted:

(42) He washed the soap out of his eyes.
The postverbal NP following the transitive verb wash in (42) is not the argument selected by the verb, as shown by (43), but in Chapter 2, L&RH suggest that (42) becomes acceptable as a consequence of a meaning shift:

(43) *He washed the soap.
That the verb comes to fall into a different class when some delimiter is present can be shown by the fact the NP soap is compatible with the adjective passive and the middle construction, as in (44):

(44) a. All the soap seemed washed out of my hair.
    b. This dye washes out easily.
L&RH do not regard the sentence in (42) as an instance of the resultative construction in order to maintain the hypothesis that a verb’s lexical semantic representation does not change with the addition of a resultative phrase. On the contrary, there is a sense in which the ‘wash’ sentence is construed as a resultative sentence, since the postverbal NP in (42) refers to an entity undergoing some change and its result is described by the phrase which immediately follows it.

Note that agentive verbs of manner of motion and verbs of sound emission do involve a change in their lexical semantic representation when they are turned into unaccusative. Exactly the same thing happens in the ‘wash’ sentences. But in Chapter 5, L&RH simply claim, without taking the latter case into consideration, that a meaning shift can occur only in a very restricted class of verbs. On the contrary, the fact in (42) suggests that a meaning shift can occur in other contexts as well.

L&RH argue against Hoekstra (1988) by claiming that (42) is not an instance of the resultative construction. One reason why L&RH do not regard (42) as a resultative construction is that the purposed resultative cannot be an AP. However, Kageyama (1996) reports that a ‘wash’-type sentence can have an AP resultative.
In view of this fact, it is clear that L&RH's claim is not so well-founded. Besides, the mechanism of meaning shift is too powerful; we can always invoke a meaning shift when a purported unergative verb appears in an unaccusative diagnostic, and the decision to adopt the strategy of meaning shift can be made in a fairly arbitrary manner. To make their arguments convincing, they need to state more clearly when and how a meaning shift occurs. Otherwise, some of their theoretical claims are rendered completely vacuous.

4.3. Other Problems

As a final point, we will point out several other problems with L&RH's analysis very briefly. One obvious limitation is that L&RH's analysis is not capable of handling possible cross-linguistic variations. In the literature, it is often observed (cf. Van Valin (1990), Dowty (1991), Merlan (1985)) that languages draw a line between the two classes of verbs on different semantic bases. L&RH's analysis concentrates on English and some other languages having a similar semantic parameter for unergative-un accusative classifications, so that they have little to say about language variation.22

Their treatments of data are sometimes inconsistent. To mention just two cases here, in Chapter 5, a directional phrase denoting a change of location is treated as an instance of resultative phrases. But, in Chapter 2, this type of phrase is not included in the category of resultative phrases. In Chapter 2, L&RH remark that the appearance of adjectival passives does not argue against the unaccusative analysis of the resultative construction. But in Chapter 6, similar facts on adjectival passives are used to argue against the unaccusative analysis of the locative inversion construction and the like. Obviously, these inconsistencies need to be fixed to make their arguments or claims to be more credible.

22 In Chapter 4, L&RH discuss a variation that results from a difference in the ordering of the linking rules, and this is the only discussion given by L&RH on language variation.
5. Conclusion

In this review article, we have critically examined some of the central claims in L&RH's book, and we have suggested a number of ways in which their analysis could be further elaborated or improved. In particular, we have shown, contrary to what L&RH claim, that the distribution of the resultative construction can be best characterized with reference to the verb's lexical semantic representation rather than its syntactic configuration. Furthermore, we have pointed out problems with L&RH's linking rules, and proposed an alternative way of defining linking rules whereby we can dispense with rule ordering. A closer inspection of the data have revealed that the syntax is not the place where unaccusativity is properly described.

REFERENCES


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