THE INTERPLAY BETWEEN TRANSITIVITY
AND ERGATIVITY:
A CRITICAL INSIGHT FROM THE “MIDDLE”

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Lexical Perspectives on Transitivity and Ergativity: Causative Constructions in English, by Maarten Lemmens, John Benjamins, Amsterdam, 1998, xii+268pp.

Keywords: transitive/ergative paradigms, ontological motivation, co-participation, middle construction, coercion

0. Introduction

The book under review, an extensive revision of Lemmens' doctoral dissertation, is an interesting and comprehensive analysis, attempting to offer an experientially-based explanation for how lexical and constructional meaning interact in the ergative and transitive paradigms. Conducting a corpus-based probe into the English death verbs (e.g. *kill*, *suffocate*, *abort*, etc.), Lemmens describes an insightful, dynamic picture of the interplay between these verbs and their constructional variability. Some corpora are examined in light of diachronic as well as synchronic perspectives, which also serves to substantiate his main claim that the interplay is cognitively grounded, hence experientially well-motivated.

This book consists of two Parts: Part I contains three chapters (Chs. 1 to 3), Part II, five (Chs. 4 to 8). Part I introduces the overall theoretical premises, and Part II develops case studies based on these prem-

* I am very grateful to two anonymous *EL* reviewers for their valuable comments and suggestions. I am also indebted to Ronald Simpson Cairns for suggesting extensive stylistic improvements. Needless to say, all remaining errors are mine.

ises. In Chapter 1 Lemmens proclaims that corpus-based analysis is taken under a general theoretical synthesis; the synthesis of Langackerian Cognitive Grammar and Hallidayan Systemic-Functional Grammar. Chapters 2 and 3 are devoted to the review of some preceding lexical-paradigmatic approaches, providing his own insight into the interaction between causative verbs and their constructional potentials. The general aim of case studies in Part II is to establish a cogent description for the complexities of the transitive and ergative models and their dynamic interaction with verbal meaning. Chapter 4 mainly deals with the issue concerning how the lexical structure of verbs may either constrain or encourage constructional extensions. His analysis here gives an account to the lexical evolution of some verbs (e.g. *starve*, *throttle*) relative to their new constructional possibilities. Chapters 5 and 6 focus on the notion of Agent-centeredness of the transitive paradigm and its logical complement in the ergative paradigm, namely the Medium-centeredness. The opposition of these two paradigms is clarified on an experientially-motivated basis, specifically with the diachronic and synchronic characterization of the MURDER verbs (verbs in the transitive paradigm) and the SUFFOCATE verbs (verbs in the ergative paradigm). Chapter 7 takes up the verb *abort*, a typical, but complex manifestation of the interplay of the ergative/transitive paradigms. Detailed discussion is afforded here as to the etymological evolution and the complexities of the paradigmatically mixed character of this verb. Chapter 8 summarizes the overall findings.

The present review consists of five sections: First, we will briefly outline the background and major aims of this book (section 1); next, we will digest Lemmens' lexico-paradigmatically oriented characterization of the complexities of the transitive-ergative interplay, where special interest will be directed to the introduction of the conceptual nucleus of <ACTOR-PROCESS> vs. <MEDIUM-PROCESS> (section 2); a brief reference to some problematic dimensions is presented (section 3); next, after the introduction of the middle construction paradigms presented by Lemmens, we will indicate how these problematic dimensions are specifically manifested in his analysis of middles. Then, we will offer a new perspective for the account of middles which will not just compensate for these dimensions, but suggest a possibility that will advance his lexico-paradigmatic view of language from a new perspective (section 4); in Concluding Remarks, we will evaluate the major claims of the present book and point out the directionality worth exploring in future

studies (section 5).

1. Background and Aims

In reference to the recent research on lexicon and syntax, the present book can be situated in the middle of two models: a purely lexically oriented model and a purely grammatical (or constructional) one. Lemmens (p. 66) says that “one has to refrain from adopting either a purely lexical approach that focuses unilaterally on verbs in *état pur* or a purely grammatical point of view which ignores the impact of verbal meaning on a verb’s constructional potential.” The integration of the two models is pursued through the examination of the interaction of lexical and constructional meaning that is manifested in the transitive and ergative paradigms.¹

With this theoretical background, the present book aims to offer a substantial inquiry into the question: how does the lexical content of a verb influence constructional variability, and how do the various constructions in which a verb may occur affect its meaning? This question and other related issues are elucidated with the premise that linguistic semantics is encyclopedic in nature involving specifications in a variety of cognitive domains. Based on this premise and inquiry, two major claims are made; first, while the meaning of a verb and that of the construction in which it occurs can be characterized independent of each other, a specific usage will *fuse* them into a composite structure in which they become interdependent; second, the interdependence is well-motivated by the interplay between the semantic modulation of verbs and their distributions in the transitive/ergative paradigms.

¹ By “purely lexically oriented model” is primarily meant those models that tend to emphasize the lexical characteristics of verbs. For instance, Levin (1993) stresses the lexical characteristics of verbs with special reference to their predictability of syntactic structures at sentential levels; Lakoff and Johnson (1980) and Brugman (1983) are also instances of lexically oriented approaches in the Cognitive Grammar framework with respect to their research orientation towards the study of lexical characteristics of metaphor and prepositions (cf. Lemmens, p. 16). By “purely grammatical (or constructional) model” is meant, for instance, Construction Grammar (e.g. Goldberg (1995)), which takes construction as a meaningful unit; namely, it is a unit which is independent of the semantics of verbs. Lemmens (p. 9) says that construction is “the grammatical frames in which a verb may occur.”

In order to substantiate these claims, Lemmens (p. 8) takes the theoretical underpinnings of what he calls “an innovative synthesis of two frameworks.” Primarily adhering to the principles of Cognitive Grammar (Langacker (1987, 1991)), Lemmens, on the other hand, draws considerable attention to Systemic-Functional Grammar (Halliday (1967–1968)). This is firstly because Lemmens emphasizes the necessity to include the paradigmatic side of linguistic analyses on which Hallidayan adherents have put a major focus, which Cognitive Grammarians have so far neglected. The second reason concerns the heuristic aspect of this book, coming from its acceptance of “the Whorfian view that *overt* grammatical categories should be distinguished from covert ones which make themselves felt by the systematic relations that link all the paradigmatic correlates of a construction type” (p. 4). In addition, the present work also “incorporates some descriptive insights from work in the framework of Generative Grammar and its derivatives (Keyser and Roeper (1984), Levin (1993), Levin and Rappaport Hovav (1995))” (p. 8).

Worthy of short reference in this section is the strong orientation of this book toward corpus-oriented research. Although the corpus-based research (via simple pattern-matching procedures) is restricted to the death verbs, it is done on a large scale. For instance, attestation is carried out not only synchronically (e.g. *Wall Street Journal* 5,353,500 words) but diachronically (e.g. OED 15,000 attestations). While not arguing in absolute terms, this empirical methodology serves at least to “avoid inaccuracies and overgeneralizations which one often finds in intuition-based studies,” as well as avoiding “the overconcentration on ‘typical-examples’” (p. 17). Extensive corpus material, as is typically demonstrated in the analysis of *abort* (Ch. 7), can shed light on less prototypical cases, leading to a better characterization of linguistic reality.

2. The Transitive vs. Ergative Paradigm

2.1. Inadequacy of the Lexicalist Account

Lemmens’ critical examination of Levin (1993) is mainly directed to her account that imposes too much predictable power on the lexical structure of verbs, as a kind of structure able to project itself onto the structural characteristics of a clause. *Contra* Levin, Lemmens sees the lexical characteristics of a verb as involving flexibility that influences

their constructional possibilities—a kind of flexibility that may sanction constructions that depart from the prototypical constructional specifications and motivate more or less (rather than *predict* in an all-or-nothing way) the semantic well-formedness of an expression.

To clarify Lemmens' approach more specifically, let us exemplify his claim. In Levin's (1993) classification, the verbs *change* and *open* are "pure change-of-state" verbs allowing the non-causative construction (e.g. *John opens the shop at 9:00 a.m.* vs. *The shop opens at 9:00 a.m.*). However, there is no corresponding non-causative for some clauses with these verbs (Lemmens, p. 37):

- (1) a. John opened a tin of baked beans. (Davidse (1991: 63))
 b. *A tin of baked beans opened.
- (2) a. Mother changed the baby. (Davidse (1991: 63))
 b. *The baby changed. (on the interpretation "the baby is clean")

(1) and (2) show that the change-of-state criterion fails to give a full account of why the causative/non-causative alternation is not always applicable to the same verb in different environments. Lemmens (p. 38) states that "Levin says that verb alternations are 'sometimes accompanied by changes of meaning' (1993: 2). Against this view, I posit that alternations are *inevitably* accompanied by changes of meaning since they reflect different ways of construing an event." This view of Lemmens' leads to the claim (p. 38) that "the clause is where verbal and constructional meaning meet to form a semantic complex capable of triggering unpredictable (yet motivated) creative usages."

2.2. Transitive vs. Ergative Model

Let us start with the most basic view and terminology concerning Lemmens' transitivity/ergativity model. Lemmens takes the transitive and ergative models as distinctive networks of construals which project different process-participant constellations in their perception of events.²

² For the notion of process-participant constellations, Lemmens objects to Davidse's (1991) view that the Medium-Goal alternation reflects the grammatical modulation as a manifestation of the grammar of material process (cf. Halliday (1967-1968)). Instead, Lemmens emphasizes that a unified description of the

In order to properly characterize the constellations, Lemmens introduces some terms expressing participants and constructions such as Effective/Non-effective (construction), Medium, Instigator, Actor and Goal (participants). "Effective" is used to designate ergative and transitive two-participant constructions, while "non-effective" is used as a cover term for ergative and transitive one-participant constructions.³ Lemmens (p. 40) states that "Medium" is "an entity that is affected by the process, yet is at the same time, also an agentive participant" (cf. Davidse (1991) and Halliday (1967–1968)). "Instigator" designates the causer of an action, externally contributing to the nucleus conceptualization of <MEDIUM-PROCESS>. Lemmens (p. 40) says that "the event finds its starting point in the Actor, the most central participant, and in the two-participant construction it opens up to the right to include the participant onto which the Actor directs his action, the 'Goal.'" In relation to our subsequent discussion, the claim (p. 41) that "the Goal does not co-participate in the process, but is an inert participant wholly affected by the Actor's action" should be emphasized here.

As such, "the transitive and ergative paradigms form two distinct models of causality" (p. 41). One model is the transitive model, the conceptual nucleus of which is <ACTOR-PROCESS>, which can prototypically open up to the right to incorporate a Goal, and the other is the ergative model, the conceptual nucleus of which is <MEDIUM-PROCESS>, which can prototypically open up to the left to incorporate an Instigator. Figure 1 below schematically indicates the respective model:

grammar of processes requires the inclusion of a lexical perspective. With respect to the term "ergativity," Lemmens (p. 42) says that he "subscribes to the view that ergativity is relevant for English, provided that one realizes that it does not manifest itself in overt case markings but in various alternation patterns, which reveal the transitive and ergative models as more covert categories of grammar."

³ Drawing on Hopper and Thompson (1980: 251), by the term "effective," Lemmens (p. 43) means that "the action is typically EFFECTIVE in some way," as it is "'carried-over' or 'transferred' from an agent to a patient."

Figure 1. <The ergative and the transitive paradigms>

(3) a. John killed Mary. <AC-PROCESS-GO>
(effective-transitive)
b. John killed. <AC-PROCESS-(GO)>
(effective-transitive (objectless-transitive))
c. John suffocated Mary. <IS-PROCESS-ME>
(effective-ergative)
d. Mary suffocated. <ME-PROCESS>
(non-effective-ergative)

(3a) is a two-participant construction, involving the participants of Actor (*John*) and Goal (*Mary*) onto which the Actor directs his action (*kill*). *Mary* here is a Goal, an inert participant wholly affected by the Actor's action. (3b) is an instance of the [AC-PROCESS-(GO)] schema, a special case of an effective-transitive; namely, an objectless-transitive where an understood object is not formally instantiated. The structural centrality of (3c) resides in the ergative nucleus <MEDIUM-PROCESS> to which an external Instigator (*John*), the causer of the action, is added. In (3c) *Mary* (ME) co-participates in the process (*suffocate*), in addition to being affected by the process. By the term "co-participate" is meant that *Mary*, though a victim, is *doing* (viz. *participates* in) the suffocation by suffering from some physiological processes. In contrast, (3d) instantiates only the <MEDIUM-PROCESS> nucleus, the semantic value of which is that "it neutralizes whether the

⁴ The present article does not discuss the pseudo-effective construction.

process was self-instigated or instigated by an external Instigator" (p. 40). The next step is to explore the lexical characteristics of death verbs and their interaction with their constructional possibilities.

2.3. *Kill and Suffocate*

In order to make our discussion concise, we confine ourselves to dealing with the verbs *kill* and *suffocate*. First, on the verb *kill*. *Kill* is a member of the MURDER group verbs (e.g. *murder*, *assassinate*, *execute*, etc.), not just involving typical conceptual embodiment of Agent-centeredness of the transitive paradigm (e.g. (4a)) but also having lexical flexibility that allows atypical agency (e.g. (4b)).⁵

- (4) a. John killed Mary.
- b. A cold killed the woman.

In contrast with the MURDER group verbs, *suffocate* shows a strong preference for a non-effective construction, i.e., a human Instigator is most unlikely to appear even in contexts where it is readily traceable. Consider (5).

- (5) He pushed her face in a lemon meringue pie and held it there until she suffocated. (Lemmens, p. 159)

Suffocate profiles the physiological process in such a way that the participant may meet her death due to lack of fresh air or to gaseous substances. The salience of the physiological process highlights the activity of the Medium, which explains the preference for a non-effective construction.

2.4. The Ontological Motivation of the Ergative Conception

On the basis of Levin's (1993) classification of the killing verbs,

⁵ Lemmens (cf. p. 106, p. 115) reports that despite its highest frequency of appearance attested in the database among the MURDER verbs (1363 samples in total; 100%), *kill* (794; 58.3%) "conforms least to the intentional Actor prototype of transitives" (p. 115). Restricting "the notion of agency to direct participation in the process" (p. 125), Lemmens subcategorizes it to the transitive agent instantiated by the Actor in the transitive paradigm and the ergative agent instantiated by the Instigator in the ergative paradigm (cf. p. 125). Note also the observation by Lemmens (p. 58) that the transitive agent manifests itself rather coherently in the MURDER verbs (e.g. *kill*, *execute*, *assassinate*, etc.), but the ergative agent does much less coherently. For the discussion of agency and Cause, see DeLancey (1984) and Nishimura (1993).

Lemmens observes the feature of the internal vs. external zone in light of the lexical content of these verbs. This feature differentiates the transitive SUFFOCATE verbs (e.g. *throttle*, *strangle*, *smother*) from the ergative SUFFOCATE verbs (e.g. *suffocate*, *asphyxiate*). Based on the theory of the active zone/profile discrepancy (Langacker (1995: 20)), Lemmens (p. 151) claims that “the ergative verbs tend to have as their active zone the most internal parts of the respiratory system (the lungs, the throat’s aperture), whereas the transitive verbs have the more external parts (the outside throat) as their active zones.” Lemmens, then, proceeds to argue that the ergative conception, in contrast to the transitive one, is strongly motivated by the ontological characteristics of a suffocation process.

The major characteristics of the events to be perceived as ergative (e.g. *suffocate*) that we are concerned with in the present article are indicated as follows: First, the victim participates in the suffocation. As Lemmens (p. 152) indicates, “the participation is not deliberate, but it is unavoidable since the physiological processes affect the victim’s respiratory system”; second, “the causes of suffocation events are typically imperceptible” and “this imperceptibility encourages a conception of the suffocation as *independent* of the cause or instigation” (p. 152), which motivates the conceptualization of a self-originating process essential to the ergative construal; third, “the (prototypical) temporal distance between the instigation and the consequences” (p. 152). This leads to low salience of goal-achievement in ergative verbs (e.g. *suffocate*), in contrast to high salience of that in typical transitive verbs (e.g. *kill*): the former type of verbs, unlike the latter type, commonly do not denote an event that ends in the death of the victim.

In short, the ergative conception is thus ontologically motivated in light of the dimension that the Medium co-participates in the process with respect to the foregrounding of its internal zones, although the ergative predilection for *suffocate* is not absolutely predicted, but rather motivated by our experience of the world. Lemmens (p. 188) concludes that “the internal/external distinction with respect to cause appears to motivate not only the distinction between the transitive and the ergative SUFFOCATE verbs but also the relatively systematic occurrence of an effective construction with prototypically ergative verbs when the cause is overtly external.”

2.5. The Transitive-Ergative Interplay

How, then, do the two paradigms interplay? In order to give a more substantial account for this, Lemmens takes up the verb *abort*. Aiming at drawing a whole picture of the characteristics of this verb and its constructional paradigms, Lemmens' observations center around the specification regarding which participant (Medium, Actor, Instigator) is most salient in the conception of abortion. Some typical examples of the paradigms are the following (p. 193, p. 196, p. 200):

- (6) a. ... þe childir þat es abortiues, þaa þat er not born oliues
... (OED, a1300)
"the children that are 'abortive,' those that are not born alive"
- b. I assert that a mother has rights, and a baby does not.
That being the case, the mother can abort, if she so chooses. (ABORTION, pro-chooser)
- c. Prenatal testing ... might motivate some pregnant women to abort *fetuses* afflicted with cystic fibrosis.

In the previous centuries, it was the ergative paradigm that governed the *abort*-cluster (6a), since it was well-motivated in that period that the item referred to a spontaneous abortion in which it is the fetus (Medium) that is the primary energy source of the process (i.e. the fetus-orientation (cf. p. 200)). However, in (6b), "the role of the woman in the abortion process is to a certain extent ambiguous, as she is also considerably affected by the process," the conceptualization of which ultimately serves to "sanction an unusual 'intransitive' construction" (p. 218). In contemporary English, experiential factors play an important role in the conceptualization of abortion, triggering the transitivization of *abort*.⁶ That is, "against the background of the medical and technical advances through which people have gained (more) control over human physiology, the conception of abortion has shifted to a transitive one in which the woman controls the process" (p. 218). For instance, in (6c), the pregnant women take on the role of an Actor who is regarded as having control over the process of aborting fetuses (Goal). Lemmens (Ch. 7) concludes that modern medical, technical advancements and ethical debates thus serve to demote the status of a

⁶ Lemmens (p. 218) notes that "anti-abortionists take the transitivization one step further by equating an abortion with the killing of a human being."

fetus to a downstream participant, while promoting that of the woman to the most central participant.

3. Problematic Dimensions

We acknowledge Lemmens' claim against the account of constructional potentials in virtue of lexical predictability and consider promising his directionality toward the account based on lexical flexibility for the interplay of the transitive/ergative paradigms. In addition, his ontological explanation of the interplay seems quite cogent. However, there are several dimensions that must be critically re-examined.

First, much argument of the present book starts with, and depends on, the simple dichotomy of two paradigms as to the roles of participants, i.e. [Actor-Goal] vs. [Instigator-Medium]. Lemmens (p. 47) says that "the constructional potential of a particular verb cannot be stated as absolute (i.e. as either transitive or ergative), but depends on the kinds of participants that are involved in the process." In this connection, distinguishing between the roles of participants is a backbone crucial to the whole picture of the paradigms' opposition. The most important criterion that conditions the dichotomy is the notion of co-participation. However, it might well be questioned how one specifies the co-participation that motivates the differentiation of those roles.

Second, no semantic examination of nominals is provided for the account of the paradigm distinction. Granting that the main topic of the present book resides in the exploration of the verbal semantics and its correlates with constructional paradigms, we want to point out the necessity of incorporating encyclopedic knowledge of the nominal referents invoked relative to the setting, which, contrary to Lemmens' claim, functions to render the paradigmatic distinction less clearly established.

Third, the present book does not detail criteria regarding sentence judgments. Given the directionality of adopting the cognitivist view of semantics, an exploration must be sought for how and in what sense certain expressions are semantically well-formed (or not). As Lemmens suggests (pp. 39ff.) that the semantic models of transitivity and ergativity may reflect ways of construing an event, sentence judgments (more precisely, interpretability of an utterance in a specific event) should be further investigated in light of the cognitivist view of semantics, i.e. the construal.

4. Middles

The present book draws much attention to the analysis of English middle expressions (e.g. *This car drives well*). This is obvious not only from the number of pages and sections devoted to this topic but from the author's claim that specific paradigms (transitive vs. ergative middles) should be established to account for these expressions. In the following sections, starting with a brief outline of his model for middles, we will examine the problematic dimensions mentioned above more specifically.

4.1. The Semantics of the Middle Construction

Lemmens (p. 76, pp. 77ff., p. 97) characterizes the meaning of the middle construction as follows; the middle construction profiles the properties of the Affected that facilitate the process or predestine it to be submitted to the process where an Agent is implied, yet it remains quite schematic (cf. Fellbaum (1985)). Noting that middles normally take a facility adverb (e.g. *easily*; cf. Vendler (1984)), Lemmens considers the semantics of middles as involving the process-facilitating properties of the Affected. This is confirmed, for instance, by the impossibility of an Agent-focused adverb (e.g. *competently* in (7a)) to occur in middles, whereas it is possible in Agentless passives (e.g. (7b))—a construction equivalent to middles in that both concern the Agent-defocusing mechanism (cf. Shibatani (1985)):

- (7) a. These chairs fold up {easily/*competently}.
 b. These chairs were folded up {easily/competently}.

(Fellbaum (1985))

By the term “predestination” Lemmens means deliberately designed properties (of the subject entity) which “can be beneficially exploited by any potential agent” (p. 80, cf. Fellbaum (1985)). Here, the notion of predestination is crucial to the characterization of middles, but no further account is offered as to how the subject entity in middles is so predestined and by what sort of conceptual basis it is predestined. To clarify these dimensions that determine the predestination of the subject entity in middles, it is necessary to establish, we claim, an ontological motivation for the middle construction involving co-participation.

4.2. The Constellation of the Middle Construction Paradigm

In terms of a lexical paradigmatic view of the middle construction,

Lemmens posits the distinction between transitive and ergative middles. The transitive middle is characterized as the construction in which “the Goal becomes the subject of the active transitive verb” (p. 228) <GO-PROCESS-(AC)> ; this means, “the semantics is that of a passive construction in which the Goal is an inert participant wholly affected by the action of the implied Actor” (p. 228). On the other hand, the conceptual nucleus of the ergative middle is <ME-PROCESS-(IS)> where the Instigator may externally effect the event occurrence. In short, “the transitive middle may alternate between an Actor/Goal reading, the ergative middle between a Medium_[+self-instigating]/Medium_[-self-instigating] one” (p. 228). Let us exemplify the situation. Look at (8):

- (8) a. Sheila seduces easily and willingly. (Lakoff (1977))
 b. The window opened only with great difficulty.
 (Langacker (1991))
 c. Asthmatic patients choke easily.

Starting with the assumption of [E(ntity)-proc(ess)-F(easibility) C(omment)] as the schematic modulation of the entire middle paradigms, Lemmens claims that there are four paradigmatic oppositions. First, (8a) is ambiguous as to whether Sheila is the target of someone else’s act of seducing (transitive middle; Fig. 2(a)) or Sheila is the Agent of the seducing, viz. she does this easily and willingly (objectless transitive; Fig. 2(b)). (8b) is an ergative middle (Fig. 2(c)) in the sense that the adverbial modification may comment upon the facility of someone opening the door (the ‘IMPLIED ERG-open’ unit, i.e. an ergative middle with a reading of Medium_[-self-instigating]). In addition, based on Lemmens’ discussion (pp. 74ff.), we might argue that (8b) could have a non-effective ergative reading which involves the conceptualization of a [+self-instigating] event; namely, the modification comments upon the facility of the door opening itself (the ‘ABS-open’ unit; an ergative with a reading of Medium_[+self-instigating]). This kind of non-effective ergative reading is found in (8c) (=Fig. 2(d)). Eventually, (8b) gives rise to a “voice ambiguity” (non-self-instigating ergative middle vs. self-instigating non-effective ergative) that might be comparable to that found in (8a) (transitive middle vs. objectless transitive). Lemmens, however, gives no further account to the notion of self-instigatability that functions to discriminate an ergative middle from a non-effective ergative (cf. 4.3 in this article). Figure 2 illustrates the paradigmatic oppositions and the ambiguities:

(based on Lemmens, p. 75 Fig. 14)

Figure 2. < A Paradigmatic view on the middle construction >

Lemmens asserts that the transitive/ergative distinction is needed for middles, saying (p. 75) that this opposition “has been overlooked in virtually all studies,” where “transitives and ergatives are indiscriminately grouped under a general ‘transitive’ denominator.” Although these paradigmatic distinction may be intuitively sustained, we can not stand squarely with Lemmens on several dimensions, as we will now explain.

4.3. Participant Roles and Co-Participation

Lemmens adopts the notion of Goal and Medium to describe the role of the subject participant in middles, but these two notions do not seem to offer a descriptively adequate or a precise formulation for the subject of middles. This is firstly because such a dichotomy suffers from a definitional circularity; that is, any participant of middles in principle, if Lemmens’ paradigmatic approach is taken, bears either a Goal or a Medium, while the specific instances of participants eligible for middles must be slotted into one or the other of these roles. No substantial characterization seems to be borne out.

Descriptively, various kinds of participant other than a Goal and a Medium (or the sub-classification of these) would be possible for the subject of the middle schema. For example, consider (9):

- (9) a. That green plays badly. (in a golf-course)
 b. This knife cuts well.
 c. Mary frustrates easily.
 d. Linoleum wipes off easily. (Hatcher (1943))

- e. Lakes Wanaka and Hawea still continue to fish well despite the recent spells of heavy rain and rising lake levels. (Yoshimura (1998))

The subject in (9a) designates a place in which one plays golf and the description of the setting is that the green is not a good place to play in. Also note that it is not the item to be affected by the Actor's action (not the GOAL-PROCESS relation). The *knife* in (9b) is not the Affected; this can be construed as Instrument with which one cuts something or it may be understood as an Actor in the sense of Foley and Van Valin Jr (1984: 30). The subject participant of (9c) is understood as bearing an Experiencer role. *Linoleum* in (9d) is taken as a Source from which one wipes off its dirt. Similar to (9a), *Lakes Wanaka and Hawea* in (9e) is not an Affected entity (nor a Goal), but rather places at which one can fish. Indeed, an exclusive dichotomy of the participant roles (Goal vs. Medium) is advantageous to the formulation of a rather clear-cut paradigmatic opposition, but the dichotomy causes the insufficiency of precise characterization of specific usages, as well as the deficiency regarding a definitional circularity.

Lemmens (pp. 40ff.) characterizes the Medium as a participant capable of self-instigating the process, hence it pertains to the conceptualization involving co-participation. However, the capability of self-instigation must be concluded to be not wholly dependent on the lexical nature of a verb, but partly dependent on our construal of the subject entity; that is, encyclopedic semantic knowledge of the subject entity evoked in association with discourse-pragmatic factors.

Lemmens (p. 127) says that the Agent-centerdness of the transitive paradigm is assessed and it is incorporated into the lexical structure of prototypically transitive verbs (e.g. *kill*, *murder*). Based on this claim, *kill* is a typical transitive (an effective transitive or an objectless transitive) lexically involved in the paradigm of the Agent-centerdness, and it is dissociated from the paradigm of the Medium-centerdness, hence no self-instigation and co-participation. Contra Lemmens, however, Fellbaum (1986) reports a middle containing *kill*; *These mosquitoes kill only with a special spray*. Keyser and Roeper (1984) also acknowledge the middle *Chickens kill easily* (both are transitive middles in Lemmens' classification). Provided that these middles are unproblematic and middles are subject to co-participation, why is it possible for *kill* to occur as a "middable" verb (Lemmens, p. 82)? If the verb takes *mosquitoes* or *chickens* as a Goal, it requires an account why a Goal (not a

Medium) is subject to co-participation, which does not conform to Lemmens' definition of Goal (cf. 2.2 in this article). If the verb takes those as a Medium, why is it possible to say that *kill* is a (typical) transitive? The acceptability of the *kill* middles above indicates that the verb *can* be used to denote a process in which co-participation is viable. This is incompatible with Lemmens' (p. 80) observation that "it is unusual to think of living beings as possessing properties which facilitate killing them."

In order to refute the change-of-state criterion for the characterization of middable verbs, Lemmens refers to a middle like (10) where the proper contextual support helps to identify a property of the subject entity:

- (10) [a professional football player comments on a new type of football]

Well, I don't know, this new ball doesn't kick very well.

(Lemmens, p. 80)

Lemmens (p. 80) says that "the semantics of the PROCESS-AFFECTED pairing must be compatible with the notion of process enhancement and/or that of predestination." In (10), although *kick* is not a change-of-state verb, the properties of the kicking process become relevant and therefore, the middle construction becomes a valid coding option. These observations indicate quite an important dimension that signals the semantic modulation of the middle construction paradigm, but no ontological explanation is sought further for the compatibility; namely, how the Affected entity (here, Goal) can be understood as the Medium which is now construed as becoming able to co-participate in the process.

All these, we argue, strongly suggest the possibility of constructional coercion (see 4.4 in this article) through which explanations are branching off into two options; namely whether a variety of participants (all these being categorized as a Goal in Lemmens' paradigm) have *shifted* to Medium_[+/-self-instigating] or they are inherently a Medium whose self-instigatability can be variable depending on contextualization. Contra Lemmens (cf. 2.2 in this article), the former option would be that the semantics of the middle construction might coerce the semantics of *kill* and *kick*, motivating the shift of a Goal into a Medium through which the Goal participant comes to co-participate in the killing (or the kicking) process. The latter option would be that no shift of roles is posited and middles intrinsically take a Medium as the subject where a

Secondly, we do not agree with Lemmens (p. 73) when he supports Hallidayan views of middles that “while the middle construction shifts the focus to the Goal, it does not change the ‘inherent voice’, which remains passive,” and furthermore that “the Goals do not actively co-participate in the process as Mediums do.” Our view of middles simply derives from the Cognitive Grammar premise that linguistic units are intrinsically overt, therefore voice alternation is impossible without any change of meaning. We want here to point out the fact that the middle construction [NP-V-Adjunct] is compatible with the intransitive-active construction schema with respect to not only the overt morphology (e.g. verb agreement, case marking), but also syntactic behavior like interrogation, tag-question formation and raising. Consider (11) and (12):

- (11) a. The car drives well, doesn't it?
b. John skates, doesn't he? <non-effective transitive>
c. The door opened, didn't it? <non-effective ergative>
- (12) a. Mary believes the car to drive well.
b. Mary believes John to skate well.
c. Mary believes the door to have opened easily.
- <non-effective transitive>
<non-effective ergative>

Although both Halliday and Lemmens assume the syntactic correspondence relationship, hence the alternation of participants, between middles and transitives, their view of middles fails to capture the peculiarities of the middle construction, which can not be found in passives. That is, the middle construction is quite peculiar in its obligatory requirement of a manner adjunct, the frequent use of the simple present tense and the fact that it takes on a property reading with an active voice, whereas (Agentless) passives do not have these peculiarities.

4.4. Partial Ergativization and Coercion

(13) a. This car drives easily. <GO-PROCESS> [transitive middle]
b. This magazine sells well.

(14) a. This car drove too fast.

b. This magazine sells.

First, we afford a piece of supportive evidence for ergativization phenomenon from a different perspective; our survey undertaken in 1996 (Yoshimura (1998)) strengthens his claim of this kind of blended nature. Thirty-seven verbs were checked with respect to their availability

⁷ Our claim here is closely related to the notions of Agent-like properties of subject participants (cf. Langacker (1990: 228)) and Responsibility characterizable relative to the notion of Subjecthood (cf. Lakoff (1977)). See also Yoshimura (1998).

in the Constructions [NP₁ *cause* NP₂ *to* V], [NP₂ V *by oneself*] and [NP₂ V Adjunct]. The aim was to examine which verbs readily appear in these constructions with NP₂ (=affected entity) as the only participant, and which verbs do not. Given that these constructions are sanctioned by the conceptualization of a self-instigating event, one possible explanation for the results would be that the more readily the verbs are permitted to appear in these constructions, the more readily the actual Instigator can be dissociated from the locus of cause (cf. Keyser and Roeper (1984), Fagan (1992)). For example, *open* is accepted in all these constructions, while *solve* exhibits very low acceptability in them: <Samples of the experiment>

open:

John caused the door to open. [NP₁ *cause* NP₂ *to* V]

The door opened by itself. [NP₂ V *by oneself*]

A: I can't open the door.

B: Why not? It opened just a minute ago.

[Question and Answer]

solve:

*?John caused the problem to solve.

*?The problem solved by itself.

A: I can't solve the problem.

B: Why not? *It solved yesterday.

Table 1 shows some of the results obtained in our experiment. Twenty native informants gave their acceptability judgments on a scale consisting of five graded degrees.⁸ For each construction containing the respective verbs, points were allotted as: 4 points for OK (perfectly acceptable); 3 points for OK? (not perfectly, but almost acceptable); 2 for? (less acceptable); 1 for *? (almost unacceptable, but not utterly impossible) and 0 for * (utterly impossible). The maximum number of points for each verb in a construction was 80 (4×20), and in all three constructions, 240 ((4×20)×3). For instance, in the case of *solve*, 14 points obtained in [NP₁ *cause* NP₂ *to* V], 28 points in [NP₂ V *by oneself*], and 16 points in [NP₂ V Adjunct] (Q&A), the total score of which amounted to 58.

⁸ The informants were eleven New Zealanders, four British, three Americans, one South African and one Singaporean.

verbs	NP ₁ <i>cause</i> NP ₂ <i>to</i> V	NP ₂ V <i>by oneself</i>	Q&A	Total
<i>open</i>	62	69	74	205
<i>break</i>	70	60	61	191
<i>move</i>	54	69	38	161
<i>sell</i>	39	39	65	143
<i>cook</i>	38	35	50	123
<i>freeze</i>	38	35	50	123
<i>transfer</i>	24	22	38	84
<i>wash</i>	15	31	23	69
<i>drive</i>	25	25	18	68
<i>solve</i>	14	28	16	58
<i>clean</i>	7	23	20	50
<i>cut</i>	9	4	29	42
<i>refrigerate</i>	12	11	11	34
<i>discourage</i>	13	3	2	18
<i>drink</i>	1	5	5	11
<i>encourage</i>	6	1	4	11
<i>kick</i>	0	3	5	8
<i>hit</i>	3	0	5	8
<i>buy</i>	0	0	7	7

Table 1: <Acceptability judgments on verbs in intransitive constructions>

The results show that *sell*, *wash* and *drive* are situated in the middle of the scale in this order, which supports Lemmens' claim on these verbs.⁹

Secondly, we argue that the constructional coercion entrenches into the intransitive use of the ergative paradigm. Constructional coercion indicates that a construction forces a specific reading of verbs in accordance with its own semantics (cf. Goldberg (1995)). Lemmens (p. 232) says that "it is the construction that stretches the verb's meaning beyond its typical usage" and for middles in this regard, the verb comes to take on a property reading. For instance, compare (15) with (16):

⁹ The following example (*interview*) is taken as another instance of ergativization: Lewinsky got an interview with B-M on Dec. 18; on the 23rd *she interviewed at American Express*. (Attested. *Time*; p. 20, 2/9/1998. stress is by K.Y.)

- (15) I thought we were out of gas, but the car **DRIVES**!
 (Fellbaum (1985))
- (16) a. [In a situation where the speaker intends that some food
 should be preserved in the deep freeze.]
 Don't throw this food away. It'll freeze!
- b. Look! This stone floats! (Yoshimura (1998))

Unlike (14b) that involves a contrast with other magazines, the stress on the verb *drive* in (15) implies the speaker's surprise to find the car drivable in spite of his/her expectation that it would probably not (cf. Fellbaum (1985)). *Drive* here undergoes partial ergativization. In the (16) examples, both *freeze* and *float* are intransitive (like *suffocate*, *choke* etc., but not highly intransitive for *freeze* according to our experimental data) and the respective clauses allow a middle interpretation; *freeze* in (16a) serves to foreground a property of the food, almost comparable to the sense of *freezable*, and a discourse-pragmatic aspect, i.e. food preservation (by freezing), is contextually highlighted; *float* in (16b) can also be understood as a middle verb designating a *floatable* property of the subject entity and contextually foregrounded is the speaker's unexpected discovery of that kind of property. How should we characterize these expressions? The (16) examples differ from an ergative middle like (8b) in their lack of a feasibility comment, and at the same time, they differ from the normal use of intransitives (e.g. *The water has frozen/A small boat was floating in the bay*) in which eventive occurrences are designated. The point here that Lemmens does not explore is that the unaccusative intransitive construction, together with discourse-pragmatic factors, might coerce a verb into the middle-like interpretation, and this point should be incorporated into his lexico-paradigmatic framework of non-effective ergatives.

4.5. The Semantics of Nominals

Our view of middles is that the speaker, by the use of the middle construction [NP-V-Adjunct], implicates the foregrounding of a property of the subject referent where the property is a construal of a characteristic inherent in the referent. In this sense, property construal is subject to the speaker's view and knowledge invoked relative to the conceptualization of a denotatum and discourse-contextual information. So, we claim that co-participation should be seen to take place in an encyclopedic association of the subject referent with the semantics of the verb, adjunct and clause-external contextualization. Important

here again is the implication of foregrounding a property, the property construed by the speaker as inherent in the subject entity, so it is in virtue of the speaker's view of the entity that the conceptualization involving co-participation is ontologically motivated. From this construal point of view, Lemmens pays virtually no attention to the semantic structure of nominals, especially for the correlation between the conceptual nature of nominal denotata and the semantics of the middle construction.

First, we want to draw attention to the fact that the subject participants of middles are most likely to denote artifacts. For instance, see (17):

- (17) a. Compact trimmer will travel with you and stores away neatly when not in use.
- b. Handy coat hanger hooks on arm ends. Folds away with optional ground socket.

(Attested. Yoshimura (1998))

Yoshimura (1998) reports that 70% of the attested middles (about 200 in total) are identified as belonging to the category of advertisement and 80% of all the attested examples contain artifactual denotata as their subject. Why so? In Lemmens' terms, there is an implication of *predestination* in the Affected, which, we want to argue, would be ontologically substantiated by an examination of the conceptual structure of nominal denotata.

Pustejovsky (1995) advocates a Qualia-based model.¹⁰ Qualia Structure represents the defining characteristics of the quality of a thing, involving "the different modes of predication possible with a lexical item" (Pustejovsky, p. 58). In this regard, the Qualia-based model crucially concerns the exploitation of the semantics of nominals, contributing to

¹⁰ Different from the model of Pustejovsky (1995), i.e. a type-oriented model of nominal expressions, our account stresses the dimension pertaining to the conceptualization of nominal denotata (a token-specific model) in particular association with a proper construal of the setting. In contrast with Pustejovsky's model of qualia roles, our account emphasizes the aspect of their open-endedness. We take qualia information of denotata as variable (or productive), although acknowledging that some qualia are typical of the conceptualization of certain denotata (e.g. *book* and its readability). They are variable (or productive) in the sense that atypical qualia can be invoked in association with the speaker's construal of a setting (for more detail, see Yoshimura (1998)).

the specification of a unique and appropriate meaning of a verb. For instance, the meaning of *bake* in (18a) is specified by the knowledge of *potato* being a natural object, and the meaning of *bake* in (18b) by the knowledge of *cake* being an artifact.

- (18) a. John baked the potato.
b. John baked the cake.

Among the four different qualia roles of nouns (i.e. Constitutive, Formal, Telic, Agentive), the quale of *potato* that specifies the meaning of *bake* is Agentive—a mode of explanation that concerns “factors involved in the origin or ‘bringing about’ of an object” (Pustejovsky (1995: 86)); more specifically, a natural kind of object as is *potato* in (18a) (and an artifact as is *cake* in (18b)). Qualia roles thus embody a system of information evoked in relation to our conventionalized, encyclopedic knowledge of the designated object, playing a significant role in determining the target reading of an expression.

Our claim is that the middle construction is used to foreground a quale of the subject nominal; more precisely in our terms, a quale of the concept of a nominal denotatum. The qualia that especially concern our discussion are the Telic and Constitutive roles. The Telic quale designates “the purpose that an agent has in performing an act, built-in function or aim that specifies certain activities” (Pustejovsky (1995: 86); cf. Moravcsik (1975), Pustejovsky (1991)). “Constitutive quale refers not only to the parts or material of an object, but defines, for an object, what that object is logically part of, if such a relation exists (Pustejovsky (1995: 98)). The foregrounding of a quale, we consider, involves recategorization of the semantic value of Telic into Constitutive to the effect that a certain built-in function of the subject entity, which is *predestined* to a process-facility property, be shifted to a Constitutive quale pertaining to its self-instigating force. For instance, consider the middle *This car drives easily*. We consider that this middle profiles a Telic quale like *drivability*. The quale can be associated with the driving technique that the driver, i.e. an Agent, has in performing the act of driving. However, what the speaker intends to imply with the use of this construction schema is an imposition of his/her view of the Telic onto the Constitutive, a feature conventionally established as intrinsic to the constitution of the car; namely, the speaker conceptualizes the car as an entity involving the quale that would encourage the ease of driving with its *built-in functions*; for instance, the ease of steering wheels, the excellence of manipulating gears, accelera-

tor and others (for more detailed discussion, see Yoshimura (1998)). This second level of qualia selection can be understood as the effect of pragmatically-motivated promotion of a quale (we might call it a constructional coercion through conventional implicatures), encouraging the hearer to construe the subject referent as possessing some constitutive functions that enable the occurrence of the state of affairs (cf. "minimal coercion" in Pustejovsky (1995: 121ff.)). The middle construction thus functions to predicate a property, i.e. the foregrounding of a quale through the construal of a referent in terms of the encyclopedic knowledge of the referent.

Our account of middles characterized in light of the encyclopedic semantic structure of the subject referent gives a picture different from Lemmens'; while Lemmens captures the subject of middles as the embodiment of an energy sink (=Affected) to which the implicit Agent exerts its action (<AF-PROCESS-(AG)>) and, therefore recognizes its voice equivalence to Agentless passives, our model takes the subject referent as an energy source, as a source recategorized as involving an Agent-like property (Langacker (1990)) which is responsible, in virtue of its qualia-foregrounding, for what is denoted by the predicate. This constitutes an ontological basis that we argued in the previous section; middles are inherently an instantiation of the intransitive-active voice schema, characterizable independently of Agentless passives and coercion takes place so that the speaker (and the hearer) can conceptualize the subject entity as involving co-participation in the process where encyclopedic information of the entity is associated with other discourse-pragmatic factors. Consequently, our account by the Qualia model and coercion does not support Lemmens' claim that middles are a paradigmatically well-distinguished category, but rather leads to the view of middles as a category that is a more ergative-like paradigm where the semantic status of Medium can be ontologically motivated by our knowledge of the world, hence variable depending on the speaker's construal of the setting.¹¹

¹¹ Lemmens (Ch. 8) insightfully suggests that modern technological advances such as computer facilities or transportation encourage the ergative-like conceptualization, which also seems to motivate the extension of the notion of Medium against the social background of the advancement of mechanical automaticity.

4.6. Interpretability in a Setting

Lemmens does not draw any special attention to the nature of judgments. When he says that linguistic semantics is encyclopedic in nature, his view of semantics inevitably enters into judgments of *sensible interpretability*; whether a certain utterance should be construed as well-formed in light of his/her knowledge of the world, accommodating the contextual, pragmatic-discourse factors in association with the proper understanding of the utterance. Construal is a notion that implies a more active role of the language user in organizing and structuring his or her world (cf. Langacker (1987)).

Lemmens (p. 80) indicates that *kick* can appear in middles when used with some appropriate contextualization (e.g. (10)). In this line of argument, Lemmens (p. 80) correctly states that “with the proper contextual support, creative middle constructions do become possible” and “it is possible for *kick* (or almost any other transitive verb) to occur in a middle construction.” The problem, we consider, is how one construes an expression as a middle relative to its contextual and discourse-pragmatic information. Lemmens does not pursue the possibility of incorporating a clause-external coercion; namely how cross-sentential factors may force the meaning of the internal constituents of middles into the semantics of the middle construction. Let us exemplify this with some middles. Compare (19) with (20):

(19) a. *?This corner sell well.

b. *This cart pushes easily.

(20) a. [conversation between the staff in a bookshop on a book that is newly published]

A: Which corner shall we use to display the book?

B: I think, ... *That corner sells well*. It's far better than this one. (Yoshimura (1998))

b. Suppose Louisa Djiak had been involved in the plant sabotage and Humboldt was protecting her. Maybe he'd called Caroline and pushed her into firing me. Although *Caroline was not the kind that pushed easily*.

(Yoshimura (1998); *Toxic Shock*; Sara Paretsky (1988).

Stress is by K.Y.)

Sell is a transitive verb—but not highly transitive as is demonstrated in our experiment (see 4.4 in this article)—which typically occurs in middles, but it is normally impossible to promote a place adjunct (at which something is sold) to the subject of middles (e.g. (19a)). Context-

tualization such as in (20a), however, enhances the *interpretability* of this utterance as a middle where *the corner* is perspectivized in light of a place, which serves to encourage the reading of the sellability of the book. *Push* in (20b) is a transitive verb used to express roughly “to try to force (someone) to do something by continual urging; put pressure on.” (LDCE (1988)). Without contextualization, (19b) or *Caroline pushed easily* would be rejected, but note that contexts like (20b) clearly enhance its interpretability; *Caroline* is a person with a mental fortitude such that the act of pushing can be associated with something inherent to it. In view of Lemmens’ basic premise that the construction reflects ways of construing the event, it would be necessary to accommodate an insight that obtains from interpretability of an utterance in relation to discourse-pragmatic factors.

5. Concluding Remarks

On the basis of an overview of Lemmens’ cognitive lexico-paradigmatic English transitivity model, the present review has examined a couple of his main claims in terms of some notions which are crucial to his framework. Our critical examination primarily concerns notions (and related claims) such as co-participation, the dichotomy of Goal vs. Medium, the dichotomy of [+/-self-instigating] of Medium, and his overemphatic evaluation of lexical information. A closer examination of English middle expressions reveals the fact that factors, such as the encyclopedic semantic structure of nominal referents, clause-external and discourse-pragmatic information, also contribute, through coercion, to a more flexible (and creative) use of lexical items than in the model presented in the present book. Although the account that we have presented, i.e. the Qualia-based model of the subject entity in association with discourse-pragmatic information, gives a different view of middles from Lemmens’, it substantiates his main claim (p. 47) that “the constructional potential of a particular verb cannot be stated as absolute (i.e. as either transitive or ergative), but depends on the kind of participants that are involved in the process.” Our account can be identified as a possible option partly incompatible with Lemmens’ lexico-paradigmatic view of middles in that while Lemmens stresses the semantic characterization of verbs, we emphasize the encyclopedic dimension of the subject entity that reflects our construal of artifacts in a setting. Our account, however, is in principle in line with the prem-

ise that Lemmens (p. 241) maintains; "language is not as [sic] an isolated phenomenon but an exponent of our experience and interaction with the world." All these observations and claims, we believe, open up the way to a more substantial exploration of the nature of linguistic creativity than Lemmens suggests in the final section of his book.

Our critical examination and alternative proposals do not detract from the value of the present book. Again, we acknowledge that this work provides a stimulating and comprehensive view of the dynamic interplay of the lexical information of verbs and their paradigmatic opposition. The theoretical framework that Lemmens employs should be viewed as flexible and promising, consonant nicely with his in-depth observation of data materials. In addition, as typically demonstrated in the case study of *abort*, the present book succeeds in affording an ontological motivation to the diachronic transition of verbal meaning and its interplay with the constructional paradigms. This success can be seen as a typical manifestation of a happy marriage between a cognitively-based exploration of verbal semantics and a Hallidayan paradigmatic view of clause structures.

REFERENCES

- Brugman, Claudia M. (1983) *The Story of 'Over'*, Indiana University Press, Bloomington, Indiana.
- Condoravdi, Cleo. (1989) "The Middle: Where Semantics and Morphology Meet," *MIT Working Papers in Linguistics* 11, 16-30.
- Davidse, Kristin (1991) *Categories of Experiential Grammar*, Doctoral dissertation, K.U. Leuven.
- DeLancey, Scott (1984) "Notes on Agentivity and Causation," *Studies in Language* 8, 181-213.
- Fagan, Sarah M. B. (1992) *The Syntax and Semantics of Middle Constructions*, Cambridge University Press, Cambridge.
- Fellbaum, Christiane (1985) "Adverbs in Agentless Actives and Passives," *CLS* 21, Part 2: *The Parasession on Causatives and Agentivity*, 21-31.
- Fellbaum, Christiane (1986) "On the Middle Construction in English," Indiana University Linguistics Club, Bloomington.
- Foley, William, A and Van Valin Jr, Robert D. (1984) *Functional Syntax and Universal Grammar*, Cambridge University Press, Cambridge.
- Goldberg, Adele E. (1995) *Constructions: A Construction Grammar Approach to Argument Structure*, University of Chicago Press, Chicago.
- Halliday, M. A. K. (1967a) "Notes on Transitivity and Theme in English 1," *Journal of Linguistics* 3, 37-81.

- Halliday, M. A. K. (1967b) "Notes on Transitivity and Theme in English 2," *Journal of Linguistics* 3, 199-244.
- Halliday, M. A. K. (1968) "Notes on Transitivity and Theme in English 3," *Journal of Linguistics* 4, 179-215.
- Hatcher, Anna Granville (1943) "Mr. Howard amuses easy," *Modern Language Notes* Vol. LVIII, The Johns Hopkins Press, Baltimore.
- Hopper, Paul J. and Sandra A. Thompson (1980) "Transitivity in Grammar and Discourse," *Language* 56, 251-299.
- Jespersen, Otto (1927) *A Modern English Grammar* III, George Allen & Unwin Ltd, London. [Reproduced by Meicho Fukyukai, Tokyo, 1986.]
- Keyser, Samuel J. and Thomas Roeper (1984) "On the Middle and Ergative Constructions in English," *Linguistic Inquiry* 15, 381-416.
- Lakoff, George (1977) "Linguistic Gestalts," *CLS* 13, 236-287.
- Lakoff, George and Mark Johnson (1980) *Metaphors We Live By*, University of Chicago Press, Chicago.
- Langacker, Ronald W. (1987) *Foundations of Cognitive Grammar*, Vol. I: *Theoretical Prerequisites*, Stanford University Press, Stanford.
- Langacker, Ronald W. (1990) "Cognitive Grammar: the Symbolic Alternative," *Studies in the Linguistic Sciences* 20, 3-30.
- Langacker, Ronald W. (1991) *Foundations of Cognitive Grammar*, Vol. II: *Descriptive Application*, Stanford University Press, Stanford.
- Langacker, Ronald W. (1995) "Raising and Transparency," *Language* 71, 1-62.
- Levin, Beth (1993) *English Verb Classes and Alternations: A Preliminary Investigation*, University of Chicago Press, Chicago.
- Levin, Beth and Malka Rappaport Hovav (1995) *Unaccusativity: At the Syntax-Lexical Semantics Interface*, MIT Press, Cambridge, MA.
- Moravcsik, J. M. (1975) "Aitia as Generative Factor in Aristotle's Philosophy," *Dialogue* 14, 622-638.
- Nishimura, Yoshiki (1993) "Agentivity in Cognitive Grammar," *Conceptualizations and Mental Processing in Language*, ed. by Richard A. Geiger and Brygida Rudzka-Ostyn, 488-530, Mouton de Gruyter, Berlin and New York.
- Pustejovsky, James (1991) "The Generative Lexicon," *Association for Computational Linguistics* 17, 409-441.
- Pustejovsky, James (1995) *The Generative Lexicon*, MIT Press, Cambridge, MA.
- Shibatani, Masayoshi (1985) "Passives and Related Constructions: A Prototype Analysis," *Language* 61, 821-848.
- Van Oosten, Jeanne (1977) "Subjects and Agenthood in English," *CLS* 13, 459-471.
- Van Oosten, Jeanne (1984) *The Nature of Subjects, Topics and Agents: A Cognitive Explanation*, Doctoral dissertation, University of California, Berkeley. [Reproduced by Indiana University Linguistics Club, Indiana, 1986.]

- Vendler, Zeno (1984) "Adverbs of Action," *CLS* 20, Part 2: *The Parasession on Lexical Semantics*, 297-307.
- Yoshimura, Kimihiro (1998) *The Middle Construction in English: A Cognitive Linguistic Analysis*, Doctoral dissertation, University of Otago, Dunedin.

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